

Original Research Article
How Distant Is 'Distant Reading'? A Paradigm Shift in Pedagogy

Abstract

Life's brevity contrasts with the enduring nature of art, and the specter of mortality perennially shadows humanity. In the contemporary landscape, millions of English-language literary works emerge annually, rendering exhaustive in-depth reading an unattainable feat for readers engaged in literary studies. The once-relied-upon method of close reading proves inadequate in addressing the expansive breadth of literary output. The imperative to incorporate computational approaches in the study of literary texts becomes evident. As we stand at the crossroads of tradition and technology, it is incumbent upon literary studies to embrace the symbiosis with computers, commonly recognized as digital humanities. This ethnoautobiographical article seeks to navigate the practical dimensions of distant reading within the realm of digital humanities. Its central thesis posits that contemporary literary academia must integrate distant reading alongside traditional close reading methodologies to comprehensively engage with the vast and diverse literary landscape.

Keywords: close reading, digital reading, digital humanities, distant reading, emotional response, subjective experience, objective analysis, computational literary study

1. Introduction

The moment has arrived for literary academia to transition from a mono-disciplinary approach, characterized by close reading, to a multidisciplinary approach known as distant reading in the realm of computers and literature. This evolving methodology can be termed the computational study of literature. The computational study of literary texts involves applying computational methods and techniques to analyze and gain insights from literary texts. This interdisciplinary approach combines elements of computer science, linguistics, and literary studies to explore patterns, trends, and structures within the text. (Martin Paul Eve, 2019) There is a discernible shift from qualitative examination to the quantification of literary elements.

The practice of close reading has been widely embraced as a pedagogical approach in literary academia globally since the 1940s. However, Rita Felski (2015) challenges close reading and conventional methods of literary analysis in her work, *The Limits of Critique*. She argues that traditional modes of literary analysis, including close reading, often rely on a critique-oriented approach that emphasizes suspicion, questioning, and uncovering hidden meanings. She contends that this critical stance, while valuable in many respects, has limitations and may not capture the full range of human engagement with literature.

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6. Findings and discussion (explain the theory used)
7. implications

She proposes an alternative to the predominant critical paradigm by exploring what she calls “post-critical” modes of reading. Instead of solely focusing on deconstruction and critique, she suggests that scholars and readers can also benefit from approaches that emphasize recognition, empathy, and the acknowledgment of the affective and aesthetic dimensions of literary experience. In challenging close reading, she is not dismissing its value entirely but rather questioning the exclusive emphasis on suspicion and the uncovering of hidden meanings. She encourages a more expansive understanding of literary interpretation that recognizes the diverse ways individuals connect with and find meaning in literature, going beyond the confines of critical analysis. Her work has sparked discussions about the role of affect, emotion, and the reader’s personal engagement in the study of literature, offering a nuanced perspective on the limitations and possibilities of different interpretative methods.

At the same time, Felski’s post-critical approach and Franco Moretti’s distant reading represent different perspectives within literary studies, particularly in how they approach the analysis of texts and engage with the act of reading. Post-critical approach shifts the emphasis away from traditional critical practices, such as suspicion and deconstruction. It encourages a broader exploration of the reader’s personal connections, emotional responses, and aesthetic experiences with literature. It involves recognizing and valuing the diverse ways in which readers engage with texts. She advocates for acknowledging the affective dimensions of literary experiences and moving beyond a singularly critical lens.

On the other hand, distant reading, as proposed by Franco Moretti, involves the analysis of large bodies of text using computational and statistical methods. It moves away from close reading, which focuses on individual texts, to examine patterns and trends across a wide range of works. It employs quantitative methods, such as data analysis and visualization, to identify literary patterns and structures. It often involves looking at literature from a macroscopic perspective, using computational tools to reveal insights not easily discerned through traditional close reading. Moreover, it tends to prioritize objectivity and systematic analysis over subjective, reader-centered responses. It seeks patterns and trends that can be identified through computational analysis rather than focusing on the individual reader’s subjective experience.

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2. Method

2.1 Conceptual Clarification

This section elucidates the terms and ideas utilized within the research.

2.1.1 Digital Humanities

Digital humanities is an interdisciplinary field of study that involves the application of digital technologies and computational methods to the exploration, analysis, and interpretation of

humanities disciplines. It encompasses the use of digital tools and techniques to study and enhance traditional humanities subjects, such as literature, history, philosophy, linguistics, and cultural studies. Digital humanities scholars employ computational methods, data analysis, visualization, and other digital approaches to gain new insights, facilitate research, and present information in innovative ways within the broader context of humanistic inquiry. The field aims to bridge the gap between technology and the humanities, fostering collaboration between scholars, researchers, and practitioners in both domains. (Franco Moretti, 2005)

2.1.2 Digital Reading

Digital reading refers to the consumption of written or textual content in a digital format, typically on electronic devices such as e-readers, tablets, computers, or smartphones. It involves the use of technology to access, navigate, and engage with text-based information. Digital reading can encompass a wide range of materials, including e-books, online articles, blogs, and other digital publications. (Maryanne Wolf, 2018)

2.1.3 Close Reading

Close reading is a method of literary analysis that involves a detailed and careful examination of a text, focusing on its specific language, structure, and meaning. It emphasizes a deep exploration of the nuances, patterns, and literary devices within the text to uncover layers of interpretation and gain a thorough understanding of the author's intentions. Close reading often involves scrutinizing individual passages or elements, fostering a nuanced appreciation of the text's complexity and contributing to a more insightful interpretation. (I.A. Richards, 1929) However, Felski's *the Limits of Critique* (2015) explores different approaches to reading, including close reading, and challenges some conventional methods of literary analysis.

2.1.4 Distant Reading

Distant reading is a term associated with the scholar Franco Moretti, who coined it in contrast to close reading. Distant reading involves the analysis of large bodies of text or literature using computational and statistical methods. Instead of focusing on individual texts in detail, distant reading looks at patterns, trends, and broader literary phenomena across a wide range of works. (Franco Moretti, 2013)

2.2 Objectives of the Study

The following twin objectives provided guidance for the study.

- 2.2.1 To explore the pragmatic facets of distant reading.
- 2.2.2 To discover the tools, potential constraints, obstacles, and prerequisites associated with distant reading.

2.3 Literature Review

Distant reading is a term coined by literary scholar Franco Moretti. He introduced this concept in his book *Graphs, Maps, Trees: Abstract Models for Literary History*, published in 2005. In the book, Moretti argues for the use of quantitative methods and computational tools to analyze large sets of literary texts from a distance, as opposed to close reading, which involves detailed analysis of individual texts. Distant reading allows researchers to identify patterns, trends, and structures across a broad range of literature, providing insights into literary history and cultural evolution. It is a part of the broader field of digital humanities, where technology is employed to analyze and interpret cultural artifacts. Moretti (2013) claims that avoiding close reading is not just a positive shift for the humanities; it is, in fact, a “condition of knowledge.” (p.48). Reviewing *Distant Reading*, Shawna Ross (2014) concludes that while Moretti advocates for the expansive explanatory capabilities of quantitative literary analysis, he tends to overemphasize the scientific objectivity of his analyses and undervalue the productively suggestive narratives of doubt, failure, and compromise. These narratives contribute nuance and depth to his hypotheses.

Tony E. Adams et al., (2015) provide a comprehensive introduction to autoethnography. Their book covers the theoretical foundations, methodological considerations, and practical aspects of conducting autoethnographic research. The authors draw on their own experiences as researchers to illustrate key concepts. Likewise, Carolyn Ellis (2004) presents a unique approach to autoethnography through a methodological novel. The work explores the complexities of conducting and writing autoethnography, offering insights into the personal and emotional dimensions of research.

2.4 Research Questions

This section delineates the core research questions that guide the enquiry into topic. These questions serve as the foundation for my investigation, aiming to uncover goals or objectives of the study. Through a thoughtful exploration of these enquiries, I seek to contribute valuable insights to the existing body of knowledge on distant reading

- 2.4.1 Where is the need for distant reading?
- 2.4.2 What are the distinct features of distant reading?
- 2.4.3 Are any special tools necessary for distant reading? If so, what are they?
- 2.4.4 To what extent is distant reading pedagogically viable?
- 2.4.5 How can distant reading complement close reading?
- 2.4.6 How can students equip themselves to be distant readers?
- 2.4.7 Are there any institutional requirements to incorporate distant reading into the curriculum?

2.4.8 What are the potential challenges to incorporate distant reading into the curriculum?

2.4.9 How to assess the possible limitations of distant reading?

2.5 Hypotheses

The commencement of this ethnoautobiographical research was grounded in the initial hypothesis: Distant reading proves valuable in the examination of literature as it enables readers to navigate the extensive and intricate realm of literary works.

2.6 Thesis Statement

The subsequent thesis statement steered the exploration towards the intended culmination of the current study: Within the realm of literary academia, it is advisable to contemplate distant reading in conjunction with close reading.

2.7 Research Design

The current research is a blend of autoethnography and exploration. With 37 years of experience in teaching English language and literature, the researcher is deeply acquainted with the close reading culture prevalent in literature teaching in Indian literary academia. The study adopts an autoethnographic approach, drawing from the researcher's reflective insights within the qualitative research framework.

Autoethnography is a qualitative research method that combines elements of autobiography and ethnography. In autoethnography, researchers explore and describe their personal experiences within a cultural or social context, aiming to understand and communicate broader cultural phenomena. This method recognizes the interconnectedness of the personal and the cultural, acknowledging that individual experiences are shaped by and, in turn, contribute to larger socio-cultural processes. (Carolyn Ellis, 2004)

Autoethnography aims for "thick description," a term coined by anthropologist Clifford Geertz (1973/2017), which involves providing a detailed and nuanced account of the cultural context and the researcher's experiences. This depth of description allows readers to gain a more profound understanding of the studied phenomena (distant reading). While autoethnography starts with the personal, it goes beyond individual experiences to analyze and interpret cultural patterns, norms, and dynamics. Researchers explore how their personal experiences connect to broader social, cultural, or political issues like governments' negative attitude toward the humanities and particularly, literary studies.

Simultaneously, it is exploratory in nature, as the researcher, driven by curiosity, seeks a preliminary understanding of distant reading—a practice often viewed as an alternative yet complementary approach to close reading. Emphasizing exploration as a perspective, this study

initiates from the intrinsic curiosity inherent in all research endeavors. Moreover, autoethnography emphasizes reflexivity, acknowledging their subjectivity and the influence of their own background, beliefs, and biases on the research process. This self-awareness is crucial for understanding how the researcher's positionality shapes their interpretation of experiences. (Tony E. Adams et al., 2015)

Close reading has long been a fundamental method in literary academia for interpreting texts, and its adoption in classes continues to be widespread. It involves a careful and detailed analysis of a text to uncover layers of meaning, stylistic elements, and the author's intentions. It emphasizes a focus on the text itself, encouraging students to examine language, imagery, syntax, and other literary elements without necessarily relying on external sources or historical context. In classes, teachers often guide students through close readings of specific passages or entire texts, prompting discussions about the nuances and implications of language choices. Moreover, literary academia uses close reading to develop students' analytical writing skills. Assignments often require students to write essays that showcase their ability to closely analyze and interpret specific aspects of a text, supporting their arguments with textual evidence.

Again, close reading is compatible with various literary theories, such as formalism, structuralism, and deconstruction. In classes, students may apply these theoretical frameworks to enhance their close readings, gaining a more nuanced understanding of how different perspectives can shape interpretations. It is also employed as an inclusive approach that allows students from diverse backgrounds to engage with texts on a deep level. Teachers encourage students to bring their own experiences and perspectives to the close reading process, fostering a more inclusive and enriching learning environment.

Result

After thoroughly investigating the tools essential for distant reading and exploring the literature on the computational analysis of literature, the researcher identified the following available tools for distant reading. Distant reading relies on a variety of these tools, including computational and statistical methods, natural language processing (NLP) techniques, and data visualization tools.

Table 1: Tools and its uses

Tool	Type	Use
Voyant	a web-based <i>text analysis</i> and visualization platform	to analyze and explore patterns in texts, such as word frequencies, trends, and relationships.
MALLET (Machine Learning for Language Toolkit)	a Java-based toolkit for natural language processing and machine learning	for <i>topic modeling</i> , which is a technique used in distant reading to identify and extract the main topics or themes within a collection of texts using algorithms to uncover latent patterns.
Natural Language Toolkit (NLTK)	a Python library for natural language processing.	for <i>sentiment analysis</i> , allowing researchers to assess and determine the sentiment or emotional tone of texts.
Python	with libraries like Pandas, NumPy, and Scikit-learn	for <i>text mining</i> and data preprocessing tasks in distant reading. Researchers can extract valuable information from large bodies of text, identifying keywords, and analyzing patterns in language use.
AntConc	a freeware <i>corpus analysis</i> toolkit	in analyzing and processing large bodies of text. It offers features for concordance analysis, keyword analysis, and collocation analysis.
Stanford Named Entity Recognition (NER)	a software package provides named entity <i>recognition</i> tools	To identify and classify entities such as names of people, organizations, and locations in a given text.
Tableau	a powerful data <i>visualization</i> tool that can be used to create interactive and visually appealing visualizations	employed in distant reading to represent patterns and relationships within large datasets.
Stylo	an R package that allows users to perform various <i>stylometric analyses</i> on a large corpus of texts	provides functions for authorship attribution, stylistic analysis, and other quantitative analyses of writing styles among different authors.
Gephi	an open-source <i>network analysis</i> and visualization software	to explore and analyze relationships between entities, such as characters in literature or concepts in academic articles.
Word2Vec	an algorithm that learns vector representations of words based on their context	to capture semantic relationships between words, enabling more nuanced analysis of language. Word2Vec embeddings can be used for cross-language analysis, enabling distant readers to bridge language barriers and study multilingual corpora more effectively.

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Readers and researchers can combine these tools based on the specific goals of their distant reading projects. The choice of tools depends on factors such as the type of analysis, the size of the dataset, and the research questions being addressed.

Distant reading, a methodology that has gained prominence in the field of literary studies, involves the analysis of large corpora of texts using computational and statistical techniques. In contrast to traditional close reading, which focuses on in-depth examination of individual texts, distant reading aims to uncover patterns, trends, and broader insights across extensive collections of literary works. To achieve this, scholars employ a variety of reading techniques that leverage computational tools and methodologies. These techniques encompass text mining, natural language processing, topic modeling, and quantitative analyses, allowing researchers to explore literary landscapes on a macroscopic scale.

Table 2: Distant reading techniques

Word Frequency Analysis	To analyze the <i>frequency</i> of words or phrases across a large corpus of texts. Scholars examine how the usage of certain words or themes has changed over time in a particular genre or author's works. This can help identify linguistic shifts or thematic trends. For example, they analyze the word frequency in the novels of Charles Dickens to identify key themes and motifs. By counting how often words like poverty, family or social injustice appear across his works, researchers can gain insights into the prevalent themes in Dickens' novels and how they evolved over time.
Network Analysis	To create networks of characters, locations, or concepts within literary texts. Scholars analyze how characters are connected to each other in a series of novels or how locations are described in a collection of travel writings. This can provide insights into narrative structures or the spatial distribution of themes. For example, they can create a network graph of character relationships in Shakespeare's plays. By mapping how characters interact and connect with each other in plays like <i>Hamlet</i> or <i>Romeo and Juliet</i> , researchers can visualize the central characters, identify key relationships, and explore the dynamics of the dramatic narratives.
Topic Modelling	To identify <i>latent topics or themes</i> in a large corpus of texts. By analyzing word co-occurrence patterns, algorithms can automatically group related words and extract topics. This method is useful for exploring the thematic content of texts and tracking the evolution of topics over time. For example, scholars apply topic modeling to a collection of the 19 th century British novels. By using algorithms like Latent Dirichlet Allocation (LDA), researchers uncover latent topics within the texts, revealing themes such as "industrialization," "class conflict," or "romantic love" that were prevalent in literature during that period.
Stylometric Analysis	To study an author's writing style across multiple works. Researchers can use computational tools to analyze features such as sentence length, vocabulary diversity, or the use of specific linguistic elements. This can help identify authorship or authorial evolution. For example, they analyze the writing style of Agatha Christie across her various detective novels. Stylometric features such as sentence length, word choice, and the use of specific phrases can help differentiate her writing style from that of other mystery authors, aiding in authorship attribution or the study of her evolving style over time.

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Sentiment Analysis	To assess the sentiment or emotional tone of texts. By analyzing the sentiment of large collections of texts, researchers uncover shifts in public opinion, changes in cultural attitudes, or emotional patterns within specific literary genres. For example, they perform sentiment analysis on a collection of 20th century American poetry. By assessing the sentiment (positive, negative, neutral) of poems, researchers track shifts in emotional tone or explore how major historical events, like wars or social movements, influenced the sentiments expressed in poetry during that era.
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As distant reading continues to reshape the landscape of literary scholarship, these reading techniques offer unique opportunities to uncover hidden connections, track historical shifts, and gain a comprehensive understanding of literature within broader cultural and historical contexts.

3. Discussion

The term “distant reading” is used to contrast with the more traditional method of literary analysis known as “close reading.” Close reading involves the detailed examination and analysis of individual texts, focusing on the specific language, themes, and nuances within a particular work. In contrast, distant reading involves analyzing large sets of texts from a distance, often using computational and statistical methods. Instead of immersing oneself in the details of a single text, distant reading looks at broader patterns, trends, and relationships across a wide range of texts.

The ‘distance’ in distant reading refers to the researcher’s ability to step back and gain a panoramic view of literature, allowing for the identification of larger-scale patterns that may not be apparent through close reading alone. The ‘distance’ refers to the analytical distance between the researcher/reader and the text, achieved through the use of computational and statistical methods. The goal is to gain insights into larger literary phenomena, historical trends, and structural patterns that may not be immediately apparent through traditional close reading methods. So, the distance in distant reading is *both conceptual and methodological*—it involves stepping back from individual texts to observe and analyze literature on a broader scale using quantitative and computational approaches.

The common perspective among scholars employing computational methods in literary studies is to implicitly liken their practice to a telescope. Laura Miller (2014) asserts that “we have these new tools, these telescope-like things that allow us to see many more texts than was possible before, just like the telescope allowed Galileo to see many more stars.” Text mining, sentiment analysis, stylometry, topic modeling, network analysis, quantitative analysis and digital humanities are some of the methods. These methods are asserted to enable us to, from a distance, take in, process, and potentially comprehend texts within broader perspectives. (Mehrdad et al. 2017) Moretti, who popularized the term, advocates for distant reading as a

complementary approach to traditional close reading, suggesting that combining both methods can provide a more comprehensive understanding of literary history and cultural trends.

Moreover, the computer as such does not read texts in the sense humans read. It is only a tool. “It is instead a mode under which we delegate repetitive labor to the machine and then expend our interpretative efforts on the resultant quantitative dataset.” (Eve, 2019, p.2).

Interpretation, a cognitive activity at a higher level, remains within the domain of human readers.

Consequently, we often find ourselves “thinking along” with machines.

4.1 Need for Distant Reading

The need for distant reading arises in various contexts where scholars seek to analyze large sets of textual data to identify patterns, trends, and insights that may not be readily apparent through traditional close reading methods. Its uses have been investigated by several scholars (Franco Moretti, 2013; Taylor Arnold & Lauren Tilton, 2015; Anne Burdick et al., 2021; Kenneth M. Price & Ray Siemens, 2013; Julia Silge & David Robinson, 2017; David M. Berry, 2012). The necessity of employing computers arises from the fact that humans are unable to read everything that should be perused. The brevity of life precludes reading everything. As an illustration, in 2015, it was approximated that 220,000 novels were published in English. Consequently, one would need to read ten novels each day to cover them all over a span of seventy-one years (equivalent to twenty-six thousand days). Therefore, Eve (2019: 3) advocates distant reading as “concerned with reductive but nonetheless labor-shaving methods that use the untiring repeatability of computation tasks to garner statistically informed deductions about novels or other works that one has not read.” Distant reading, therefore,

1. is valuable for studying the *evolution of literary genres*, language usage, and stylistic trends over extended periods. Scholars can analyze vast corpora of texts to identify patterns in literary history and understand how genres or themes have changed over time. For example, scholars using distant reading techniques analyze a vast corpus of 19th-century novels to trace the evolution of the Gothic genre. Through computational analysis, they identify common themes, narrative structures, and linguistic patterns, revealing how the Gothic genre transformed over the course of the century.
2. is employed to analyze linguistic patterns in texts, aiding in *authorship attribution*. By comparing an author’s known works with disputed or anonymous texts, scholars can identify consistent stylistic features and potentially attribute authorship. For example, it is applied to discern the stylistic fingerprints of an unknown text. By comparing it with the known works of multiple potential authors, scholars can use computational methods to

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attribute authorship based on consistent linguistic features, such as word usage, sentence structure, or thematic elements.

3. allows for *sentiment analysis* across large bodies of literature. Scholars can explore the emotional tones present in texts, providing insights into the prevailing sentiments of different literary periods or specific genres. For example, it is employed to analyze a large collection of 20th-century poetry to identify prevalent sentiments. Computational tools reveal shifts in emotional tones over different decades, offering insights into how poets expressed and responded to changing societal and cultural dynamics.
4. is instrumental in understanding the *cultural and social contexts* reflected in literature. By analyzing a wide range of texts, researchers can identify how societal changes are mirrored in literary works, offering a macroscopic view of cultural shifts. For example, it is employed to explore the portrayal of social issues in American literature from the 1960s to the present. Analyzing a diverse range of texts, they uncover patterns that reflect changing attitudes toward topics such as civil rights, gender roles, and environmental concerns.
5. enables scholars to conduct *comparative literature studies* on a large scale. By analyzing texts from different cultures or languages, researchers identify similarities, differences, and cross-cultural influences, contributing to a more comprehensive understanding of global literature. For example, it facilitates a comparative analysis of medieval European and Arabic literature. Researchers use computational tools to identify linguistic and thematic parallels, shedding light on cross-cultural influences and exchanges between European and Arabic literary traditions.
6. facilitates the analysis and *curation of digital archives*. Scholars apply computational methods to explore vast digital collections, preserving and making accessible literary works that might otherwise be overlooked. For example, it is applied to analyze a digital archive of early 20th-century newspapers. By examining language use and recurring themes, researchers contribute to the preservation and accessibility of historical perspectives embedded in news articles of the time.
7. is used to analyze *texts beyond literature*, including historical documents, political speeches, and religious texts. Researchers identify patterns, linguistic shifts, and cultural nuances across a wide range of textual sources. For example, it is utilized to analyze political speeches from the 20th century. Scholars examine the rhetoric, language, and recurring themes across speeches to gain insights into the evolution of political discourse and the communication strategies employed by different leaders.

8. is used by linguists and language scholars to study the *evolution of language*. By examining large datasets, they track changes in vocabulary, syntax, and linguistic structures over time, providing insights into linguistic evolution. For example, it is used to study the evolution of colloquial language in online forums over the past two decades. Computational analysis reveals shifts in slang, linguistic innovations, and the impact of digital communication on language patterns.
9. is employed to classify and trace the *evolution of literary genres*. Scholars analyze features common to specific genres and track how these characteristics change or persist over different periods. For example, it aids in classifying and studying the evolution of science fiction literature. Scholars use computational methods to identify characteristic features, trace the development of sub-genres, and explore how science fiction themes have evolved over time.
10. has applications in *education*, where it is used to introduce students to large-scale literary analysis. By exploring computational methods, students gain insights into the broader literary landscape and the possibilities offered by digital tools. For example, in a literature course, distant reading is introduced to students analyzing a large dataset of Victorian novels. Through hands-on experience with computational tools, students gain insights into patterns of social commentary, gender roles, and narrative structures, expanding their understanding of the Victorian literary landscape.

These examples highlight the versatility of distant reading in addressing research questions and uncovering patterns across diverse literary and cultural contexts. The approach proves particularly useful when dealing with extensive corpora that would be impractical to analyze through traditional close reading methods alone.

4.2 Features of Distant Reading

Distant reading involves analyzing and interpreting large bodies of text using computational and statistical methods to identify patterns, trends, and structures. However, according to critics who do not agree with distant reading, it also functions as an anti-reading practice that replaces direct, human interaction with literature—this is particularly true once the methods and models have been established. While close reading is compared to a microscope that has also the power of amplification, distant reading can also be compared to telescope for Geoffrey Rockwell (2003), since the realm of the unseen, that can be unveiled and examined beneath the microscope. However, Barbara Herrnstein Smith (2016) argues that there are textual elements cannot be detected without computer assistance. Here are, thus, some key features of distant reading:

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1. Distant reading involves the examination of extensive datasets, often spanning multiple works, genres, or time periods. For example, one can analyze a digital library of thousands of novels from the 19th century to identify common themes, linguistic patterns, or narrative structures.
2. It relies on statistical and quantitative analysis to extract meaningful insights from the data. For example, using text mining techniques, one can quantify the frequency of specific words, phrases, or stylistic elements across a vast collection of poems.
3. It employs computational tools, such as text-mining algorithms, natural language processing (NLP), and machine learning, to process and analyze large volumes of text efficiently. For example, one can apply sentiment analysis algorithms to gauge the overall emotional tone of a massive corpus of online reviews.
4. It seeks to identify recurring patterns, trends, or structures within the data. For example, one can identify common narrative arcs or plot structures across a diverse set of novels to uncover underlying patterns in storytelling.
5. It provides a macroscopic view of literature, allowing researchers to observe general trends rather than focusing on individual texts. For example, one can study the evolution of literary genres over time by analyzing a broad range of texts from different periods.
6. It seeks to identify recurring patterns, trends, or structures within the data. For example, one can identify common narrative arcs or plot structures across a diverse set of novels to uncover underlying patterns in storytelling.
7. It provides a macroscopic view of literature, allowing researchers to observe general trends rather than focusing on individual texts. For example, one can study the evolution of literary genres over time by analyzing a broad range of texts from different periods.
8. It often involves the use of visualizations, such as graphs or maps, to represent and interpret complex patterns within the data. For example, one can create network graphs to visualize relationships between characters in a large corpus of plays or novels.

By leveraging these features, distant reading offers a *complementary approach* to traditional close reading, providing researchers with a broader perspective on literature and cultural trends.

4.3 Pedagogical Viability

Distant reading has been increasingly explored and integrated into both research and pedagogy in the field of literary studies and digital humanities. While it may have initially gained prominence as a research methodology, there are instances where distant reading techniques are being applied in educational settings. (Brett D. Hirsch, 2012) **Here are some considerations regarding the feasibility of distant reading in pedagogy:**

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1. Distant reading often involves advanced computational and statistical methods that may be more suitable for graduate-level or advanced undergraduate courses where students have a foundational understanding of literature and research methods.
2. Some institutions incorporate distant reading as part of larger literature courses to introduce students to the possibilities of computational analysis. This involves hands-on exercises or projects using user-friendly tools to analyze texts.
3. Collaborative projects or interdisciplinary courses that involve both literature and computer science students can provide a unique opportunity for distant reading in a pedagogical context. Such collaboration allows students to learn from each other's expertise.
4. The availability of user-friendly distant reading tools has improved, making it more feasible for teachers to introduce these methods to students. Tools like Voyant or online platforms that offer pre-built distant reading analyses can lower the entry barrier.
5. It can encourage students to develop critical thinking skills by asking them to interpret and contextualize the results generated by computational tools. This can enhance their analytical abilities in understanding literature from a broader perspective.
6. It can be integrated into interdisciplinary courses that bridge literature and technology. Courses that explore the intersection of humanities and computational methods can provide students with a well-rounded perspective.

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While distant reading has made strides in becoming more pedagogically accessible, its widespread adoption in standard literature courses can vary based on institutional resources, curriculum design, and the level of technical expertise among students and instructors. Teachers interested in incorporating distant reading into their courses should consider the specific needs and goals of their students and seek to strike a balance between traditional close reading and computational approaches.

4.4 Complementarity of Distant Reading and Close Reading

Distant reading and close reading are complementary approaches to literary analysis, each offering unique insights into texts. Integrating both methods can provide a more comprehensive understanding of literature.

1. Close reading focuses on the detailed analysis of individual texts, examining language, themes, and stylistic elements on a *microscopic level* while distant reading offers a *macroscopic view* by analyzing large datasets, identifying trends, patterns, and relationships across a broad range of texts.

2. Close reading allows for *in-depth exploration* of the nuances and complexities within a single text, revealing layers of meaning that may be missed through distant reading alone while distant reading facilitates the *discovery* of broader trends, commonalities, or shifts in language use, enabling researchers to pose new questions and hypotheses for close reading.
3. Close reading is *time-consuming and resource-intensive* when applied to a large number of texts, making it impractical for studying extensive corpora; whereas distant reading *efficiently* analyzes large datasets, identifying general trends and providing a foundation for selecting specific texts for close reading.
4. Close reading illuminates the *historical and cultural context* embedded in individual texts, offering insights into the author's intentions and the contemporary social milieu while distant reading examines literature *across time periods*, identifying overarching historical and cultural trends that may not be apparent in the study of individual works.
5. Close reading is primarily associated with literary analysis, drawing on the skills of literary interpretation and criticism while distant reading encourages *interdisciplinary* collaboration by integrating computational methods, statistics, and data analysis, bridging the gap between literature and technology.
6. Close Reading remains a *foundational skill* in literature courses, developing students' abilities to engage deeply with texts and articulate nuanced interpretations while distant reading offers opportunities for students to explore literature from a broader perspective, introducing them to computational tools and quantitative analysis.
7. Close Reading validates distant reading findings by providing detailed examinations of specific instances, enriching the interpretation with qualitative insights; whereas distant reading *validates* close reading by confirming or challenging hypotheses generated through detailed analysis, ensuring a balanced and comprehensive approach.
8. Close Reading emphasizes the *uniqueness and specificity* of individual texts, promoting a deep understanding of the particularities within each work while distant reading focuses on general trends and patterns, providing a broader context for understanding literature and fostering a sense of the larger literary landscape.

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By integrating both distant reading and close reading, scholars and students can leverage the strengths of each approach, creating a more nuanced and holistic understanding of literature. This combination allows for a richer exploration of texts that considers both the intricacies of individual works and the broader literary ecosystem.

4.5 Skills for Distant Reading

Engaging in distant reading does not necessarily require special qualifications in the traditional sense, but individuals involved in this approach should possess a combination of skills and knowledge from both literary studies and computational disciplines. **Here are some qualifications and skills that can be beneficial for those interested in distant reading:**

1. A solid *foundation in literary studies*, including an understanding of literary theory, genres, historical contexts, and critical analysis, is crucial. **Familiarity with close reading practices is also valuable.**
2. Strong *research skills* are essential for formulating research questions, designing studies, and interpreting findings. Researchers/readers should be able to contextualize distant reading results within broader literary and cultural frameworks.
3. Proficiency in *computational and statistical methods* is necessary for implementing distant reading analyses. This includes knowledge of programming languages (e.g., Python, R), statistical techniques, and familiarity with relevant tools and libraries.
4. Understanding *text mining and Natural Language Processing (NLP) techniques* is important for preprocessing textual data, extracting meaningful information, and handling language-specific challenges.
5. Competency in *data literacy* such as working with large datasets, data cleaning, and data visualization is crucial. Students should be comfortable navigating and analyzing diverse types of literary data. In fact, Yuval Noah Harari (2015) popularized the term 'dataism' to refer to a phenomenon that encapsulates the idea that data plays a central role in the ongoing transformation of human societies and the potential evolution of human beings. It is also a philosophy that places a significant emphasis on the value of data in understanding and shaping the world. This concept suggests that data is not only a tool for analysis but also a fundamental and all-encompassing force that drives decision-making, knowledge creation, and even the nature of reality itself.
6. Effective *communication and collaboration* with experts from diverse fields, such as computer science, data science, or digital humanities, are essential. Bridging the gap between literary studies and computational disciplines requires interdisciplinary skills. The collaboration between literary studies and computational disciplines is driven by the need to leverage technological advancements and data-driven methodologies to enhance the study of literature, providing scholars with new tools and perspectives in the rapidly evolving digital landscape.
7. The ability to *critically evaluate* distant reading results and interpret their implications within the context of literary and cultural studies is crucial. Researchers/readers should

Comment [DC14]: still an expert opinion related to the topic, it is not showing the results at all

be mindful of the limitations and potential biases in computational analyses. Critical thinking plays a significant role in distant reading, especially in the interpretation and evaluation of the results obtained through computational and statistical analyses. While distant reading often involves large-scale quantitative methods, critical thinking is essential for several key aspects of the process.

8. Knowledge of *ethical considerations* in data usage, privacy, and algorithmic bias is important. Researchers/readers should adhere to ethical guidelines when working with textual data. This includes issues related to privacy, consent, and the responsible use of data. Researchers/readers must critically assess the ethical implications of their work and take steps to mitigate potential risks.
9. Distant reading often involves using evolving technologies and methodologies. Individuals should be *adaptable and open* to learning new tools and techniques as the field continues to develop. Adaptability and openness to them in distant reading enable researchers/readers to leverage the full potential of emerging technologies, collaborate effectively, address evolving challenges, and contribute to the advancement of knowledge in the field.
10. Teachers incorporating distant reading into courses should have effective *teaching skills* to guide students in understanding and applying distant reading methods. Teaching skills are essential for effectively conveying the intricacies of distant reading, fostering interdisciplinary collaboration, and empowering learners to navigate the intersection of literary studies and computational disciplines. The ability to create a supportive learning environment is important.

While formal qualifications may vary, a combination of these skills and knowledge is advantageous for scholars/teachers interested in conducting distant reading research or incorporating distant reading into educational settings. *Continuous learning and staying informed* about advancements in both literary studies and computational methods are essential for success in this interdisciplinary field.

4.6 Challenges in Incorporating Distant Reading into the Curriculum

The implementation of any innovation in academia inevitably encounters challenges from stakeholders. It is essential to acknowledge that innovation is preceded by renovation, emphasizing the impermanence of established norms. Challenges, by their nature, are surmountable with the collective will of stakeholders. The introduction of distant reading alongside close reading confronts not only individual hurdles but also institutional obstacles. Hence, incorporating distant reading into a literature curriculum presents various challenges,

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ranging from pedagogical considerations to logistical and technological issues. (Annie Burdick, 2021) Here are some challenges that teachers and institutions may encounter:

1. Students and instructors may have varying levels of *technical proficiency*, creating a potential barrier to effectively implementing distant reading methods. However, providing in-service programmes for teachers and introductory workshops, tutorials, or resources to enhance students' technical skills can help overcome this challenge.
2. *Inadequate access* to computers, software, or reliable internet connections can limit the practical implementation of distant reading techniques. However, institutions should ensure that students have access to necessary technology and explore cloud-based or web-based tools that require minimal software installations.
3. *Collaboration* between literature and computer science departments may pose challenges due to differences in methodologies, terminology, and expectations. However, the system should encourage interdisciplinary communication and collaboration, and possibly foster joint courses or projects that bring together expertise from both fields.
4. *Integrating distant reading* into an existing literature curriculum definitely require adjustments to course content, objectives, and assessments. However, gradual integration, starting with smaller modules or supplementary materials, can help smoothly incorporate distant reading into the curriculum without overwhelming students.
5. Students accustomed to traditional close reading methods may *resist* or find distant reading approaches unfamiliar or less engaging. However, teachers can frame the introduction of distant reading as a complement to close reading, emphasize its potential benefits, and provide concrete examples of its relevance to literary analysis.
6. Distant reading may involve *ethical considerations* related to data privacy, sensitive content in texts, and potential biases in algorithms. However, teachers should address ethical concerns explicitly in the curriculum, discuss responsible research practices, and ensure that students are aware of and respect ethical guidelines.
7. Striking a *balance* between traditional close reading and distant reading methods within a course can be challenging, especially given time constraints. Therefore, teachers should carefully plan the curriculum to allocate time for both close reading and distant reading activities, emphasizing the complementary nature of the two approaches.
8. Designing *assessments* that effectively evaluate students' understanding of distant reading concepts and skills may be challenging. So, teachers should develop a mix of assessment methods, including written reflections, group projects, and individual assignments, to gauge students' comprehension and application of distant reading techniques.

9. Limited *availability* of distant reading resources, such as datasets, tools, or case studies, can impede the implementation of practical activities. Departments should therefore identify and curate accessible resources, share open-access datasets, and collaborate with colleagues to pool resources can address this challenge.
10. Shifting the *pedagogical culture* within a department or institution to embrace digital and computational methods may meet resistance. Institutions should therefore foster a culture of openness to pedagogical innovation, encourage professional development, and highlight the value of incorporating diverse methods in literary studies.

Addressing these challenges requires thoughtful planning, ongoing communication, and a willingness to adapt and refine approaches based on feedback and experiences. Gradual integration, combined with support mechanisms, can help institutions, teachers, and students successfully incorporate distant reading into literature curricula.

4.7 Institutional Requirements

Innovation relies heavily on institutional cooperation. The responsibility of motivating faculty and ensuring the requisite infrastructure falls primarily on institutions. Without this support, any attempt at innovation is destined to fail. The introduction of distant reading into a literature curriculum, therefore, involves various institutional requirements to ensure successful implementation. There are several studies that also focus on the institutional challenges and opportunities associated with its implementation (Anne Burdick et al., 2021; Matthew K. Gold, 2012); Roopika Risam & Adeline Koh, 2014; Brett D. Hirsch, 2012; Susan Schreibman, Ray Siemens, & John Unsworth, 2015;) Institutions should

1. provide *training and professional development* opportunities for faculty members to enhance their understanding of distant reading methods, computational tools, and interdisciplinary collaboration. They can organize workshops, seminars, or training sessions led by experts in distant reading and digital humanities, and encourage faculty to participate in relevant conferences or online courses.
2. foster *collaboration* between literature and computational disciplines to facilitate interdisciplinary approaches to teaching and research. They can establish collaborative initiatives, joint courses, or research projects that involve faculty members from literature and computer science departments. They should also encourage interdisciplinary dialogue and networking.
3. ensure access to necessary *technological resources*, including computers, software, and a reliable internet connection. They should invest in computer labs, provide access to

Comment [DC16]: Why, just a statement...? Where are the research data and research findings then analyzed using whose theory?

- relevant software tools, and explore cloud-based solutions to minimize technical barriers for students and faculty.
4. allow *flexibility in the curriculum* to accommodate the integration of distant reading methods and activities. They should review and update course offerings, learning outcomes, and assessment methods to incorporate distant reading. they can consider creating elective courses or modules that focus specifically on distant reading.
 5. ensure access to a diverse and extensive collection of *digital texts* and literary datasets. They should collaborate with libraries to expand digital collections, provide access to open-access datasets, and support the acquisition of resources relevant to distant reading.
 6. establish and communicate clear *ethical guidelines* for the responsible use of data, privacy considerations, and address potential biases in distant reading. they can develop institutional policies or guidelines that address ethical concerns related to the use of technology and data in literary analysis. They should also provide training on ethical research practices.
 7. offer support services to *assist students* in navigating technical challenges, accessing resources, and developing the necessary skills for distant reading. they can think of providing helpdesk support, workshops, and peer mentoring programmes to support students in using computational tools and conducting distant reading analyses.
 8. design *assessment methods* that align with distant reading objectives and effectively evaluate students' comprehension and application of computational methods. They should develop a variety of assessment tools, including written assignments, group projects, presentations, and examinations, to gauge students' understanding and skills in distant reading.
 9. *allocate resources* for the acquisition of computational tools, software licenses, and funding for research projects related to distant reading. they can seek grant opportunities, establish institutional funds for digital humanities initiatives, and allocate budgetary support for the purchase of necessary tools and resources.
 10. foster a *sense of community* among faculty, students, and researchers interested in distant reading. they can accomplish it by way of organizing seminars, reading groups, or conferences focused on distant reading. they can encourage the formation of communities of practice where individuals can share experiences, collaborate, and support each other.

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Incorporating distant reading into an institution requires a collaborative and strategic approach. Addressing these institutional requirements can help create an environment conducive to the successful integration of distant reading methods in literature programs.

4.8 Limitations of Distant Reading

Digital humanists do not assert the perfection of distant reading. While distant reading offers valuable insights into literature, it also has some key limitations, drawbacks and challenges associated with distant reading. Moretti (2013) himself, despite being a proponent of distant reading, acknowledges and discusses some of the critiques and limitations associated with this method.

1. It often involves quantitative analysis that may *overlook the nuanced aspects* of language, symbolism, and literary techniques present in individual texts. It may struggle to capture the richness and complexity of certain literary elements.
2. It may struggle to fully grasp the cultural, historical, and *contextual nuances* that shape the meaning of texts. Close reading is better suited for a deep exploration of such contextual details.
3. Distant reading tools provide statistical patterns and trends but often do *not interpret the meaning* or significance of these patterns. Human interpretation is crucial for understanding the context and implications of the identified trends.
4. The quality of distant reading analyses heavily relies on the *quality of the underlying data*. Inaccurate or biased data can lead to misleading conclusions, and ensuring data accuracy can be a significant challenge.
5. Distant reading tools and algorithms may inherit biases present in the training data, potentially leading to skewed or unfair results. Researchers/readers need to be aware of and address issues related to *algorithmic bias*.
6. It tends to *prioritize quantitative metrics*, such as word frequencies or topic distributions, sometimes at the expense of qualitative understanding. This can result in a reductionist approach to literary analysis.
7. It struggles to *capture authorial intentionality*, literary creativity, and the subjective aspects of interpretation that are often crucial for understanding literature.
8. It may not represent the entire literary landscape comprehensively. Selection biases in the corpus, limited availability of certain types of texts, and language-specific biases can affect the generalizability of findings.

9. Distant reading techniques may be more challenging to apply effectively to *certain literary genres* or historical *periods* where language use is highly idiosyncratic or less amenable to computational analysis.
10. Collaborations between literary scholars and computational experts may face challenges in communication and understanding, as each discipline has its own methods, terminologies, and perspectives.

Despite these limitations, distant reading remains a valuable tool when used judiciously and in conjunction with other methods. Researchers and educators should be mindful of these challenges and consider the appropriate balance between distant reading and close reading for a more comprehensive literary analysis.

4. Suggestions

Incorporating basic-level courses on distant reading into a literature curriculum can be an enriching experience for students, providing them with valuable skills in computational literary analysis. Here are some suggestions and strategies for introducing such courses:

1. Teachers can design a course title that reflects the integration of distant reading, such as “Introduction to Literary Analysis through Distant Reading.” They should craft a clear course description that outlines the objectives, emphasizing the exploration of computational methods to analyze literary texts.
2. The course should begin by introducing students to the fundamentals of distant reading. It should cover basic concepts such as text mining, data visualization, and computational analysis. It should also provide historical context and explain how distant reading complements traditional close reading.
3. The course should incorporate hands-on workshops where students can work with relevant tools and software. They should use platforms like R or Python for text analysis and introduce them to basic programming concepts. Teachers should ensure that students gain practical experience in applying computational methods to literary texts.
4. Case studies that demonstrate the application of distant reading in literary studies can be tried. They should showcase how scholars have used computational methods to uncover patterns, trends, and insights in different literary genres and historical periods.
5. The course should emphasize that distant reading is *not a replacement* for close reading but a complementary approach. It should illustrate how the two methods can be integrated to provide a more comprehensive understanding of literary texts.

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What are your suggestions for autobiography research? Why is this a suggestion for English teachers in general?

6. Teachers can assign projects where students create their literary corpora for analysis. This hands-on experience allows them to curate texts, preprocess data, and apply distant reading techniques to explore patterns within their chosen corpus.
7. The department can invite guest speakers or experts in the field of distant reading to provide insights into real-world applications and advancements. Virtual or in-person lectures can expose students to current research and industry practices.
8. The curriculum should encourage collaborative projects where students work in teams to apply distant reading methods to a specific research question or theme. This fosters teamwork, critical thinking, and the sharing of diverse perspectives.
9. Assessment can include reflective assignments where students articulate their understanding of distant reading, its strengths, and limitations. Teachers can encourage them to discuss the implications of computational methods on literary studies and their own learning experiences.
10. The curriculum developers should develop clear criteria for assessing student performance, ensuring that both conceptual understanding and practical skills are evaluated. It should include assessments for collaborative work, individual projects, and participation in workshops.

By incorporating these strategies, students can gain a foundational understanding of distant reading while developing valuable skills in computational literary analysis. This approach not only enhances their engagement with literature but also prepares them for the evolving landscape of digital humanities.

5. Conclusions

The journey through the realms of close reading and distant reading unveils the rich tapestry that constitutes the evolving landscape of literary studies. As we navigate this intersection, it becomes increasingly apparent that the synthesis of these complementary methodologies is not just a theoretical aspiration but a pragmatic necessity. The coexistence of close reading and distant reading within literary academia promises a more nuanced, comprehensive understanding of literature. By acknowledging the symbiotic relationship between these approaches, we pave the way for an institutionalized framework that transcends traditional boundaries. The thesis posited here asserts that the integration of both close reading and distant reading is not only plausible but essential for cultivating a robust, adaptable literary scholarship that resonates with the complexities of our ever-evolving literary landscape. As literary academia strides into the digital era, this integration not only meets the demands of our contemporary intellectual landscape but propels the discipline towards new horizons of exploration and discovery.

Comment [DC20]: There is no problem with the conclusion, OK.

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Comment [DC21]: 1. Use APA7 style or follow the journal template
2. Read the latest articles in the last five years, especially in 2020, 2021, 2022, 2023 and 2024
3. Write alphabetically
4. Number of references for indexed international journals (usually 30 references)

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