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Abducted by Reading Machines: Pragmatism and the Discourse of Distant Reading

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ABDUCTED BY READING MACHINES:
PRAGMATISM AND THE DISCOURSE OF DISTANT READING

A Thesis
Presented to
the Graduate School of
Clemson University

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of the Requirements for the Degree
Master of Arts
English

by
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Abstract

This project begins with an investigation of a case study in literary analysis that attempts to bring together close and distant reading techniques to enhance the output of both methods. The investigation reveals not only a breakdown in the attempted corroboration of truth claims and evidence across methods, but a tension felt more broadly in the discourse surrounding distant reading as a methodological and disciplinary position. In response to this problematic, I access C.S. Peirce and John Dewey to construct an argument for a pragmatic model for mediating between the more traditional methods employed in literary studies and the computational tools explored and used by scholars of distant methods. This discussion is foregrounded in the hermeneutic response of Julie Orlemanski to the discursive gap between methods. Taking the notion of scales of reading as a starting point, the pragmatic approach offers to place the output of close and distant methods within Dewey's pattern of inquiry and accounts for the potential disciplinary conflict with Peirce's logic of abduction. The former stands as a metaphorical interlocutor between computational models and the more heuristic approaches often found in literary analysis while the latter is placed into conversation with Ariana Ciula and Cristina Marras's "Circling Around Texts and Language: Towards Pragmatic Modelling" to reveal that pragmatism contains a viable set of analytical tools for creating and interpreting evidence in literary studies using digital methods. I conclude by looking towards applying the pragmatic tools used to

analyze this case study to a larger discussion of the discursive unease unearthed in the examination of the scholarship of digital method.

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Introduction

This essay will begin with my own attempts to use digital tools to put close and distant readings into conversation with one another and the breakdowns my exploration of those activities reveal. Specifically, the case study at hand involves an investigation of a few Victorian novels from both a close and distant perspective. The project emerged from a desire to better understand the effect of a particular narrative structure, the marriage plot, on the subjectivity of the protagonist in this kind of novel. This research question arose as a potential explanatory hypothesis for a phenomenon I observed in close reading. Consider the following pair of passages from *Jane Eyre*:

“I will be myself. Mr. Rochester, you must neither expect nor exact anything celestial of me, -- for you will not get it” (Bronte 260).

“I have now been married ten years. I know what it is to live entirely for and with what I love best on earth...I am my husband’s life as fully as he is mine” (Bronte 450).

In these textual moments, I identified an assertion of self that surges at the beginning of Jane’s relationship with Mr. Rochester and subsides with her marriage to him. Words like “celestial,” “will,” and “love” emerge as mechanisms to justify the aforementioned reading. Taking these semantic cues to be potentially indicative of a larger trend, I used topic models and visualization techniques to sift through the words and ideas found to be significant in my close reading for those that were also part of larger patterns throughout the novel. I was soon frustrated, however, as they had no significance in the

text as viewed from a distance. I modified my inquiry to include words that would reflect what I thought of as the spirit of the argument. My distant analysis yielded results, but the link between the moments that set me off on this line of inquiry and the plots of semantic data I produced was lost in an attempt to deploy the logic of close reading in a distant scheme. The notion that a smaller corpus would allow for a more refined understanding of the output produced using computational methods was flawed because it did not account for the shift in the way each method produces truth claims. To elaborate, the discourse surrounding distant methodology emphasizes the necessity in considering the textual objects under scrutiny as changed by the process of computational analysis. In his *Reading Machines: Towards and Algorithmic Criticism*, Stephen Ramsay writes of the break:

Any reading of a text that is not a recapitulation of that text relies on a heuristic of radical transformation. The critic who endeavors to put forth a "reading" puts forth not the text, but a new text in which the data has been paraphrased, elaborated, selected, truncated, and transduced. This basic property of critical methodology is evident not only in the act of 'close reading' but also in the more ambitious project of thematic exegesis (16).

This "heuristic of radical transformation" is clearly absent at this stage in the analysis.

The founding claims of the close reading (that a discernible transformation in

subjectivity of the female protagonists occurs along the axis of matrimony) were absolutely what drove the choice of key terms in the distant analysis.

This methodological exploration responds not only to breakdowns within my own projects, but also to a larger conversation taking place around digital methods generally. Many scholars have attempted to account for the preservation of close reading using the language of corroboration. Jockers addresses the problem thusly: “I am not suggesting a wholesale shelving of close reading and highly interpretive ‘readings’ of literature. Quite the opposite, I am suggesting a blended approach.” This more cooperative assessment does not last, however, as the tension emerges inevitably through the assertion that “macroanalytic approaches reveal details about texts that are, practically speaking, *unavailable* to close readers of the texts” (26, emphasis mine). It is clear that Jockers does not intend to consign close reading to obsolescence. Still, the rhetoric of distant reading seems to inevitably suggest inadequacy and shortfall in close reading methodology. This can be seen in the writings of countless other scholars of distant and digital method, including Franco Moretti: “[A] field this large *cannot* be understood by stitching together separate bits of knowledge about individual cases, because it isn’t a sum of individual cases: it’s a collective system, that should be grasped as such, as a whole” (4, emphasis mine).¹ Once again the specter of inadequacy emerges

¹ Moretti, Franco. *Graphs, Maps, and Trees: Abstract Models for a Literary History*. London: Verso, 2005. Print.

from the core principles of distant reading to invite conflict and animus with which the scholar must then contend. While it might be said that he pays little heed to this friction in *Graphs, Maps, and Trees*, prolonged engagement with the discourse surrounding distant reading methods leads Moretti's work to a more conciliatory space. The rhetoric of inclusion is present and accounted for in his essay "Operationalization: or the Function of Measurement in Modern Literary History." He writes: "Operationalizing means *building a bridge* from concepts to measurement, and then to the world. In our case: from the concepts of literary theory, through some form of quantification, to literary texts" (1, emphasis mine). Similar phrases and approaches may be observed in Moretti's work with the Stanford Literary Lab.² Both scholars make an effort to consolidate their proposed methodological approaches with the contributions of close reading. Jockers moves to shift "reading" to "analysis" and crafts an analogy that employs the logic of economics as a guide to the interplay between texts his macroanalytic method seeks to explore. Moretti likewise proposes to transform literary concepts into "operations" that may be observed and mapped out through a "data-driven" analytic process. And while these works certainly do not exhaust the full spectrum of approaches used to characterize the shift from close to distant reading, they do stand as representative of the need to demonstrate at the very least a

² See "Network Theory Plot Analysis" and "The Emotions of London."

commitment to the heritage of close reading and the involvement of insights gleaned from that method in literary analysis.

The goal of this paper is to address the epistemic conflict between close and distant reading revealed in this literary case study using the semiotic theory and investigative processes of American Pragmatism, specifically those found in the writings of C.S. Peirce and John Dewey. I will argue that the characterization of distant reading methods and their benefits need not be perceived as beggaring close reading, and that pragmatism may offer a productive and alternative approach to describing distant and digital methods, specifically semantic trend analysis. The hope is to present a method for dealing with the precursory notion that the digital humanities are somehow more “factual” or “concrete” that reveals the more experimental and unsettling character of computational analysis using the terms of pragmatism, specifically Peirce’s theory of abduction and Dewey’s pattern of inquiry. These principles are valuable in this endeavor because of their approach to the acquisition and interpretation of evidence in the process of creating knowledge; Peirce’s logic provides a useful approach to constructing digital models of literary corpuses. Too, Dewey’s pattern is a metaphor that captures the uncertainty that operates as the impetus of the digital projects that struggle to account for their analytical position. The most vital detail that connects these philosophers and their ideas to digital method is their characterization of fact. To be, as Matthew Jockers proudly is in *Macroanalysis*, “after the facts,” is not to assume that pursuit will lead to the obsolescence of close methods. Rather, it is to know that the process and goal is

always disruption and aspiration to meaning. Pragmatism describes this epistemological position elegantly and holds promise as a method for mediating between close and distant methods in a way that responds both to the tension in the conversation more broadly and to the problematic revealed in my case study.

It is important to state at the outset that the effort underway here is not to paint these efforts as unnecessary or inadequate; certainly Jockers, Moretti, and many other prominent scholars of the digital humanities do an exemplary job of exploring new methods that expand the repertoire of the literary scholar and her ability to problematize established literary knowledge. Rather, the goal is to explore something far more interesting, specifically the tension between methods that occurs in my case study and the methodological clarity pragmatism may offer there. As Ramsay correctly points out, the contributions of literary criticism are not meant to be verified or falsified through the application of digital method: “If text analysis is to participate in literary critical endeavor in some manner beyond fact-checking, it must endeavor to assist the critic in the unfolding of interpretative possibilities...The evidence we seek is not definitive, but suggestive of grander arguments and schemes” (Ramsay 10). This idea underpins the pragmatic approach to considering the evidentiary output of both close and distant methods here. In fact, it is my *failure* to account for what Ramsay identifies in the case study that serves as the impetus for the project.

Close Reading Patterns and Transitions in *Jane Eyre* and *The Portrait of a Lady*

The case study begins with an investigation of marriage in two exemplar texts: *Jane Eyre* and *The Portrait of a Lady*. These canonical works stand as representatives of their respective genres and historical time periods, though defining them as such is beyond the scope of this essay. It is relevant, however, to consider their significance within these broader categories as the reason they are under investigation here. In this context, the practice at hand is much like Jonathan Culler's construction of close reading in "The Closeness of Close Reading" as it stands in relation to considerations of historicity and established knowledge. To elaborate, I trouble here, as Culler suggests of close readers more broadly, accepted knowledge about these texts by attending to their semantic content using the same methodological approach that may be broadly understood as close reading (Culler 22). As that troubling leads to the subsequent exploration of distant computational analytics that becomes the call to action for this essay, a thorough examination of exactly the kind of trouble I uncover reading these texts is naturally helpful. It is therefore productive to take some license with the constructions of attention and engagement John Guillory identifies in his "Close Reading: Prologue and Epilogue" and consider this point in the case study my "prologue" with respect to close reading.³ The demand, as Guillory characterizes it, to seek meaning in larger patterns at varying levels of engagement with these texts,

³ Guillory discusses close and distant levels of analysis historically, identifying moments in the progression of academic discourse at which each level experiences ascendancy.

emerges from the analysis set to unfold here. As such, I will employ Guillory's account as a roadmap for the case study that not only illuminates the path beneath my feet, but also shows the way to the "epilogue" towards which this project inevitably marches.

The idea for the initial investigation comes out of a close reading of Isabel Archer's shifting volition in *The Portrait of a Lady* as it plays out in narrative time. What this entails is engaging passages from before and after her marriage and comparing them linguistically and structurally for shifts in the way she makes decisions. Perhaps the most fitting moment to begin this investigation is when Isabel defines her interest in choice: "'You are too fond of your liberty.' 'Yes, I think I am very fond of it. But I always want to know the things one shouldn't do. 'So as to do them?' asked her aunt. 'So as to choose.' Said Isabel" (James 70). This small exchange is of vital importance because it frames every choice Isabel makes in the novel from this point on. As the subject of desire for many a suitor, Isabel privileges the ability to choose above any benefit those suitors might offer. This passage expresses her will in the purest terms. She does not wish to choose because she wishes to go against the grain or maximize the value of her choice. She simply wants to be in control of her own destiny. This is imminently observable in her rejection of Lord Warburton's proposal: "We see our lives from our own point of view; that is the privilege of the weakest and humblest of us; and I shall never be able to see mine in the manner you proposed" (123). Here the right to choose is expressed by Isabel as predicated on her need to see things from her own point of view and privileges her subjectivity above all else. It is worth noting, too, that Isabel

gives up a great deal of potential wealth and power in refusing this proposal. It is as though the favorable qualities of the potential relationship preclude her from choosing to accept his proposal because they demand so much consideration that they supersede her will: "She liked him too much to marry him; that was the point; something told her that she should not be satisfied, and to inflict upon a man who offered so much a wife with a tendency to criticize would be a peculiarly discreditable act" (116). Isabel is so keen to ensure her will's supremacy that she maintains it above the fray of pragmatic thought. She is a character written as an avatar of pure will, a force of nature that *acts as is*. Her rejection of Oscar Goodwood makes this all the more clear: "I shall probably never marry. I have a perfect right to feel that way, and it is no kindness to a woman to urge her – to persuade her against her will. If I give you pain I can only say I am very sorry. It is not my fault; I can't marry you simply to please you" (164). Will acts almost as a magnetic influence in the life of Isabel Archer. The more one attempts to influence or bend it, the more it pushes against that influence. Here Oscar Goodwood attempts to play on Isabel's sympathy and appeal to her own facility for kindness. He gets nowhere because his manipulations automatically polarize her will against him. To attempt to make Isabel do something is to guarantee that she will not comply. This is the result of her need to keep her own will separate from that of others. So as to choose.

The man that finally succeeds in marrying Isabel Archer is fittingly characterized as somewhat of a void: "He is Gilbert Osmond – he lives in Italy; that is all one can say about him. He is exceedingly clever, a man made to be distinguished; but, as I say, you

exhaust the description when you say that he is Mr. Osmond, who lives in Italy. No career, no fortune, no past, no future, no anything” (James 206). I call attention to this description because it resonates with Isabel’s reasoning for refusing Warburton and Goodwood’s proposals. To elaborate, both of these men brought with them baggage of some sort or another. Warburton’s money and status make Isabel uneasy with her ability to separate him from his wealth in the choice, and Goodwood’s appeal to her sentimentality leaves Isabel no choice but to reject him for fear of accepting him because she feels sorry for him. Osmond, by contrast, is nothing to her. Not only is he a complete stranger, but there appears to be nothing to learn of him. The apparent emptiness of the man is the trap into which Isabel falls. His courtship of her reflects a tactic similar to Madame Merle’s initial description: ““I have neither fortune, nor fame, nor extrinsic advantages of any kind. I only tell you because I think it can’t offend you, and some day or other it may give you pleasure”” (326). The failure of previous suitors stems from their entanglements. Here Osmond claims to have none despite the fact that he is easily the most complicated suitor Isabel courts. His tactic is utter ambivalence. He admits to being in love with Isabel and in the same breath offers her nothing in return for her love. Isabel responds with a half-hearted rejection which Osmond meets with a perfectly-tailored response: ““If we meet again, you will find me as you leave me. If we don’t, I shall be so, all the same”” (327). Osmond does not speak as a lover pining over the sole object of his heart. He sounds as though he could care less whether Isabel crosses his path again. He appears immune to the primal magnetism

that afflicts the other men in the novel and that resistance is exactly what makes him *irresistible*. Isabel feels she can safely choose to marry him because nothing about him can encumber her choice. He does not appeal to her emotions nor does he have any significant fortune to weigh on the decision. His ambivalence empowers him to force her to choose even as she feels the choice is hers alone. This is the moment at which the other-will (Osmond's) becomes indistinguishable from her own.

The animated nature of Isabel's subjectivity is replaced by Osmond's cold, statuary vision of their marriage: "Ah, you see, being married is in itself an occupation. It isn't always active; it's often passive; but that takes even more attention. Then my wife and I do so many things together...Your wife indeed may bore you, in that case; but you will never bore yourself. You will always have something to say to yourself – always have a subject of reflection" (535). Here the transformation seen in Isabel is fully in frame. Osmond sees her as a "subject of reflection" as opposed to a distinct person. The union here stands as the determining factor for Isabel; it consumes her ability to choose. The textual evidence gleaned here led me to consider the phenomena of marriage across other texts. The central research question shifted from an inquiry into the role matrimony plays on subjectivity in this one novel to one considering the transition more broadly as it exists in the marriage plot genre.

This movement towards larger analytical structures in the case study begins with more close reading of the marriage plot in *Jane Eyre*. Jane is a character is defined from

the beginning of the novel by a ferocious and determined self-will. Bronte characterizes her using the language of resistance beginning in her childhood: “I was conscious that a moment’s mutiny had already rendered my liable to strange penalties, and like any other rebel slave, I felt resolved, in my desperation, to go all lengths” (12).⁴ Jane *resists*. It is woven into her very nature to proceed stubbornly, even when that stubbornness is ground out to the very last strand of self-possession.

Understanding this bit of free will that defines Jane is most productively accomplished in a reading of the two marriages she is offered prior to surpassing her self-interest at the novel’s end. The first proposal is made by John Rochester, the master of Thornfield and Jane’s employer. Here Jane is willing to agree to the match, though she has terms that represent the triumphant individual will shining through: “I assured him I was naturally hard – very flinty, and that he would often find me so; and that, moreover, I was determined to show him divers rugged points in my character before the ensuing four weeks elapsed: he should know fully what sort of a bargain he had made, while there was yet time to rescind it” (Bronte 273). Here Jane presents Rochester with a month-long engagement in order to reveal whether or not he will be able to tolerate her mannerisms for the rest of their lives. Jane will not simply marry the man because she is interested in her own happiness more than his. She does not see herself, as Ellis sees the ideal English woman, “as delicate as might be supposed to be...a

⁴Bronte, Charlotte. *Jane Eyre*. Oxford: Oxford, 2008. Print

ministering angel, into the peculiar feelings and tones of character influencing those around her, applying the magical key of sympathy to all they suffer or enjoy, to all they fear or hope, until she becomes identified as it were with their very being, blends her own existence with theirs, and makes her society essential to their highest earthly enjoyment" (203).⁵ Near anathema to this construction, Jane is depicted as a prickly and disagreeable person that has no intention of altering herself or her desires in marrying Rochester. She is, to return to the passage I displayed in the introduction, no angel. One might make an argument based on the plot of the novel that positions Jane's tests as being morally upright given Rochester's previous marriage. However, it is important to take that analysis a step further and understand that Jane, with no prior knowledge of Bertha, can only be acting in her own *self-interest*. Coincidence does not change this. In fact, in the scope of my argument the plot of the novel matters little compared to Bronte's characterization of Jane.

Delving deeper into my reading of that characterization, I turn now to St. John and his offer of matrimony to the willful Ms. Eyre. As he is soon travelling to India to be a missionary, St. John wishes to take Jane with him as his wife. The trip and the work are not at issue for her (remember the distinctions drawn regarding servitude earlier), but her status as St. John's wife *does*: "I freely consent to go with you as your fellow

⁵Ellis, Sarah Stickney. "The Women of England, Their Social Duties, and Domestic Habits." *The Victorian Women Writer's Project*. N.p., 22 Aug. 2014. Web. 18 Oct. 2015.
<<http://webapp1.dlib.indiana.edu/vwwp/view?docId=VAB7198&doc.view=print>>.

missionary; but not as your wife: I cannot marry you and become *part of you*" (Bronte 408, emphasis mine). Here the crux of my argument is apparent. Jane will cease to be herself upon marrying and this, in both the cases presented, does not agree with her. It is clear from this passage that Jane's capacity in India would be that of St. John's moral appendage; a gentle and passive reminder of the British life that he is meant to live wherever he goes. But Jane is very much invested in the preservation of her autonomy, even unto going with St. John as a separate person. The Jane of before is defined by a scrabbling for self-definition. She asserts an agency that St. John denies and that Ellis would balk at: "God did not give *me* my life to throw away; and to do as you wish *me*" (Bronte 414, emphasis mine). This is the epitome of *self*-possession, a denouncement of the selfless existence marriage promises.

Jane's marriage to Rochester compellingly inverts this dynamic and provides evidence of a radical transformation in the character's subjectivity. The titular protagonist returns to Rochester when he is in a state of utter disability. She acts as almost as a prosthetic to him as his wife:

Mr. Rochester continued blind the first two years of our union: perhaps it was that circumstance that drew us so very near – that knit us so very close; for I was then his vision, as I am still his right hand. Literally I was (what he often called me) the apple of his eye. He saw nature – he saw books through me; and never did I weary of gazing for his behalf, and of putting into words the effect of field,

tree, town, river, cloud, sunbeam – of the landscape before us; of the weather round us – and impressing by sound on his ear what light could no longer stamp on his eye (Bronte 451).

As a wife, Jane is a balm to the injured Rochester, healing the wounds he suffers as a result of his colonial misadventures and moral failings. He is blind and without a right hand because his West Indian wife Bertha burned his home to the ground. And here is Jane to reverse the damage, to see for him and heal the domestic damage done by his first failed marriage. She is a cyborg that is all flesh, a union of Rochester and Jane that now comprises the whole of her identity. Too, note that she “never did weary” of this function. Through marriage Jane becomes a completely selfless accoutrement.

Jane acts as an aid to Rochester’s vision as well, though in this case the relationship they share is less metaphorical and more literal. Still, it is not to be denied that this sentiment and the plight of Rochester resonate strongly with respect to the conceit of sight. Rochester is a deformed and confounded lump without Jane’s tireless and selfless care. She is so selfless, in fact, that she becomes a part of him: “No woman was ever nearer to her mate than I am: ever more absolutely bone of his bone, and flesh of his flesh” (450). One might argue that this is just the language of marriage, though that would make my argument all the more poignant. For the idea that Jane is wedded both physically and spiritually to Rochester is precisely what *she* resists and precisely what goes unresisted as she becomes part of a whole rather than an individual.

Returning to Guillory's prologue, this is the moment in the analysis where my attention is most cleanly focused on the object of the text in accordance with I.A. Richards prescribed approach to close reading: "Richards found the psychology of stimulus and response indispensable. Reading could be analyzed as a form of attention, very much what Hayles calls 'deep attention,' a term that we can recognize now as rooted both in the practice of close reading and in the stimulus-response psychology on which close reading was based" (12). The transformations here described through semantic analysis comprise a deeper attention to the text. Though it is difficult, as Culler points out, to positively identify close reading as it is accepted by practitioners of literary criticism, this definition serves as the most useful in parsing this case study because it deals directly with the focus of the project at given stages. The analysis undertaken thus far comprises an example of deep attention as Guillory defines it. The shift towards Hayles' "hyper" attention occurs when the observations gleaned from this closer reading lead me to explore outside of the text using other media and artifacts. In this case, the next step follows what Hayles calls "machine reading." She defines the concept as the blend between close reading and the hypertextual reading that occurs in digital media. The integration of the two techniques leads to a feedback dynamic that proceeds as follows:

The more the emphasis falls on pattern (as in machine reading), the more likely it is that context must be supplied from outside (by a human interpreter) to connect pattern with meaning; the more the emphasis falls on meaning (as in

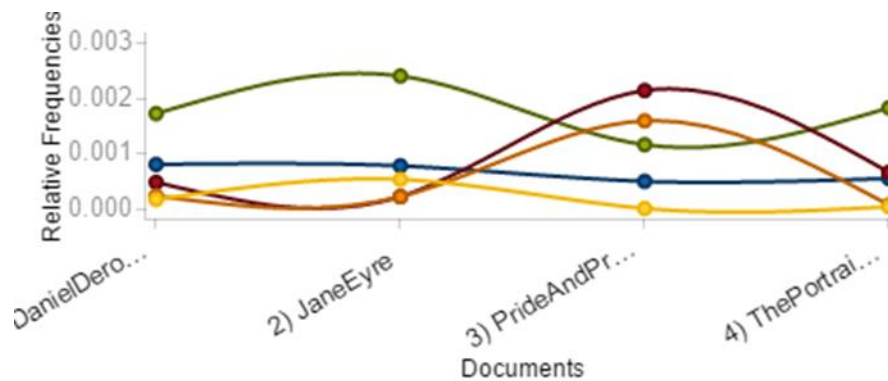
close reading), the more pattern assumes a subordinate role. In general, the different distributions between pattern, meaning, and context provide a way to think about interrelations between close, hyper, and machine reading (Hayles 75).

Here she envisions the insights supplied by traditional reading methods entering into conversation with those gleaned from patterns that can only be viewed from the distant perspective supplied by digital tools. What is on the table here is a re-centering of the construction of meaning in literary analysis on the collaborative effort between close reading and distant reading, in this case using semantic trends as a guiding principle. However, this where my own project runs off the rails, as one cannot apply close reading to large patterns and narrative structures any more than one can analyze the grammatical structure of a clause from a distance. As Moretti asserts in *Graphs, Maps, and Trees*, the objects of analysis in a distant reading are those that have “no equivalent within lived experience” (85). This did not, however, stop me from trying to establish one.

Meaningful Failure and Distant Perspectives

The trends that emerge here from close reading led me to engage semantic trend analysis in an effort to better visualize the semantic shifts matrimony seems to trigger in these novels. To that end, I chose two other works occupying comparable genre and historical positions I had not read closely, *Daniel Deronda* and *Pride and*

Prejudice, as a control group for examining my findings. These works would, I hypothesized, contain the same broad narrative structures of *Jane Eyre* and *Portrait* and might therefore confirm my suspicions about transformative subjectivity revolving around marriage. The first step was to discern meaningful and statistically significant semantic trends that might make the corpus as a whole a bit more clear. The following is a graph showing the frequency of key words “house,” “give,” “turn,” “fall,” and “engage” in the corpus:⁶



This was merely a guiding gesture, as raw frequency does not indicate a great deal on its own. However, one can clearly see even here that the novels in the corpus largely resist this simple collective consideration. Few of the words coalesce at the same point of frequency on even two of the four given texts. This is the first signal of my mistake in considering these objects from a distance.

⁶ This graph was generated using *Voyant*.

The inability of the current analytical scheme to adapt to the new status of the objects under investigation is best understood through Julie Orlemanski's thoughts on reading methodology as script in her "Scales of Reading": "Texts 'happen' when they are read (or otherwise used — translated or archived, for instance). Texts' scale thus depends upon, and takes shape in, the interactions of readers and words, which unfold within regularizing frameworks of textuality and literacy" (218). My interaction with the corpus as it was built and evaluated differed from my interpretation of that interaction. To be less opaque, the project changed and my thinking did not. That idea drives the project towards an investigation of methodology. Orlemanski accesses Bruno Latour to say much the same thing: "When an analyst is faced with 'such sudden shifts in scale,' Latour writes, 'the only possible solution for the analyst is to take the shifting itself as her data ... it is this very framing activity, this very activity of contextualizing, that should be brought into the foreground'" (Qtd. In Orlemanski 218). In an effort to begin to address what is rightly called for in this passage, it is necessary to pivot on the precise instrument of my analysis towards a more complete and productive picture of the breakdown.

The method employed here is a casting of the novels as textual objects to be examined in narrative time. This means that each novel in the corpus is reduced to its textual content and scanned from beginning to end in an effort to examine, much as I did in my close readings, the transformations that may or may not proceed along the

axis of marriage as it unfolds in the “time” generated by the narrative form.⁷ The words measured for their raw frequency in the figure above are here measured as they stand in relation to the plot. The hypothesis was that the frequencies would reveal shifts in the relevance of these words relative to moments where, according to evidence gathered in close reading, the protagonists of each novel *should* be grappling with the shift in subjectivity marriage demands. This works well in some cases. The following figure derived from *Jane Eyre* shows a clear trend:



Aside from some local maximums, the occurrence of the word “house” is clearly most intense at the end of the novel in the narrative space surrounding Jane’s decision to marry Rochester. That said, this graph stands as an entirely different kind of evidence

⁷ This procedure is derived from a unit in Mathew Jockers’ *Text Analysis With R for Students of Literature*.

than I might have wanted. True, “house” is a word that appears often at the end of the novel, but the word does not even appear in the passages I marked as significant in my close reading. Too, the plot for the same word in *Portrait* proves confounding to the anticipated corroboration:



Here there is an intensity at the end of the novel, but it is dwarfed by the massive hit at the beginning of the novel when the protagonist Isabel is farthest from being married. A close reader would see this coming from miles away; these are distinctly different novels with different authors from different points in an incredibly vast literary period. However, the notion that their basic narrative shape (the marriage plot) would create compelling similarities at the macro-level *feels* like the kind of assertion that would be born out in a distant reading. Still, this is precisely what better practitioners of distant method demonstrate is irrelevant to quantitative analysis. Jockers pins the problem down nicely in his analysis of Key Word in Context, or KWIC searches:

Cultural memes and literary themes are not expressed in single words or even in bigrams or trigrams. Themes are formed of bigger units and operate on a higher plane. If we may know a word by the company of words that surround it in a sentence, we may know a theme by the sentences, paragraphs, chapters, and even full books that express it. In short, simple word-to-word collocations and KWIC lists do not provide enough information to rise to the level of theme (122).

Though the scale of my reading was different, I used the same granular objects (words) to attempt to locate larger structures within the corpus. The signals that would indicate the kind of narrative synergies I hoped to uncover would be sent at the level of an entire novel. Too, the evidence gathered using semantic trend analysis here is applied as a measure of verification across methods. The truth claims generated by close and distant reading are not the same; the objects and evidence involved in a close reading are too dissimilar to those gleaned in a distant reading to be verified or falsified by the latter. Rather, they are meant to lead to *new* questions and open alternative lines of investigation.

Franco Moretti sets the stage for this move perfectly in his essay “Operationalizing.” He writes: “Digital humanities may not yet have changed the territory of the literary historian, or the reading of individual texts; but operationalizing has certainly changed, and radicalized, our relationship to concepts: it has raised our expectations, by turning concepts into *magic spells* that can call into being a whole

world of *empirical* data” (15, emphasis mine). This notion of magic words bears a striking resemblance to a passage from famed *empiricist* William James’ seminal “What Pragmatism Means.” The resonance found here is undeniable:

You know how men have always hankered after unlawful magic, and you know what a great part in magic *words* have always played. If you have his name, or the formula or incantation that binds him, you can control...whatever the power may be...But if you follow the pragmatic method, you cannot look on any such word as closing your quest. You must bring out of each word its practical cash value, set it at work within the stream of your experience. It appears less as a solution, then, than as a program for more work (213).

There is a tension here between pragmatism and operationalizing, though it is a productive tension that could yield a greater understanding of the problem at hand. Pragmatism and instrumentalism are not all that different. Still, it is important to explore the practical effects quantification has on the critical process. As James notes, the illumination of a new term leads to “more work.”

Pragmatism in the Discourse of Distant Reading

Pragmatic philosophy presents itself as a productive alternative to the hermeneutic positioning that defines the relationship between close and distant reading

in the case study. To elaborate, C. S. Peirce's logic-driven framework in "The Nature of Meaning" provides a new way of looking at the gap between truth claims presented by the hybrid approach. He writes: "Abduction is the process of forming an explanatory hypothesis. It is the only logical operation which introduces any new idea; for induction does nothing but determine a value and deduction merely evolves the necessary conditions of a pure hypothesis" (216). To unpack this point, Peirce is talking about accounting for new ideas within the pragmatic system, the central maxim for which is as follows: "Consider what effects, which might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object" (Peirce 132). This attention to the realm of practical effects might deceptively lead one to think of pragmatism as a philosophy that only accounts for what already is. Abduction is a way for Peirce to expand the umbrella of practical effects to include speculative thought. This is important to the case study and to the discourse of digital methodology because it anticipates the verification/falsification trap that Moretti and Jockers (and indeed all practitioners of distant reading) must attempt to sidestep in accounting for the relationship between the objects of distant reading and those of close reading. Returning for a moment to Peirce, induction begins to sound quite a bit like the simpler conceptions of quantitative work that Jockers, Moretti, and Ramsay discuss. Specifically, induction in the context of the digital humanities might best be thought of as data without interpretive context or merit. In the case study, the work of determining the raw frequency of words in the

corpus is inductive. Too, deductive logic here is strikingly reminiscent of the scientific *mise en scene* that digital methods generate. To use semantic trend in the case study to attempt to confirm that marriage must be the axis on which the subjectivity of the protagonist shifts in the novels of the corpus was to attempt to use the tools deductively. And so abduction as the central logic of pragmatism offers a fascinating way of accounting for the epistemic position of digital methodology in literary studies because it is the logic of peripheral and rational tension. The present difficulty with putting close and distant reading methods into conversation with one another is that the conversation always comes back to the evidence each method privileges. Abduction aids in facilitating this dialogue because it captures the speculative and problematizing character of both methods and unites them not in output or reasoning, but in the spirit of inquiry the two methods share.

The application of abduction to the distant reading discussion becomes all the more productive in light of the case study and the breakdown that occurs therein between the methods employed to better understand the trends observed within the corpus. To be more specific, the application of semantic trend analysis was mishandled because it was applied *inductively*. Word frequency was measured and noted as evidence to demonstrate that the semantic currents of the novels were indeed what they were hypothesized to be. Applying the logic of abduction here allows the uncovering of evidence during close reading to be a moment at which new questions are asked rather than a moment wherein an investigation of existing questions

continues using new methods. To return briefly to Peirce: “Deduction proves that something *must* be, Induction shows that something *actually* is **operative**, Abduction merely suggests something *may* be” (Peirce 216). Rather than viewing the project as a quest to verify the findings of close reading with the findings of distant reading, the pragmatic approach involves using each method to disrupt and problematize the findings of the other.

Arianna Ciula and Cristina Marras’s “Circling Around texts and Language: Towards ‘Pragmatic Modelling’ in Digital Humanities” provides a point within the ongoing methodological discourse to focus this re-orientation of inquiry. Their thesis resonates with my own in that they seek to address the dialogue between computational methods and the tools of the analog humanities: “DH researchers tend to privilege a symbolic analysis of texts instead of a pragmatic one. The former view on text focuses on partitioning it into descriptive chunks or components, be they material or conceptual, while the latter, as we intend it here, calls for an integrative approach where the *use* of language in understanding and manipulating texts is given a prominent place” (Ciula and Marras). The essay defines the pragmatic approach to modelling as “center out,” which is a productive way of problematizing the present dynamic of cooperation between the more scientific approaches of computational analytics and the semantic work of literary analysis. To elaborate, the “bottom-up” and “top-down” approaches that are more common to tech-driven fields and discourses treat the task of literary analysis as deductive or inductive work. Models that break down given texts into

discrete pieces for analysis and comprehension adopt too much scientific methodology to perform the troubling of established knowledge and ideology that is vital to inquiry in the humanities, particularly the study of literature. The operative approach in “Pragmatic Modelling” seeks to use the language and metaphors of humanities scholarship to construct models that more accurately reflect the labor in which they engage:

The awareness of the value of pragmatics in modelling acts contributes to making rigorous practices open to a creative and imaginative dimension. In this context, metaphors often function as models to integrate the interpretation of theories, especially when there are not terms or concepts to be used that are directly related to the observed facts/objects, in other words when there is an indirect or remote relation between observer and *observatur*, *explanans* and *explanandum*. In these cases, metaphors compensate or fulfill a "linguistic gap", the "inadequacy" of the ordinary language for scholarly purposes (Ciula and Marras).

The reason pragmatism operates as an efficient interlocutor between close and distant methods is because it relies on a relational and experimentally-driven logic that is absent in many of the more prescriptive language games engaged by the sciences. Digital tools prove a sticky wicket for many theorists because the discourses of science are ever-encroaching in characterizations of their functions. Pragmatism provides an

alternative to parsing these differences that accounts for the impracticality of defining the evidence gathered by close and distant reading methods using a common reservoir of theoretical language. As Ciula and Maras astutely anticipate: “In order to further explore the relationship between theory and practice within DH models of modeling, it will be important to develop appropriate *ad hoc* guiding frameworks (*based on case studies designed around the needs of specific contexts of modelling*). Eliciting a pragmatic awareness and giving prominence to a metaphorical language seems to us a promising way forward to explore such relationships” (emphasis mine).

John Dewey’s pattern of inquiry presents itself as one such productive metaphor for constructing a model of investigation suitable to the case study at hand. He lays out a procedure for the pursuit and creation of knowledge that greatly informs the discussion of a pragmatic digital methodology in his aptly titled chapter “The Pattern of Inquiry.” To begin with, Dewey’s construction of rationality resonates deeply with the issue at hand: “Logic is not compelled, as historic ‘empirical’ logic felt compelled to do, to reduce logical forms to mere transcripts of the empirical materials that antecede the existence of the former” (Dewey 318). This assertion foreshadows the structure of Dewey’s pattern in that it establishes, much as Peirce’s abduction framework does, the importance of accounting for the pursuit of new knowledge and the relation of that pursuit to the disruption of existing knowledge. To wit, the pattern of inquiry begins with an indeterminate situation. Drawing this back to the case study, the task of

investigating the ties between marriage and shifting subjectivity clearly proceeds along the axis of verification rather than exploration. I was not after what I did not know but rather what I hoped I knew. This search for an explanation leads the inquirer to discover what Dewey calls the problem. This is the perceived point at which the indeterminate situation arises. It is important to separate this from the *cause* of the problem, which lies further along in the pattern, because the problem itself is the point where understanding and experience depart. It is also the demand for these two to meet again. This leads quite obviously to the quest for a solution to the problem. Dewey describes this step as the point in the inquirer's process where ideas and reasoning are used to attempt to place existing knowledge into conversation with hypotheses in order to clarify the indeterminate. The next step is to determine the relation of the proposed solution to existing knowledge and established objects of observation in order to test its validity. This involves putting the solution into conversation with other rational structures and facts to see where it fits with regards to them. Dewey characterizes the utility of the process thusly: "The operative force of facts is apparent when we consider that no fact in isolation has evidential potential. Facts are evidential and are tests of an idea in so far as they are capable of being organized with one another. The organization can be achieved only as they *interact* with one another" (Dewey 328). Here the emphasis is on interaction, a state of being that proves difficult to define in the discourse of reading methodology. This relationship lends itself, Dewey finds, to the understanding of operational evidence as dependent upon its capacity to interact with

the peers of its epistemic community: “They are not merely the *results* of operations of observation which are executed with the aid of bodily organs and auxiliary instruments of art, but they are the particular facts and the kinds of facts that will link up with one another in the definite ways that are required to produce a definite end” (328). As Peirce lays out in his discussion of the pragmatic maxim, objects are defined by the conceptions that emanate from them. The moment of in-definition, as it is described in Dewey’s framework, is a moment at which the conceptions that would define an object are obscured and its relations to fixed concepts unclear.

To return these assertions to the case study, the pattern of inquiry may be applied as a linguistic framework for re-structuring the model of investigation employed in the distant reading of the corpus. Rather than approaching the output of my close reading as a point of departure for distant verification, I can reconsider the relational character of the evidence gleaned in that reading and craft a distant reading plan that addresses what I *don’t* know. Take the passage upon which so much hinged in the close reading of *Portrait*:

“‘You are too fond of your liberty.’ ‘Yes, I think I am very fond of it. But I always want to know the things one shouldn’t do. ‘So as to do them?’ asked her aunt. ‘So as to choose.’ Said Isabel”

The structure of this exchange leads me to conclude that Henry James here wishes to underscore Isabel’s pre-occupation with self-determination. However, the same

reflexive character that prompts the contrarian retort “so to choose” also reflects a deep regard for the rules of society. It is entirely valid to read this passage in a totally different way than I initially did. In fact, the sheer number of semantic and linguistic choices in even a small sample of text like this one represents a staggering number of potential indeterminants.

Conclusion

The application of digital analytics to literary study represents a crisis of methodology that will come to define the nature of humanistic inquiry for decades. What I propose here is an alternative method of approaching this problem that ameliorates the friction that so often accompanies these discussions. Examining texts for trends that verify hypotheses gleaned from close reading only reifies existing critical approaches. Established knowledge should be disrupted by the introduction of digital tools just as every new critical approach in literary studies has challenged the human subject. The application of pragmatic philosophy here stands as a means of capturing the excitement and potential of digital methodology without alienating the critical heritage of close reading. In her essay “The Literary, the Humanistic, the Digital: Towards a Research Agenda for Digital Literary Studies,” Julia Flanders frames the issue thusly:

Digital literary study must thus consider, as a central problem, the empowerments and disempowerments contingent on its use of tools, not

because they are tools, but rather because of the questions they raise about how we are situated in relation to our objects and methods of study. The human scholar of literary studies must be present in the inquiry at its end points – as the initiator of questions and consumer of answers – and also *inside* the process, *inside* the tools, as they mediate between us and the field we are seeking to grasp (Flanders).

It is imperative, both in this passage and in a larger sense, that digital tools are considered outside of their instrumentality. Scholarship lives in wrinkles that refuse to be smoothed over. Flanders' essay reveals that this vital force may face suppression by neoliberal research programs eager to produce projects that are both easy to consume and demonstrative of the awesome power of humanities computing. What must be addressed is the positioning of the reader relative to the text as it is mediated by digital analytics. Projects that focus on presenting something like quantifiable certainty in the realm of literary studies certainly beggar the aforementioned tensions and privilege computation without a thought towards actually understanding what has been done. Alan Liu describes the climate that generates demand for such projects in his forthright "Where Is Cultural Criticism in the Digital Humanities?" He links the rise of funding and prestige for digital projects to the economic collapse of 2007 to demonstrate that administrative entities within the academy looking to assuage concerns about the "subjective nature" of the humanities are more than willing to put the word "computer"

on a project's masthead in order to look more vocationally relevant in a post-recession world that demands instrumentality from education. He laments the notion that scholars of digital methods are seen as having the capacity to redeem the humanities from economic failure rather than contribute to cultural discourse (Liu 6-8). Indeed the application of digital methods to literary analysis has been seen at times as a ward against the ills of an unforgiving job market. Matthew Kirschenbaum astutely points this out in his "What is Digital Humanities and What's it doing in English Departments": "Often wrenching changes linked to both new technologies and the changing political and economic landscape have led to the construction of 'digital humanities' as a free-floating signifier, one that increasingly serves to focus the anxiety and even outrage of individual scholars over their own lack of agency amid the turmoil in their institutions and profession" (Kirschenbaum 60).

The consternations expressed here by Liu, Flanders, and Kirschenbaum all emanate from a lack of investigation where the tools themselves are concerned. Understanding how digital methods inform the critical conversations into which their users wade is of the utmost importance. The pragmatic approach is but one of many potential answers to this call to action. Critics such as Jockers, Moretti, and Ramsay elegantly characterize their own methodologies. However, the pattern of inquiry and the logic of abduction stand as a useful accoutrement to their frameworks. It may be productive, then, to envision a larger conversation beginning with the end of this investigation and the application of the pragmatic approach to the discursive unease that each of the three

aforementioned scholars identify in their work. Pragmatism might function as the ideal mechanism of mediation for the rhetorical friction that emerges in discussions of distant reading as it relates to close reading. Literary criticism lives in tensions that refuse to be resolved. This sentiment, which I will contend is at the heart of literary studies, resonates well with the following: “Logic is the criticism of conscious thought, altogether analogous to moral self-control; and just as self-control never can be absolute but always must leave something uncontrolled and unchecked to act by primary impulse, so logical criticism never can be absolute but always must leave something uncriticized and unchecked” (Peirce 169). This idea is at the heart of pragmatic thought and, possibly, the way forward in better understanding the contributions of computational analytics to literary work.

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