Exploring Linguistic Structure in Short Fiction: the case for collaboration between literary and technical analysis

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Introduction:

The following project serves as an exploratory glimpse at a possible future of literary study. It takes a research experiment approach to a typically humanistic field with the intent of demonstrating a need for linguistic and literary collaboration. This project is intended to be a marriage of hard scientific methods and humanistic interpretation. I want to demonstrate the usefulness of technical analysis in performing literary research, to show the value in using objective measures in a traditionally subjective approach. I see the future of the humanities, including English studies, becoming more and more technical with every passing day. The recent emergence of Digital Humanities as a field of academic study only solidifies this claim.

This project will be a combination of technical and literary analysis. I aim to show and analyze objective data to show the potential contribution of technology to the literary field. Much of the strength of literary work comes from its subjectivity, from the individual interpretations that characterize the field of English. English studies often explore questions that cannot be quantified, questions about how a text might be interpreted on the whole, what the underlying meaning or larger picture is. A more technical analysis relies on objective data points, which must also be interpreted, and points to conclusions about what is factual, what actually exists. Of interest here is combining the interpretation of the parts of a text with the interpretation of the whole, joining the literary and the technical.

Throughout this paper, I will use small case studies on a sample of texts to demonstrate how a research question can be robustly explored using a combination of literary and quantitative techniques. I first pose here a research question to explore: does the genre classification of a fiction text have a structural element? If so, to what can the structural differences be attributed? Are the differences related in any way to the content of the stories themselves? I then narrow the field of interest to short fiction and I propose the following hypothesis: a structural difference can be found between two genres of short fiction stories, science fiction and “actual world” fiction. I further anticipate that a structural difference between the two classifications of fiction can be attributed to an increased need for creating a setting framework within the science fiction works.

I do not aim here to simply prove that a distinction between these two types of texts exists. That conclusion could be reached using just non-quantitative measures. I am interested in the collaboration between the technical and the literary and attempting to illustrate the value in using both for textual analysis. The purpose of this project is more to show the possibility and potential of this type of work. The following case studies are only a small selection of diagnostics that could be implemented in aiding the interpretation of literary texts. I intend to show not only that the diagnostics used in these case studies provide valuable information in answering the research question posed above, but that they could be useful tools in supporting other literary claims.

As noted above, the technical analysis cannot account for all aspects of this project. Not only will I be looking to count instances of certain structural properties of the selected texts, but I also seek to further examine the repercussions of those properties. That is, I want to discuss as well how the structural decisions might have an impact on the reader and on the audience, and how the genres themselves affect the reader. The reader plays an enormous role in any work of fiction. Both author and reader contribute to the interpretation of a text. The author guides the audience through the story, but ultimately, the reader must determine what resonates.

An important note must be made about the relationship between audience expectations and genre. The two types of fiction that I chose for the purposes of this project elicit very different expectations from their respective reader bases. A reader picking up *The New Yorker* has a different expectation for the fiction it contains than a reader who chooses to read *Galaxy Magazine*. This difference may be responsible for differences in content and structure. It brings up the following question: to what extent is the audience of a publication responsible for its classification as belonging to a particular genre? Science fiction is fiction that assumes the existence of another world, another setting; it is "alternative-world" fiction. This alternative world is one that the reader may not be familiar with, and which has rules governing it that may not exist in the actual world. Actual world fiction does not have to make the assumption that there is another world. The story is set within the confines of the actual world around the reader. For my analysis, I use the novelty of the setting as the means to select which genre a short story belongs in, but I did take into consideration the location of publication.

Literary magazines have target audiences in mind; *Galaxy* and *Modern Science Fiction* are concerned with reaching readers interested in science fiction, *The New Yorker* and *The Atlantic Monthly* target a completely different demographic. In order to perform the following analysis, this relationship must be kept in mind, as it plays an important role in interpreting the data collected in the case studies. It is a problem that must be faced in order to proceed with the following analysis.

Organization of the following analysis:

In my attempt to show the successful interaction between technical and literary analysis, I will explore the questions of genre, structure, and audience posed above through a series of case studies. The three case studies below explore narrative mode, information status of the pivot nominal, and subordinate clauses respectively. Each case study will be presented in the form of a quantitative study. They each begin by suggesting a hypothesis based in discourse theory, literary theory, and linguistic theory, which will then be explored using a variety of tools and methods and a selection of pieces of short fiction, both actual world and science fiction. Using the data provided by such tools, I present arguments about the differences and the similarities present between the two types of fiction and attempt to situate the results within the context of the theoretical background.

Finally, I intend to combine the results of the three case studies into a comprehensive argument about the nature of genre in short fiction. Specifically, I will argue for or against the influence of linguistic structural differences in defining the genre of the text and the extent to which the audience factors into the assigned genre. Before delving into the case studies, though, I will give some insight into the process by which I arrived at the texts and tools I use throughout this analysis.

Process:

Perhaps one of the most difficult hurdles I've encountered in the genesis of this project is deciding which primary works to include in my analysis. When I originally conceived the idea for this thesis project, I had wanted to examine both modern and historical short fiction. I was drawn to the contemporary science fiction that had been a part of my early reading; I wanted to

look deep into the writings of Orson Scott Card, Margaret Atwood, Ray Bradbury, and Kurt Vonnegut Jr.

This plan proved difficult when I attempted to clarify my project, tried to explain how I would make comparisons between the actual world fiction and the science fiction. I was already attempting to reach conclusions about an entire genre using a select few works; trying to span almost a century of writing was simply too large of a range. I decided I would have to narrow the range, choose a time period, and create a specific corpus of material. Recognizing that I may not be able to make my project as comprehensive as I would have liked, I settled on making it detailed and specific enough to be considered viable research.

So, the question became: modern or original? Many of the undisputed 'masters' of the science fiction genre produced their work earlier in the twentieth century than the authors I had focused on growing up. Bradbury, Wells, Asimov, Herbert all wrote decades earlier than Card. So, the question lingered: if I am writing an analysis that hinges on the idea of science fiction as a genre, shouldn't I look at the work of the authors that defined the genre? Would it be a mistake to choose the later authors before looking at the works that made it so relevant and popular?

The more modern authors and texts proved difficult in another way. I planned to create an analysis heavily dependent on examining genre. I would inevitably have to discuss the genre titles given to the works by the publishers, the magazines, and the creators of the texts. I noticed a trend over the time to classify works as many different genres, rather than giving one or two genre titles to a text. That is, the lines differentiating the genres, in the eyes of publishers, have become less defined. A modern work might be classified as a "science fiction, romance, thriller"; such a wide classification would make my analysis much more difficult. Taking this into consideration, I decided that I would probably like to focus my attention, and this thesis, on short fiction from earlier in the twentieth century. I eventually settled on the time period spanning 1945-1960. I wanted to choose an era where science fiction was also a popular genre amongst readers. The 1945-1960 period directly follows the so-called "Golden Age of Science Fiction", which lasted from about 1938-1946. The "Golden Age" sparked interest in science fiction, and the genre gained widespread popularity and attention from readers.

My decision to choose this era was also influenced, in part, by the accessibility of the works of fiction. As I began to formulate a better idea of the tools I wanted to use in my analysis, other problems with my primary sources arose. Much of the software that I wanted to incorporate into my project required full-text, digital forms of the text. The availability of more modern texts is often limited by the copyright laws to which they are bound. So, working with older texts that may be out of print or out of copyright removes the legal liabilities in dealing with stories that are not publicly available.

Classification of Texts as Science Fiction or Actual world Fiction:

Before I could even select the texts that would make up my sample set, I first had to define what features and characteristics would indicate a work of science fiction or a work of actual world fiction. It is not enough to simply look at how a critic or reviewer defined the genre of the particular text; the genre titles used are often very fluid and wide-ranging. I wanted to create a more definite measure by which to claim that the texts I ultimately decided to use fit into the genres and are suitable examples for my analysis.

The most important characteristic that I use to determine the genre of the texts is the setting. For the actual world fiction works, the setting must be one with which the audience is familiar and which could, with no stretch of the imagination, exist in the real world. That is, the place and time of the piece of writing should not be fantastical, otherworldly, or incongruous with what the reader assumes to be true about the world in which he lives. These pieces do not need to be historical in the sense that they explore the lives of historical figures or events.

The above definition makes use of a broad generalization. There will be variations among individual readers about what is a realistic or plausible setting. I pose here broad 'realities' that can reasonably be assumed to apply to most people within a given society. I want to deviate briefly here to discuss the idea of 'mental encyclopedias' and their role in interpreting fictional texts. Lubomír Doležel tackles the concept of mental encyclopedias in his book *Heterocosmic: Fiction and Possible Worlds*, noting the difference between an "actual world encyclopedia" and a "fictional encyclopedia." The former contains all knowledge that a reader has about the world in which he lives, the actual world. The latter contains all the knowledge

about the fictional world. The fictional encyclopedia will always digress from the actual world encyclopedia to a degree.

> Fantastic fiction provides us with numerous examples of fictional encyclopedias that contradict the actual world counterpart, as any visitor to the non-natural or supernatural worlds quickly discovers. As he or she crosses form the natural into the non-natural world, his or her encyclopedia has to be modified. The visitor has to learn the encyclopedia of the alien world. (179)

I posit that Doležel's sentiment holds true for science fiction texts, as well as fantastic. They have a greater degree of divergence from the actual world encyclopedias than actual world fiction. Due to this digression, I suspect that the science fiction texts will have certain linguistic qualities that aid the reader in assimilating the new fictional encyclopedia with their own actual world encyclopedia.

It is worth nothing that not every individual has the same actual world encyclopedia. These encyclopedias are, in part, constructed by personal experience; each person's mental encyclopedia will differ from anyone else's. Thus, when I discuss a text or aspect of a text being known information or familiar information to the reader, I am using a generalization. Mostly, I refer to information that one would be reasonably expect any member of society to know. The science fiction texts are those that are set in either a time or a place that requires some level of suspension of reality in order to imagine. Often these are dystopian universes, societies, or time periods; these alternate universes are necessarily not "now."

The location of publication is also an important measure that I considered when attempting to classify the works of fiction. The original magazine or journal in which the text was published provides some clues as to the type of fiction it is, and served as a starting point in my initial selection of texts. I chose publications that I believed would be a good source for a particular genre of fiction and then examined the setting of each work to classify its genre. The location alone cannot be the sole factor when determining genre, as evidenced by one of the texts used throughout this analysis: "Lance" by Vladminir Nabokov. Though published in *The New Yorker*, a stereotypical source for actual world fiction, this short story clearly falls in a different

category: speculative fiction. I briefly discuss the special case of speculative fiction below. For the purposes of this analysis, I located texts in both genres, as defined by their setting, which were similar in content and/or in plot, in order to highlight the structural and linguistic differences in the texts.

I do recognize the potential for overlapping cases of actual world and science fiction. That is, it cannot be claimed that the two genres are always distinct and separate. In particular, the case of speculative fiction should be noted. Speculative fiction as a concept has been popularized relatively recently and refers to a type of fiction which speculates about the future of the actual world. In a sense, it is both actual world and science fiction at the same time, referencing the real world but set in a future setting that has yet to be realized. Margaret Atwood makes an important distinction between science fiction and speculative fiction in her book *In Other Worlds: SF and the Human Imagination.*

> What I mean by 'science fiction' is those books that descend from H.G. Wells's *The War of the Worlds,* which treats of an invasion by tentacle, blood-sucking Martians shot to Earth in metal canisters—things that could not possibly happen—whereas, for me, 'speculative fiction' means plots that descent from Jules Verne's books about submarines and balloon travel and such—things that really could happen but just haven't completely happened when the authors wrote the books. (6)

When I use the term speculative fiction, I make the same distinction as Atwood. One of the texts included in my selection, *Lance*, is a prime example of a speculative fiction text, telling the tale of future expeditions to the moon.

This discussion of defining genre and providing distinctions between multiple genres brings to light the question: what is genre? Adena Rosmarin tackles the question in her book *The Power of Genre*, focusing on the way the term is used in literary criticism and on the role of the critic in defining and constructing genre. Rosmarin presents the case for deductive genre criticism, arguing,

> The genre is the critic's heuristic tool, his chosen or defined way of persuading his audience to see the literary text in all its previously

> inexplicable and "literary" fullness and then to relate this text to those that are similar or, more precisely, to those that may be similarly explained. (25)

She continues on to emphasize the role of similarity and difference in texts as means by which to determine genre. A critic must not only look for the similarities in a set of texts, but also explore the differences. A genre is not just defined by how similar the texts in it are to each other, but in what way they affect critical thought and the impact that they have on the reader.

In the following project, I begin by defining the two genres, science fiction and actual world fiction, in terms of a particular feature- the setting. As the project continues, I will explore the similarities in linguistic features and the differences, ultimately considering the impact that texts have on the reader. In this way, I take a Rosmarin-centered approach, looking to the pragmatic and rhetoric impact of the texts as a way of determining genre. The goal of the project is to use technical and literary tools to explore this impact. In a world of increasing familiarity with technology, there is space and opportunity for the field of literary analysis and criticism to embrace more quantitative methods and integrate with them, opening up more possibilities of generalization.

Literary analysis attempts, in its most traditional form, to provide a complete and thorough account of a text or feature of a text. In other cases, this analysis is widened to include all the works of a single author or of a small group of authors. It is a very content-driven practice and results in very specific conclusions regarding a relatively small amount of text. Linguistic and syntactic analysis tend to be more focused on commenting on the frequency of occurrence of specific linguistic features, but not necessarily projecting meaning upon those features. I argue here that the integration of quantitative linguistic analysis with more traditional literary analysis allows for more robust analysis, marrying the "why" with the "how," combining content and form.

Case Study 1: Narrative Mode

Though this project will continue on into case studies more reliant on quantitative analyses of textual elements, I begin with a more traditional literary analysis of an integral literary feature of any text: the narrative mode. Broadly, narrative mode refers to the way that

the author chooses to convey information to the audience and to articulate the plot of the story. The narrative mode includes both the narrative point of view and the narrative voice. The narrative mode of piece of fiction is consistent throughout the text. That is, it is a constant quality of a text, rather than a linguistic feature that can be counted or quantified

The narrative point of view refers to the perspective of the narrator in a text and how they are related to the story that is being told. There are three main points of view: first-person, second-person, and third-person. First-person point of view depicts a text through the eyes of character within the story. Second-person point of view allows the author to speak directly to the reader of the story. Use of second-person point of view in fiction is quite rare and can be difficult to identify. Second-person narratives can occur in very specific types of texts, like the choose-your-own-adventure novels that were popular in the 1980s. Sometimes, a second-person narrative mode is paired with a first-person one, where the narrator is a character within his own story. This is technically an example of first-person narrative. Third-person point of view involves a narrator that is removed from the action of the text. Specifically, in third-person point of view, the narrator is not a character within the text. The most obvious indicator of point of view is the pronoun usage within a text. First-person accounts use first-person pronouns (I, we) to refer directly to the viewpoint character. Third-person pronouns do occur within first-person narratives, but they do not refer to the character giving the account, from whose viewpoint the story is being told. The second-person pronoun (you) referring to the viewpoint character is seen in cases of second-person point of view. Likewise, the third-person pronouns (he, she, they, it) are indicative of third-person point of view.

In addition to the person-oriented perspective of a text, there are several other aspects of a texts narration that are considered when discussing the narration of a story. These are part of the narrative voice, which describes how the story conveyed. In cases of third-person point of view, the level of omniscience of the narrator can differ. There are three main levels of omniscience a third-person narrator can be: fully omniscient, limited omniscient, and objective. A fully omniscient narrator knows everything about all the characters in the story. Omniscient narrators can be identified by describing the thoughts, feelings, and actions of multiple characters. These narrators are almost exclusively found to be speaking from the third-person point of view, though there are a few examples of first-person omniscient narrators. When a narrator is only

privy to the thoughts and feelings of a single character, they are said to have limited omniscience. This third person variation is also sometimes referred to as the central intelligence point of view, which tells a story from the point of view of a single character, though it is not told in the first person. In central intelligence narratives, the only information that the reader has about the world is that which the character would be aware of. In contrast to both omniscient and limited omniscient narrators are the objective narrators. Objective narrators tell only what is happening in the tale, without telling any internal thoughts or feelings of any character. The objective point of view portrays a more neutral and detached observer as a narrator.

When considering the narrative voice of a text, it is also necessary to address the reliability or unreliability of the narrator. Though unreliable narrators are far less common than reliable ones, the inclusion of one changes the entire meaning of a text and requires a different interpretation on the part of the reader. Originally defined by Wayne C. Booth's *The Rhetoric of Fiction* published in 1961, the term "reliable narrator" has been the subject of many academic works, each posing a different definition. Booth's account focused primarily on the relationship between the narrator and the 'implied author', specifically the relationship between the actions or words of the narrator and the norms and morals held by the implied author (Olsen). Booth's view was challenged Ansgar Nünning, who posited that the role of the unreliable narrator can more accurately be defined by the relationship between the narrator's words and the readers' world view. Most academics tend to agree that the unreliability of a narrator is characterized instead by the way his world view is congruent with the reader's world view.

Whether a narrator is called unreliable or not does not depend on the distance between the norms and values of the narrator and those of the implied author but between the distance that separates the narrator's view of the world form the reader's world-model and standards of normality" (Nünning, 1997). Regardless of the distinctions made by the theorists presented above, there are several signals that most academicians agree mark an unreliable narrator. Nünning proposed three categories of such signals: intratextual signals, extratextual signals, and reader's literary competence (1997).

In the following analysis, I will look at a series of short stories from the late 1940's and early 1960's which fall under my two defined categories of science fiction and actual world fiction, providing a more traditional literary analysis of how the point of view relates to the

stories. The texts I will be using include: *Two Weeks in August (1951), Harrison Bergeron (1961), Colette (1948), The Drunkard (1948), A Good Man is Hard to Find (1953),* and *Lance (1952).*

Working off of the main hypothesis that the unique setting of science fiction stories influences the overall structure of the text, I posit the following hypotheses regarding the narrative mode of science fiction and actual world short stories.

I expect the science fiction stories to have more third-person narrators. Though third-person narratives are generally more common in fiction, I think that when compared to the actual world stories, there will be a greater number of third-person narrators in the science fiction classification. A third-person narrator allows for more extensive explication at the beginning of a story. Descriptions of the setting, of the world in which the plot takes place are more easily given by a third-person narrator. Additionally, in texts with third-person point of view, I expect the narrators of the science fiction stories to have a greater degree of omniscience than the narrators of the actual world texts.

As the actual world stories are set within the frame of the world in which the reader exists, I expect there to be a lesser need for exposition. This might translate as a tendency toward first-person or second-person narratives.

Similarly, I do not expect to encounter many unreliable narrators in the small selection of texts presented here, though, generally, I would expect the number of unreliable narrators to be greater in the actual world stories. Since the readers of actual world fiction already have an understanding of the rules governing the world in which the story is set, it is easier for authors to effectively include extratextual signals of an unreliable narrator. These extratextual signs can include contradictions of the reader's general knowledge of the world or logical impossibilities. In the science fiction stories, since they involve an unfamiliar setting and worldly conditions, it may be more difficult to for a reader to recognize when the narrator contradicts the rules of the fictional world.

	Variation	Two Weeks in August	Harrison Bergeron		Lance		Colette (First Love)	The Drunkard	A Good Man is Hard to Find
POV									
	First-Person	X			X		X	X	
	Second-Person								
	Third-Person		X						X
Omniscience									
	Full	N/A			N/A		N/A	N/A	
	Limited	N/A	X		N/A		N/A	N/A	X
	None/ Objective	N/A			N/A		N/A	N/A	
Narrator Identity									
	Protagonist						X	X	
	Non-Protagonist	X	X		X				X
Reliability									
	Reliable	X	X		X*		X	X	X
	Semi-Reliable								
	Unreliable								

*Narrators in speculative fiction are typically not thought of as unreliable for speculating on possible futures

From the results above, at first glance, there does not appear to be a strong connection between the type of text and the perspective from which it is told. Specifically, a significant difference between the type of perspective used in the short stories classified as science fiction and those classified as actual world fiction does not seem obvious from looking at the chart above. The distributions of the point of view, level of omniscience, and reliability are not uniform in any one category.

Though the data do not seem to show a clear distinction between the two types of fiction, the results do warrant other discussion. The hypotheses presented rely on the content of the texts, so we need to more closely examine the content of the individual stories to see whether the hypotheses have merit. Here, I would like to take a more detailed look at one example of a science fiction short story and one example of an actual world short story.

In "Harrison Bergeron", a third-person narrator outlines the dystopian nature of a future society in which equality is valued to such a degree that exceptional members of the population must wear physical handicaps. The narrator very explicitly lays out the setting of the story:

> THE YEAR WAS 2081, and everybody was finally equal. They weren't only equal before God and the law. They were equal every which way. Nobody was smarter than anybody else. Nobody was better looking than anybody else. Nobody was stronger or quicker than anybody else. (102)

Before the reader even knows anything about the protagonist or any of the main characters, he is already aware of the state of the world and the society presented within the short story. Bradbury used his narrator to clearly state the differences between the fictional 2081 United States and the world with which the reader would already be familiar. The third-person narrative point of view allows for this type of exposition.

The narrator has limited omniscience in Harrison Bergeron, which allows the reader insight into some of George Bergeron's thoughts,

> He tried to think a little about the ballerinas. They weren't really very good-no better than anybody else would have been, anyway […] George was toying with the vague notion that maybe dancers shouldn't be handicapped. But he didn't get very far with it before another noise in his ear radio scattered his thoughts. (6)

For the actual world fiction category, I will look at Flannery O'Connor's "A Good Man is Hard to Find". The data suggests that both O'Connor's short story and "Harrison Bergeron" have a similar narrative mode. Whether the narrative mode has similar impact on the content of the stories can only be determined through a careful analysis. "A Good Man is Hard to Find" tells the tale of a family vacation gone awry. Like "Harrison Bergeron", the story is told from the third-person perspective, rather than from the point of view of any of the characters. The plot focuses primarily on the grandmother protagonist. The third-person narrator has limited omniscience which is used to give the readers a look into the thoughts and feelings of the grandmother.

In fact, the story opens with such thoughts, told in a very matter-of-fact style that O'Connor employs throughout the entire piece, "The grandmother didn't want to go to Florida. She wanted to visit some of her connections in east Tennessee and she was seizing at every chance to change Bailey's mind" (186). The reader is immediately aware of the character. This is in direct contrast to the way that Ray Bradbury chose to begin his story, which began by emphasizing external setting aspects rather than internal character thoughts and feelings.

While the data suggests that the two stories are similar, in terms of linguistic structure, the contribution of that structure to the content of the story is very different between them. The

limited omniscience perspective in “Harrison Bergeron” allows the reader to connect with the thoughts and emotions of the Bergeron family; the reader is able to feel the jarring effect of the mental handicaps on George Bergeron’s mental state. In contrast, in Flannery O’Connor’s tale, the reader has an inside look at the thoughts of the grandmother, but it is much more difficult to identify with her character. This difference results from the types of thoughts that the authors chose to share with the audience; in “Harrison Bergeron” we get more glimpses of emotional thoughts , whereas in “A Good Man is Hard to Find”, the thoughts the audience has access to are much more dry and generic. Clearly, though the two stories have similar narrative structures, the structures play a different role in each story. There is not enough data here to generalize the contribution of the structure to all texts of a particular genre, but it may be an avenue for future study.

In terms of the reliability of the narrator, very little can be determined from this small sample. All the texts included in this study had reliable narrators, which may just support the claim that there is a generally higher frequency of reliable narrators than unreliable narrators in all fiction. We cannot make much of a comparison here between the science fiction short stories and the actual world fiction stories.

Returning to the hypotheses posed earlier about the narrative mode of the short fiction categories, it is evident that data alone does not provide enough information to make conclusions about the contribution of the narrative mode to the story as a whole. There is a non-quantitative element required to analyze the narrative mode of the short fiction; the content must be considered as well as the format.

Case Study 2: Definiteness Effect and Information Status in Science Fiction and Actual world Short Fiction

In investigating genre, it is impossible to remove the audience from the picture. The audience, or perceived audience, in part determines the genre of a text from a publishing standpoint. I am interested in exploring whether the audience can influence the genre of a text on textual level. That is, I want to explore whether the linguistic structure of short science fiction texts treats the audience differently than the structure of actual world short fiction. It may sound odd to speak of linguistic structure as having agency, but here I refer more to authorial

decisions in regards to the reader. What does the author expect the reader to already know? What information must the author provide explicitly for the reader, in order for them to comprehend the text? Does the author rely on the previous knowledge of the reader?

In order to attempt to answer some of these questions, I turn to the work of linguists Ellen Prince, Gregory Ward, and Betty Birner. Some of Prince's best known work is in the area of interpreting information-status, the 'oldness' or 'newness' of information in a discourse, in regards to the audience. Ward and Birner have produced several studies that examine the role of definiteness in discourse and text. While Ellen Prince's work primarily addresses canonical subjects, it provides the starting point for this examination of information-status in fiction and the possibility of finding structural differences between science fiction and actual world fiction. Prince describes the relationship between definiteness and information-status, which is necessary for the following analysis. The work of Ward and Birner provides a theoretical framework that is directly related to the data that I am examining here. In "Definiteness and the English Existential", they interpret non-canonical subject constructions, like there-sentences, and explain how the construction is indicative of information-status.

In "The ZPG Letter: Subjects, Definiteness, and Information-Status", Ellen Prince performs an in-depth analysis of a single text- the Zero Population Growth fund-raising letter. Her analysis is similar in intent to the analysis being performed in this thesis, with the main difference being her focus on a single text rather than a larger corpus. She investigates the differences between subjects and non-subjects with respect to definiteness, a formal linguistic feature, and information-status of the entities, a discourse feature (Prince 1).

Prince's arguments are based on a commonly accepted notion that subjects occurring in the canonical position, for English this refers to subjects occurring before the verb in the sentence, tend to be definite and tend to refer to 'old' or known information to the reader. Information status of a noun refers to whether the information is already known to the reader. Information that is common knowledge is hearer-old; the hearer, or reader, is aware of it already. Information that the hearer, or reader, is not aware of would be hearer-new. As Prince points out, hearer-new information does not typically appear in the subject position of a sentence. Hearer-new information also is typically indefinite. An understanding of definiteness is important to the analysis. As Prince writes, "Formal definiteness pertains to the marking of the

NP (noun phrase) as definite or indefinite […]. Marking of definite NP's in English may be done by the definite article (*the*), demonstrative articles (*this, that*), possessive adjectives, personal pronouns (e.g. *I, they*), and (unmodified) proper nouns" (3). Prince goes on to remark cases of linguistic situations in which only indefinite NP's occur, namely, in There-sentences (4). The NP's that exist in an English language construction involving the insertion of the word *there* before a form of *be* and then a noun phrase are also called pivot nominal. In these constructions, the word *there* is expletive, meaning it points to the existence of something, rather than locative, which means it refers to a particular location. There-sentences, using the existential there, are the linguistic feature that I will examine in this case-study and I will explore them further in my discussion of Ward and Birner's work.

In using Prince's and Ward and Birner's work, I aim to explore the information status (the oldness/newness) of noun phrases in both science fiction and actual world fiction texts, looking for differences in the frequency or location of occurrence of There-sentences, which are markers of hearer-new information.

As one of the hallmark characteristics of many science fiction stories is often an unfamiliar setting, be it a novel world, planet, universe, or century, I had expected an analysis of the science fiction texts to show a frame of sorts. That is, I anticipated that the authors of the sci-fi works would have to set up the story with introductory information and set the scene for the readers, who are unaware of the time/location of the story they are about to consume.

I expected this frame to be indicated by the information status of pivot nominals in the text, specifically by an increased presence of hearer-new pivot nominals at the beginning of the texts and an overall larger number of hearer-new phrases.

When speaking of information status, I refer to the categories outlined by Ellen Prince in "The ZPG Letter: Subjects, Definiteness, and Information-status". Prince describes information status as the old-ness or new-ness of the information presented within a sentence. Again, each discourse referent in a sentence can be categorized as Hearer Old/ Hearer New, Discourse Old/Discourse New, or in regards to whether it contains an inferrable. Hearer status is whether or not the information is new to the hearer, regardless of the discourse.

For the purposes of this case study, I am primarily concerned with the hearer-status. I hypothesized that the science fiction texts would require more hearer-new markers at the onset of the story to lay out the setting for the uninformed reader. Pivot nominals in this construction tend to be hearer-new and are often used by authors of speakers to introduce new information to the reader. As Ward and Birner define it, "For an entity to be hearer-old entails that the speaker believe or assume it to be present within the hearer's knowledge store, while for an entity to be hearer-new entails that it not be assumed to be present within the hearer's knowledge store." (728) Ward and Birner performed a corpus-driven study of the English existential (There-sentences), examining information status and definiteness. One of the conclusions they reach is that, "the postverbal NP of an existential *there*-sentence consistently represents a hearer-new discourse entity. However, in certain circumstances, this entity may nonetheless be uniquely identifiable and therefore realized by a definite" (729). They continue on to identify five cases in which a definite postverbal existential occurs. For my analysis, though, I am concerned with the hearer-status of the noun phrase, rather than the definiteness. On the basis of the work done by Prince, Ward, and Birner, I will be equating the existence of English existential sentences with the occurrence of hearer-new information.

In order to examine the information status of pivot nominal and the occurrence of hearer-new information in the texts that I selected, I located all instances of *there* in the texts and highlighted all that represented non-locative phrases. I used an online digital humanities tool, Lexos, created by researchers at Wheaton College, to upload the plain text files and segment them into thirds. Lexos is a tool that can scrub, manage, cut, and digitally represent data taken from a variety of files, including plain text. It makes the task of organizing file segments and analyzing much simpler than manually dividing the texts. The segmented files can then be downloaded and used for other types of analysis.

I used Lexos to cut each of the six texts into three equal segments and then downloaded the segmented files. I then uploaded these files into a different online digital humanities tool, CATMA (Computer Aided Textual Markup & Analysis). Part of CATMA, the CLEA (Collaborative Literature Exploration and Annotation) tool allows for collaborative literary analysis and primary source storage. I used the CLEA tool to find all instances of there-sentences within the six texts and to identify the linguistic environment in which they occur.

I also looked at side-by-side comparisons of the fiction pieces, taking note of how many there-sentences were present and where within the piece they occurred. Whether there was clustering of the phrases was another feature I examined.

	Segment	Two Weeks in August	Harrison Bergeron		Lance		Colette (First Love)	The Drunkard	A Good Man is Hard to Find
There-Sentences									
	Beginning Third	1	2		1		1	3	3
	Middle Third	5	2		2		1	5	6
	Final Third	3	1		7		1	1	5

The chart above shows a rough distribution of the there-sentences in the texts, outlining how many instances occurred in each third of each text. Though the data above provides information about all six of the texts, I will be looking more closely at three of them. The texts that I chose to use for this case study are "Harrison Bergeron," "The Drunkard," and "A Good Man is Hard to Find". Of them, the first is classified as science fiction and the latter two are actual world.

First, let us look at Vonnegut's story, "Harrison Bergeron" in the frame of definiteness. When the instances of There-sentences are highlighted, an interesting pattern emerges. Only five instances of this linguistic construction are present in the story and they are almost uniformly scattered throughout the text. They do not appear to cluster in any part of the text.

Of perhaps more important mention, the There-sentences in "Harrison Bergeron" were not used to present the information that I anticipated they would. Specifically, I expected a science fiction text to need to There-sentences to create a non-realistic setting. That is, I believed the existential sentences would appear when the author needed to highlight what was different about the fictitious world from the reader's reality. In Vonnegut's text, however, the existential sentences only described events that had just happened. For example, "There were tears on Hazel's cheeks" (5) does describe new information to the reader, but does not help to frame the otherworldly society in which the Bergeron's were living. I had expected to see this type of existential more heavily in the actual world fiction.

"The Drunkard" is an actual world short story by author Frank O'Connor. It tells of the lives of the Delaney family, mostly of Mick Delaney and his son, Larry. Mick Delaney is described as an alcoholic. After Mick takes his young son with him to the bar, where Larry

mistakenly becomes drunk on his father's beer, the whole town faults him for giving drink to a child. His wife berates him loudly and Mick realizes the error in his drinking.

"Harrison Bergeron" and "The Drunkard" are texts of similar length and are concerned with related themes. Both depict the everyday life of a family, made up of a husband and wife who have a son together. Both discuss the ways in which society regulates individual action and remark upon individual handicaps and struggles. In both, the son is the force acting for change, the pivotal character fighting back against the status quo. In "The Drunkard", it is the son's actions, though not necessarily intentional, that are the turning point that causes his father to quit drinking. In "Harrison Bergeron" it is Harrison's strength and disobedience that leads him to question the governmental system of handicaps and attempt to overthrow the Handicap General.

The results found when examining the information status of the pivot nominal in "The Drunkard" were surprising. There were more instances of There-sentences in this text than in "Harrison Bergeron", but not by a large margin. The instances tended to be more heavily concentrated toward the beginning of the story, with almost none at the end. Also, importantly, most of the There-sentences introduced more abstract information about world, rather than purely physical conditions of the setting.

> Between business acquaintances and clerical contacts, *there was very little* he didn't know about what went on in town […] *There was no more* to be said, though we all knew I didn't need anyone to look after me, and that I could quite well have stayed at home. (25)

This same distinction cannot be said for the other actual world story included in this case study. Unlike the previous two texts, Flannery O'Connor's "A Good Man is Hard to Find" is a longer piece of fiction. Written in 1953, and originally published in 1955, it is described as a Southern Gothic fiction, a subset of realistic fiction. It does play on some of the same themes, though, including family relationships, death, and personal weakness. In brief, it is the story of a family trip that quickly falls apart with the appearance of a convict character.

I have classified this story as one of actual world fiction, as it takes place in a realistic setting. The story itself describes some improbable occurrences, but is not outside the realm of possibility so much as to be able to classify it as anything other than actual world fiction. The

events described within are more unlikely than those described in O'Connor's "The Drunkard", but the similarities between the two are greater than with "Harrison Bergeron".

The pattern of hearer-new information in this text is different from either text already described. The instances of There-Insertion are clearly clustered in two main sections of the text: the middle and the end. The There-sentences are almost exclusively used to present new information about the physical world surrounding the characters.

> The grandmother recalled the times when *there were no paved roads* and thirty miles was a day's journey. The dirt road was hilly and *there were sudden washes* in it and sharp curves on dangerous embankments. (192)

When we consider the nature of the pivot nominal, and how it relates to the setting of the story, we can reach a deeper level of analysis. In "The Drunkard" the There-sentences rarely appear before pivot nominal describing the physical world. In "A Good Man is Hard to Find", almost the opposite is true, with most of the pivot nominal relating to physical objects. The split is relatively even in "Harrison Bergeron". This data does not allow for a generalization as to the type of There-sentences that appear in either actual world fiction or science fiction, but it is a finding nonetheless, and suggests that examining the content along with the data would result in more comprehensive conclusions.

My hypothesis was not borne out in the results of the analysis of the three texts above. There was no evidence of the science fiction text needing to be framed with hearer-new information and pivot nominals at the beginning of the story. I expected that the science fiction texts would include more information that was new and inaccessible to readers, requiring more set up and explanation on the part of the author. Specifically, I anticipated that the author of a science fiction work would use more linguistic constructions that denoted the presence of hearer-new information regarding the "otherworldly" differences. In fact, the number of hearer-new there-insertion phrases was similar in all the stories, taking into account slight differences in the lengths of the texts.

Additionally, the pattern of appearance of the there-insertion sentences was not as I hypothesized. Initially, I thought that the science fiction story would have a higher concentration of hearer-new information at the beginning of the text, creating a frame of reference in the mind

of the reader, allowing them to acquire the new information that they would need to understand the context of the plot. However, this pattern was not present in "Harrison Bergeron".

This study alone does not discount the idea that science fiction stories contain more hearer-new information or that they do not require framing; looking at there-insertion is only one method of examining information status. Additionally, the set of sample texts was relatively small; a more extensive look at more texts may be able to support the results found above. My hypothesis was, perhaps, flawed. In further exploring this topic, I would need stricter definitions for framing, using more than the presence and patterns of existential sentences.

Again, the most informative conclusions can be reached only when we consider not just the objective facts, in this case the location of existential There-sentences, but also the content that they involve.

Case Study 3: Subordinate Clauses

Continuing my examination of the relationship between syntactic structure and genre classification, I now move into a study of a specific type of sentence structure. I will look at the complexity of the clausal structure of short stories and whether it differs between science fiction and actual world texts.

It is well known that the subordination of clauses contributes to the complexity of a text, and it is this complexity that serves as my area of interest for this section (Rafajlovičová). It is relatively easy to talk about the complexity of a single text or the works by a single author. For example, most academics would never question a statement saying that the prose of Faulkner is more complex than the simple and more minimalist writing seen in works by Ernest Hemingway. While intuitive claims about a text's complexity can be made, examining quantitative data on specific linguistic structures in the text, like clausal subordination, can provide factual support for such claims. In general, this case study is more technical in nature and less content-driven than the previous two case studies.

This section of my project is concerned with syntactic subordination. I will be looking at different types and instances of subordination within short fiction texts. In order to understand the reasoning for my analysis and the data which I outline, an explanation of some linguistic

terms and concepts is warranted. In the following case study, I am interested in complex sentences. Complex sentences are those which demonstrate a relationship of non-equivalence between a main clause and another clause. This relationship is sometimes called a hypotactic relationship. The other type of sentence is the compound sentence. Compound sentences demonstrate a relationship of equivalence; they have multiple clauses that have the same status/role in the sentence. Coordination sentences are examples of compound sentences. None of the clauses is superordinate to any other (Rafajlovičová).

Often, discussion of complex sentences revolves around the terms subordination, embedding, and dependency. There are some discrepancies, however, in how different grammarians use these terms (Rafajlovičová). For some, including Downing and Locke, the main distinction is between compound (relationships of equality) and complex (relationships of dependency) sentences. For others, including Hopper and Traugott, the complex sentences can be further separated into categories of dependent clauses and embedding/subordination.

For the purposes of this analysis, I will be including embedded clauses as a type of subordination. My hypotheses are focused on the more general case of all subordinate clauses. For my analysis, I will use Huddleston's (1988) definition of a subordinate clause, "one [clause] functioning as dependent within a larger construction that is itself a clause or a constituent of one". Included within this definition are the main types of clauses I will examine: relative clauses (headed by *wh*-pronouns and *wh*-adverbs) and adjunct clauses identified by the presence of certain subordinating conjunctions (*after, before, because*). I will also briefly look at the two clause constructions preceded by *that:* restrictive relative clauses and sentential complements.

The word *that* poses several complications in an analysis of subordination. In English, *that* is used as a head for several types of clauses, in particular, sentential complements and restrictive relative clauses. Sentential complements express complete thoughts, with both a subject and a verb following the *that*. The other subordinate clause introduced by that is a restrictive relative clause. This clause is adjectival in nature, modifying or referencing some other noun phrase. *That* also functions in English in non-subordinate clause introducing capacities, the most obvious of which is as a demonstrative.

Though the intricacies of subordination are a matter of debate among many grammarians, most tend to agree that subordination is a considered to be an indicator of structural complexity in the language of a text. Compared to the case of information status and definiteness, a hypothesis on the appearance and prevalence of subordinate clauses in the two different genres of short fiction is less straightforward. In fact, there are two main hypotheses that I intend to explore and apply to the data.

The first hypothesis suggests that there will be a greater number of sentences with subordinate clauses in the science fiction stories than in the actual world stories. This hypothesis is based largely on the content of the stories. This hypothesis follows from a similar train of thought as the first case study on definiteness, attributing syntactic structural changes to the possible need for science fiction tales to create a setting framework. A science fiction story that is placed in an unfamiliar setting may need more explanation for the reader, which might take the form of subordinate clauses. Science fiction explores new ideas of setting and thus, might have to be more explicit and descriptive. This follows from the knowledge that relative clauses provide more information about ideas presented within the main clause of the sentence. Science fiction stories are built on a concept of novelty, on exploring the new and the unfamiliar. These novel concepts of utopian/dystopian society, other life forms, and technological advances may require more complex sentences, with many clauses, to be accessible to the audience.

The second hypothesis is based largely on the publication atmosphere of the 1950-1960's era. This time period is sometimes characterized by the popularity of pulp fiction and pulp magazines. As the science fiction/pulp fiction stories were written to appeal to the mass public, I would expect to see a more simple clausal structure in the science fiction stories than in the actual world stories. In order to be more accessible to the general public, and easier for a mass audience to comprehend and read, the science fiction authors might have written in a more simplistic style, choosing to avoid using a large number of subordinate clauses. Similarly, if subordinate clauses are present, as there are sure to be a few, I expect that there will be fewer subordinate clauses in each sentence than in the sentences of the actual world fiction.

Additionally, the audience for actual world fiction might be more educated, and more familiar with more complex sentence construction. Sentences with large numbers of embedded clauses require more time and effort to read and understand. Magazines like *The New Yorker*

were marketed to this more specific demographic, rather than the mass readership that *Galaxy Magazine* and other science fiction-centric publications targeted.

In order to examine the clausal structures within the two types of short fiction, I first identified words that were likely to signify a subordinate clause. The key words I chose were all words that often head such clauses and they fell into three main types: relative pronouns, relative adverbs, and adjunct clausal heads. The relative pronouns include the *wh*-clauses (who, which, whose, whom) and *that* (when used in a restrictive relative clause).

After identifying the key words, I found all instances of the key words in each short fiction text, using the search/find function included in the word processor. Following the collection of all instances of the given key word, I had to manually code each instance, determining whether the occurrence of the key word within the text introduced an embedded clause or not. The results were then compiled into a spreadsheet and comparisons between the texts were made. The analysis of the data led to a series of conclusions and areas that warrant future study and analysis.

For this case study, I have included all six of the texts: two science fiction stories, three actual world stories, and one example of speculative fiction. Aside from the three texts discussed in the earlier case studies, I've also included "Two Weeks in August", a science fiction text written by Frank M. Robinson. It was published in *Galaxy Magazine* in the February issue of 1951. The story follows the everyday life of an office worker, Bill, who is tired of his coworker McLeary's outrageous claims. As a joke, Bill mentions that he plans to take his two week vacation in August to Mars. McCleary, dumbfounded, doesn't know how to respond. Weeks later, after the vacation, Bill and his other coworkers discuss the holiday. McCleary chimes in, claiming he traveled to Mars, and produces trip souvenirs that could only have originated on the red planet.

I've also included two stories written by Vladimir Nabokov: "Colette" and "Lance". Both short stories were published in *The New Yorker*, the former in 1948 and the latter in February of 1952. "Colette", also published under the title "First Love", depicts just that. It is the tale of a young man remembering his brief friendship and passion between himself and Colette. It talks of innocent love and the realities of life. This text easily falls within the

category of actual world fiction that I proposed earlier in the project. It was published in a notable magazine for literary fiction, catering to a particular audience of readers. The tale pulls from common experience and does not rely on the fantastic.

On the other hand, "Lance" is a difficult text to classify within my current framework for this project. The piece was published in *The New Yorker*, and thus, falls under my qualifications for being an example of the actual world fiction, rather than science fiction. However, the story has been argued as a work of science fiction by Charles Nicol in his essay "Nabokov and Science Fiction: 'Lance'". This piece of fiction would likely be classified as speculative fiction. "Lance" tells the story of the narrator's descendant, Emery Lancelot Boke, and his adventures into space. The short story is told in several parts, at times focusing on Lance and at others focusing on his parents, referred to as simply The Bokes. This story was published before the first manned space mission, and speculates on how such a mission would go.

	Clausal Head	2 Weeks in August	Harrison Bergeron	Lance	Colette	The Drunkard	A Good Man is Hard to Find
Word Count		2463 words	2200 words	4695 words	3181 words	4054 words	6472 words
Average Sentence Length (in words per sentence)		12.5	11.7	24.3	24.2	15.7	13.7
Relative Clauses:							
Relative Pronouns	who	0	3	9	4	13	3
	which	0	3	16	12	0	0
	whose	0	0	4	2	2	1
	whom	0	0	1	3	0	0
	that	4	3	17	10	2	18
Relative Adverbs	when	11	2	11	0	11	12
	where	3	1	6	5	0	4
	why	0	0	0	0	0	0
Adjunct Clauses:							
Subordinating Conjunctions	Whoever	0	0	0	0	0	0
	Whomever	0	0	0	0	0	0
	Whichever	0	0	0	0	0	0
	Wherever					1	0
	After	2	0	2	2	5	2
	Before	0	2	1	4	5	2
	Because	0	1	1	1	5	8
Sentential Complements:	that	2	8	21	8	26	26

The data collected in this portion of the project will be used to explore several different structural qualities related to complexity. Specifically, I will be looking at the frequency of subordinate clauses, which clausal heads appear in each type of text, nesting of clauses, and sentence length. All of these contribute to the overall complexity of the text, which is the overarching feature of short fiction that I am investigating below.

With regard to the occurrence of adjunct clausal heads marking subordinate clauses, there were more cases of *after, before,* and *because* in the actual world fiction than in the science fiction texts. This was an unexpected result; I had hypothesized that there would be a larger number of these clausal heads, especially *after* and *before* occurring in the science fiction stories, as a way to further clarify the setting of the story. As science fiction stories often occur in novel settings, I had expected that an author of science fiction would use a larger number of subordinate clauses to further emphasize or articulate the setting for the audience. *After* and *before* directly reference time and could be used to situate the story within a framework of time more familiar to the reader.

There were very few sentences that included any of the *wh*-subordinating clauses (*whoever, whomever, whichever, wherever*). The only occurrence was in "The Drunkard".

The "Lance" text yielded particularly interesting results. This text was the longest of the six examined. Every type of clausal head key word occurred within this Nabokov's text, and in several cases, the occurrence number was the highest present within the corpus. In particular, there were a far greater number of *which* heads in "Lance" than in any other story.

Overall, there did not appear to be a significant difference in the occurrence of the more common relative pronouns (*who, which)* between the science fiction and actual world texts. However, it is important to note that both texts written by Nabokov demonstrated a much higher number of these pronouns than any other text.

Neither of the science fiction texts contained any instances of *whose* or *whom.* The actual world texts contained several instances of these two pronouns, thought they did not occur as frequently as the more common *who. Who* was the most common relative clausal head to appear in the actual world texts.

When analyzing the occurrence of the key word *that*, a pattern emerges. The actual world texts show a much larger occurrence of both sentential complements and restrictive relative clauses. The inclusion of both sentential complements and relative clauses add complexity to the texts. This supports the claim that the actual world short stories involve more complex and complicated sentence structure than the science fiction short stories.

Simply looking at the frequency of several types of subordinate clauses in short fiction leaves out a crucial ingredient in the complexity of a text. In order to look more closely at the interplay between clausal structure and complexity, I also took on the task of examining the nesting of subordinate clauses. That is, I was interested in the complexity of each sentence and whether multiple subordinate clauses were being layered on top of one another in a single sentence. This would lead to a more complex sentence structure. It would be possible for a text with fewer subordinate clauses to have more complex sentences than a text with many more subordinate clauses, if those few clauses co-occurred.

"Lance" had the most instances of nested subordinate clauses, as defined by the use of the clausal head key words outlined above. There were several cases of sentences with two or more clausal heads marking subordinate clauses in a single sentence.

> In the case of Mr. Boke, I find myself operating with the features of an old professor of history, a brilliant medievalist, *whose* white whiskers, pink pate, and black suit are famous on a certain sunny campus in the Deep South, but *whose* sole asset in connection with this story (apart from a slight resemblance to a long-dead great-uncle of mine) is *that* his appearance is out of date. (22)

The key word *which* was most common in these nested sentences. Interestingly, many of the double nested sentences had one of the clauses, often a *which* headed clause, inside of parentheses. None of the other texts use parentheses to enclose subordinate clauses.

Sentence length is another measure that comes into play in this section of the analysis. While not directly correlated to clausal structure, it would seem intuitive that a longer average sentence length might be indicative of more complex clausal structure. I wanted to see whether that was the case.

After running readability diagnostics in my word processor for each of the short stories, I looked closely at the average number of words per sentence that were used in each text. While the difference is slight, the science fiction texts reported lower averages than the actual world texts. The majority of the texts reported averages within a similar range, but both the pieces of fiction written by Nabokov reported significantly larger averages than any of the other works.

This data does not account for subordinate clauses not syntactically marked by clausal heads, as well as several other types of subordinate clauses. Additionally, there are many more subordinating conjunctions that would be included in an analysis of this sort, but to do so would be too large of an undertaking for the scope and resources of this project. This analysis does beg future study, however, and is indicative of the type of syntactic analysis that can be performed on a particular text.

From the data provided, there seems to be greater support for the second hypothesis than for the first. That is, it appears that the actual world fiction stories might be more complex than the science fiction short stories. The actual world fiction stories had both a greater number of subordinate clauses headed by *wh*-pronouns and a greater number of adjunct clauses headed by subordinating conjunctions. Additionally, all of the actual world fiction texts had a higher average sentence length than the science fiction texts.

This study only touches the surface of complexity, and many more diagnostics would have to be applied to make any factual claims. The study does, however, support the claim that there is a difference in the structure of the two genres.

Conclusions:

Throughout this project, I have attempted to show how technical and literary analysis can be used together, and to argue for the continued exploration of such collaborative work in future projects. Using an example research question, exploring the relationship of linguistic structure with short fiction genre classification, I aimed to illustrate the value and possibilities in performing digital humanities research. Digital humanities is a growing field, one that relies on the type of research that this project demonstrated. It is a field characterized by the integrations of computing and traditional disciplines in the humanities.

This project relied more heavily on counting features of computing, rather than more complex computer-based operations, though they are often employed in digital humanities projects. Though it would have been possible to incorporate most of the diagnostics presented here without the aid of a computer, the technology allows this process to be quick and efficient. In the past, such work would be time-consuming and inefficient. With such easy access to technology and the tools that can do the tedious work for us, we are able to perform more diagnostics and flesh out a study. Exploring research questions like the one presented in this project would have been incredibly challenging without the digital tools I employed. With them, though, the process was much simpler and allowed me to spend more time analyzing the data and drawing conclusions.

In looking at narrative mode, the limitations of using a single type of analysis became evident. Simply looking at the objective data, the types of narrative point of view and narrative voice, to compare two texts was not sufficient to draw conclusions. Once the content was taken into consideration along with the data regarding the form, conclusions were easier to draw and more comprehensive. While I was unable to reach any overarching or generalized conclusions about the nature of science fiction or actual world fiction, the case study encourages discussion on the matter and motivates a larger study into the relationship between genre and narrative mode.

In the second case study, examining information status in short stories, no concrete conclusions were drawn. I found that the existential sentences occurred in different contextual environments that may or may not be related to the genre of the text. Importantly, it was evident that this finding came from a collaboration of the objective data and the content.

The third case study looked at complexity and subordination in the two genres of interest. The results suggested that further analysis was necessary, but seemed to indicate that the actual world fiction was more structurally complex. In further studies, deeper exploration into the content surrounding each clause or the locations of the clauses within the text might yield more comprehensive results.

Though it does not seem possible to make factual claims about how the linguistic structures in both science fiction and actual world fiction differ and whether it is related to the

setting, I can argue that there is value in this type of research. If nothing else, we saw small but significant results in each case study. All of these results exemplify the potential of collaborative work between literary and technical analysis.

In general, recognizing the changing face of humanities research, including literary analysis, is necessary to keep up in this increasingly technology-dependent environment. In using the new tools and abilities that technology has given us, we can only make greater contributions to academic study.

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