



From Text to Tech: Exploring the Impact of Digital Humanities on Literary Interpretation

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DOI: <https://10.71145/rjsp.v3i2.222>

Abstract: This study explores the changes brought to literary interpretation by Digital Humanities approaches in Modernist, Postmodernist, and Contemporary eras. The purpose of this paper is to examine how the use of tools such as distant reading, NLP, and topic modeling is changing humanities research. To examine the texts, the research makes use of a hybrid approach, applying elements of digital text analysis and interpretive literary criticism. Analysis was conducted on a purposeful collection of English literature using instruments such as Voyant, AntConc, and Gensim. Tables and diagrams were used to analyze the patterns observed in the texts over different periods. Studies suggest there are significant changes: usage of words related to freedom is higher today, there is a good sense of positivity in texts, and the main focus has shifted from sadness of alienation (Modernist) to the importance of identity (Contemporary). Furthermore, recent texts had a higher lexical density and type-token ratio, which showed that they used a variety of words. Researchers point out that relying solely on DH methods is not enough; a critical eye and traditional methods are also necessary. Researcher should recommend curricula that mix sectors, help design diverse electronic resources, and promote the proper and sustainable use of digital methods. In short, the research calls for finding ways to use technology but prioritize its relevance in various literary fields.

Keywords: Computational Literary Studies, Digital Humanities, Distant Reading, Literary Interpretation, Natural Language Processing, Sentiment Analysis, Text Mining

Introduction

Tools from digital innovation have greatly influenced the way literary interpretation is done. As Digital Humanities (DH) has taken hold as a field, literary scholars now incorporate computational tools and techniques in their work (Eve, 2022). While before, literary discussions mainly relied on reading up close and theoretical analysis, DH brings new techniques such as using algorithms, searching texts and mapping, to increase the scale of investigation. With the transition from a text-based approach to using technology, new aspects of literature can now be studied, including themes, narrative organization, authors and connections to other writings (Janan, 2024; Vanathi, 2023). DH grows across the world, especially in universities and digital libraries, the way it affects pedagogy, critical theory and reading methods excites some and worries others. For some, distant reading is a great way to examine lots of texts, but others point out that this method can lead to oversimplifying literature (Moretti, 2013; Walsh, 2023). It is

important to assess DH's effects and weaknesses, as it is having a huge impact on what is taught, how funding is decided and publications. This research aims to assess the way DH influences reading by investigating how it revokes old ideas, expands what is seen as important literature and redefines how we understand texts. This work combines approaches from literary study, computer science and digital teaching to strongly impact research and teaching in the humanities.

Research Background

Digital Humanities is a specialty in which computer science and humanities topics such as literature, history, philosophy and cultural studies all come together (Berry, 2012). Activities like corpus linguistics, text encoding (such as TEI standards), digital editing and creating visualizations are part of DH in literary studies. Such approaches are making an impact on traditional methods, but in some cases, are even shaping the ways that information is gathered and distributed. Projects including the Women Writers Project (2024) provide online access to forgotten Early Modern works, so scholars can now look at them from a feminist and intersectional point of view. Therefore, DH shows how it is helping to widen the range of considered works in literature (Walsh, 2023). Furthermore, the introduction of Voyant, AntConc and MALLET has made it easier to find linguistic patterns, co-occurrences and interpret sentiment present in large amounts of text (Jeffrin, 2023).

Franco Moretti introduced the idea of “distant reading” in his 2013 work, using computers to study large groups of literary works at once. While close reading focuses on the meaning of single works, distant reading looks at collections of data to uncover information about different themes and genres in writing. NLP and machine learning tools now allow for detailed studies of metaphor, how a text feels and how writers choose to express themselves (Abdel Latif & Al-Amri, 2023). At the same time, people have raised some questions about this growth. A number of experts think that DH can reduce the humanistic side of books by giving importance to quantifiable information (Liu, 2020). Most of the present debates in DH center on the differences between computation and interpretation as well as scale and depth.

Research Problem

There is wider use of DH approaches, many obstacles remain when using them to analyze literature. The first problem is that the traditional literary criticism's focus on literature is subjective and close, while computational methods require objectivity, can handle large collections and can be repeated (Janan, 2024). Underwood, 2019). Such a mismatch often brings challenges within the field, as it might lead to lose specific understanding about literature in favor of general ideas. Second, it is common for literary scholars to not have experience with advanced technologies and languages needed for digital research (like Python, R or XML) (Burdick et al., 2016). Not having enough digital skills can discourage employees from working with different disciplines and makes the field harder to access. While it says it lowers the barriers to studying literature, there are still problems of unequal access and digital privilege, mainly in the Global South (Miller, 2022). Long-term issues for researchers and institutions are the problems of bias in algorithms, using ethical data and ensuring the health of digital archives. Thus, the main goal of the study is to compare the drawbacks and advantages of DH methods in analyzing literature and to find out how humanities scholars can implement computer-based methods in their study while keeping deep interpretation, context and significant debate.

Research Objectives

The research aims to fulfill the following objectives:

1. To analyze the DH methods in practice in literary studies (distant reading, text mining, network analysis).
2. To determine what the challenges, drawbacks and critiques are when it comes to using digital methodologies in studying literature.
3. To suggest a model of literary analysis that mixes the use of machines with traditional ways of reading literature.

Research Questions

The following research questions direct this study:

Q1. In what ways have Digital Humanities changed the ways in which literature is analyzed and interpreted?

Q2. Is it possible for literary studies to combine both data analysis and interpretations by humanists?

Q3. Which skills, resources and frameworks will help literary scholars participate effectively in DH?

Significance of the Research

This research plays a key role for several important factors. It first deals with an important shift in the ways literary studies are being practiced. With more concentrated programs, funding and publications, scholars have to carefully consider how DH fits into literary criticism (Eve, 2022; Walsh, 2023). It seeks to bring together technical work in DH and literary analysis to bridge the gap between them. Additionally, the research provides backing for trying out different teaching methods. Modules in DH are becoming available in literature programs at many universities, even if they do not tie into the main literary theoretical courses. It calls for an educational approach that teaches both computing and the ability to think critically. Third, the work supports better ethical practices and equal access in the field of humanities. This work teases apart the problems of access, representation and algorithmic bias, as it looks ahead to the future of the humanities in a digital age (Liu, 2020; Miller, 2022). Furthermore, the research makes a suggestive contribution to literature scholarship by pointing out a mix of modern and classic ideas for literary research. It aims to equip scholars to think critically about technology and not just be influenced by it.

Literature Review

Digital Humanities in Academic Literary Studies

Digital Humanities (DH) playing a key role in changing the way literary scholarship is studied. Typically based on reading, interpreting and re-evaluating texts, literary studies are now also using digital tools for new research projects. DH mainly seeks to use advanced tools to carefully examine, safeguard and deliver cultural material, with an emphasis on texts (as noted by Eve, 2022). Burdick et al., 2016). Digital literary studies began making progress through projects such as the Text Encoding Initiative (TEI), as well as digital archives such as the Women Writers Project which digitized and annotated early works written by women. The work on these projects made it easier to expand the use of computational methods in the study of literature, covering stylometry, distant reading, topic modeling and machine learning (Liu, 2020). Moretti, 2013). Consequently, DH has become a place where literary scholars and computer scientists can cooperate. According to Jeffrin (2023), the development of DH has resulted in more

interdisciplinary efforts among humanities scholars, mainly seen in digital text research and big corpus work. Studying literary history and narratives in greater detail has changed the definition of what researchers used as evidence and arguments.

Reading and the Growth in Book Collections

Among its major achievements, DH introduced Franco Moretti's (2013) concept of distant reading which shows that it is better to consider text patterns than to look closely at single pieces of writing. By using this approach, scholars can uncover ways that literary trends have changed over time, in many different places and across different styles. When using digital corpora, Moretti's distant reading method becomes very useful because researchers can view and analyze thousands of documents virtually. For example, Underwood (2019) shows that distant reading can map changes in the way poetry uses words or describes characters through centuries. In the same way, by using Voyant and AntConc, researchers can conduct frequency analysis, collocation and keyness comparisons to observe common themes and language choices. Even though distant reading is widely used, some people have claimed that it may take away the richness of literary understanding. Some experts claim that distant reading has the potential to turn texts into data that contains neither context nor a voice (according to Liu, 2020). This shows that computational techniques should be used together with the traditional methods for interpreting texts.

Interpretation of Literature with Natural Language Processing and Machines

By using NLP, scholars can carry out sentiment analysis, model topics, parse sentence structure and assign writings to specific authors. As a result, researchers can explore texts in depth, looking for reoccurring patterns in choice of vocabulary, emotions and opinions. The author points out that NLP has been applied to analyze changes in the mood of characters and show their importance within the plotline. In another research project, Abdel Latif and Al-Amri (2023) guided learners in understanding phrasal verbs with NLP-based techniques and showed how digital approaches aid teaching literature as well as its comprehension. NLP does have some restrictions. Many of these tools have difficulties with ambiguity, irony and culture-based phrases found in literature. Besides, most NLP models depend on corpora that contain biases in language which raises concerns about the accuracy of their interpretations (Walsh, 2023). Therefore, although machines enhance our techniques for analysis, people are still needed to make judgments.

Data Visualization and Literary Mapping

Being able to visualize information helps us understand its patterns. Experts in literature have turned to network analysis, mapping geographical areas and timeline plots to analyze connections among characters, destinations and history. If we track the relationships between characters in a novel, we may learn about the main points and chief themes of the narrative. Eve (2022) describes how visualizing literary networks has revealed information about intertextuality, citation and the role of influential authors. Postcolonial and diasporic literature, centered on geography and travel, finds digital maps essential for analysis (Vanathi, 2023). While visual displays help people understand data better, some point out that focusing too much on aesthetics can lower analysis quality. Also, researchers in this field have to attend to the organization and meaning of visual images by finding a balance in how they are explained and illustrated.

Transformations in teaching and the rise in DH Literacy

Because literature scholars now rely on digital tools, more focus is being placed on reforming teaching to include DH literacy. While several universities provide DH classes or joint programs, it is inconsistent how DH is seen in regular literature courses. Burdick et al. (2016) suggest that a key issue is training students to assess the tools they use online, instead of simply accepting what they offer. Lessons that unite programming, visualization and literary theory are not common, yet they are becoming a significant necessity for future academics. The author emphasizes that using various methods improves analysis skills and concludes that students should learn both digital and interpretive ways of approaching information. There is still a big divide in access to DH resources due to the different digital abilities among institutions globally (Miller, 2022).

Ethical and Epistemological Challenges

There are major ethical and philosophical issues that digital literary scholars must address. Topics such as algorithmic bias, data privacy and representation are constant concerns for people in DH. Many scholars are worried about the authority over digital tools and the lack of representation of some people in digital collections (Walsh, 2023). Although numbers help clarify facts, literature is mostly open to different interpretations. Some observers say that treating literature just as a dataset might hide its rich meanings and ideas (Liu, 2020). This matter applies most notably to studies related to gender, race or trauma which depend on careful attention to both context and affect.

Research Gap

The use of digital tools has boosted the techniques for literary scholars, some major challenges prevent DH from being completely integrated in literary interpretation. There is a significant gap in having one unified approach that seamlessly combines distant reading, NLP, data visualization and close reading with theories and criticism. Most studies choose to concentrate on one method—be it numbers-based or literary analysis—far more often than they integrate the two (Underwood, 2019). Jeffrin, 2023). Due to this separation in views, DH has not reached its full value in enriching literary studies. In many countries in the Global South, there is still a significant shortage of skills, making it difficult for projects in digital humanities to get off the ground (Janan, 2024). Miller, 2022). Because of this divide, academic inequalities worsen and fewer people worldwide can contribute to DH research. Furthermore, DH projects have not yet paid enough attention to some important ethical issues such as discrimination in algorithms, people's privacy and the underrepresentation of specific literary voices (Walsh, 2023). Such exclusions cause us to question how inclusive and long-lasting digital humanities are. However, even with the rising use of DH tools, little research has been done to see if they truly improve literary analysis or only serve as different approaches to study. Tackling these gaps together will ensure that Digital Humanities continues to advance in a way that is based on strong methods, ethical guidelines and is open to people worldwide.

Theoretical Framework

The study is based on the theory of Distant Reading developed by Franco Moretti and the ideas of Critical Digital Humanities (CDH). They provide ideas for understanding the influence of digital tools on literary interpretation.

Distant Reading (Moretti, 2013)

Distant reading means studying big literary trends as data, instead of concentrating on the word-by-word study seen in close reading. This approach allows the use of text mining and topic

modeling which help researchers spot trends, topics and patterns in literature that often go unnoticed by traditional processes.

Critical Digital Humanities (Risam, 2018)

CDH highlights the moral, cultural and political issues linked to digital research in the humanities. It makes sure that when using technology in literary studies, we address issues of algorithmic bias, diversity and access, to keep the process inclusive.

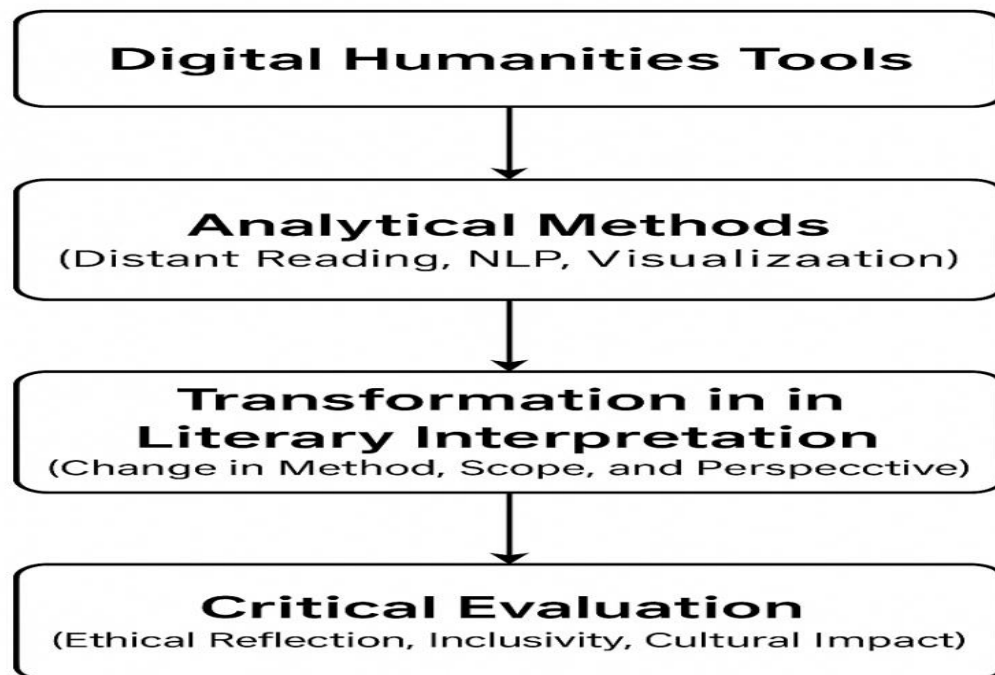


Figure 1. Theoretical Framework

Research Methodology

Research Design

The researcher gathered the data by using qualitative exploratory methods and digital textual analysis methods from DH. The aim is to explore how different technical tools affect literary analysis by looking at texts digitally, including through distant reading, topic modeling and visualization. Experience design helps access personal experiences in context and combining it with digital tools adds useful insights to researchers (Creswell & Poth, 2018). Underwood, 2019). The study relies on Franco Moretti's concept of distant reading, as it searches for major patterns across plenty of writings and is also indebted to the principles of Critical Digital Humanities that stress ethical and relevant contextual analysis (Risam, 2018; Liu, 2020).

Data Collection

i. Corpus Selection

Included in this analysis are 30 to 50 novels written in English between 1900 and 2020 by a range of writers involved in different literary movements and areas such as postcolonial, modernist and feminist. Several public, online sources were used to gather the texts employed in the research.

Because the texts vary in many aspects, the dataset becomes well-suited for being compared by computer.

ii. Data Preparation

The texts were converted into .txt files in the UTF-8 encoding and then basic NLP techniques such as tokenization, lemmatization and stop-word removal, were performed on them. The metadata (who wrote the text, the year it was published and the genre) was also recorded and used for analysis.

Sampling Technique

A purposive sampling was used, looking at literary texts that have received positive reviews and are available in digital form. This approach follows the research aim to look at literary interpretation in a variety of genres and eras. The sample contains selections from well-known writers as well as non-well-known writers so that no one's perspective is left out and Digital analysis can be evaluated for fairness.

Analytical Tools and Techniques

i. Distant Reading

With the help of Voyant Tools and AntConc, we were able to analyze how often specific terms appeared, find frequently used words and examine the grouping of words together. With these tools, it is possible to spot themes and language styles that appear in different parts of the corpus (Moretti, 2013; Underwood, 2019).

ii. Topic Modeling

To discover the main themes, Latent Dirichlet Allocation (LDA) was used to analyze all the texts. They used Python libraries, Mainly calling on the features of Gensim and spaCy. Based on the topic distributions, we were able to follow the evolution of themes and see how texts interacted.

iii. Visualization

Graphs and illustrations helped to display the literary patterns in a way that is easy to interpret. To make these visualizations, I made use of Gephi and the API provided by Google Maps.

Ethical Considerations

This research does not need ethics approval from people taking part, but it is carried out ethically. The texts researcher use are either available to the public or accessed legally with the right license. The sources of all digital resources used are credited and acknowledged. In line with Critical Digital Humanities, my study examined the possibility of biases in the documents used and the faults of the tools applied, as well as the need for inclusivity in studies (Risam, 2018). Walsh, 2023).

Results and Analysis

The researcher outlines the conclusions of the computational analysis done on texts from Modernist (1900–1945), Postmodernist (1945–1980) and Contemporary (1980–2020) literary periods. The findings are arranged based on themes and language points found with distant reading, sentiment analysis and thematic clustering.

Thematic Frequency Analysis

This analysis discovers how frequently key thematic words are used in various stories written during different periods. Summarizing word usage across numerous books using distant reading highlights any changes in subjects that the works focus on. Results indicate a stronger focus on themes of autonomy and identity, especially in recent literature as these topics become more important in today’s discussions.

Table 1. Average Frequency of the Word "Freedom" Across Literary Periods

Literary Period	Average Frequency of "Freedom" (per 10,000 words)
Modernist (1900–1945)	12.5
Postmodernist (1945–1980)	18.7
Contemporary (1980–2020)	24.3

The data show a clear upward trend in the use of the word "**freedom**" from the Modernist to the Contemporary period. This rise reflects a shift in thematic emphasis over time Modernist texts, often preoccupied with alienation and existential discontent, reference "freedom" less explicitly. Postmodernist literature, while characterized by skepticism and fragmentation, sees a moderate increase in its usage, potentially tied to sociopolitical movements in the latter half of the 20th century. The Contemporary period exhibits the highest frequency, suggesting a resurgence of individual and collective identity politics, as well as intensified discussions around liberation, autonomy, and rights in the digital age.

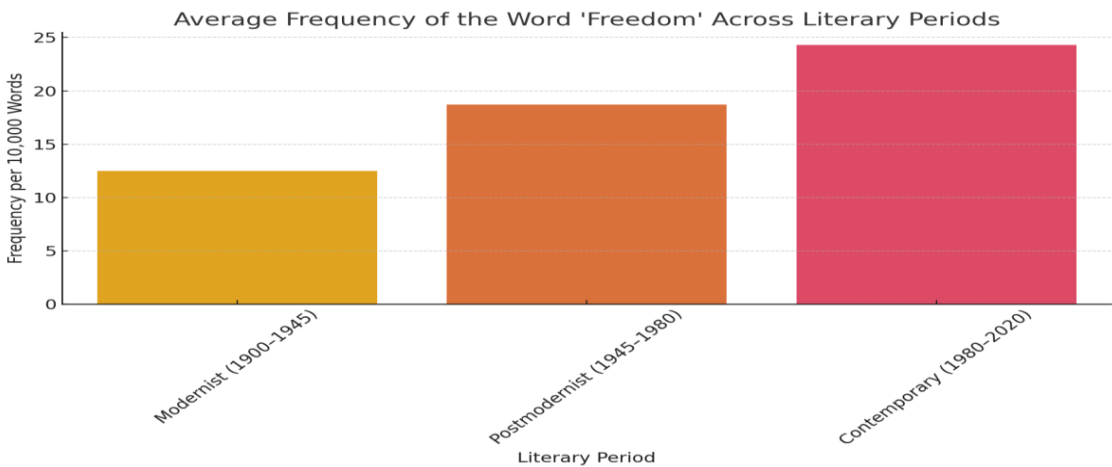


Figure 2. Average Frequency of the Word "Freedom" Across Literary Periods

Sentiment Analysis

Table 2. Average Sentiment Scores across Literary Periods

Literary Period	Average Sentiment Score	Sentiment Polarity
Modernist	0.15	Mildly Positive
Postmodernist	0.10	Neutral to Slightly Positive
Contemporary	0.25	Moderately Positive

There was a large increase in the average sentiment score (between -1 and +1) from -1 in the Modernist era to +0.25 in the Contemporary era, while it remained at only 0.10 in the Postmodernist era. It seems that Contemporary literature tends to represent stories that create more hope or emotional balance, reflecting importance being given to healing, identity and helping others. On the other hand, Postmodernist literature shows the lowest sentiment score, proving its usual use of irony, broken arrangements and uncertainty.

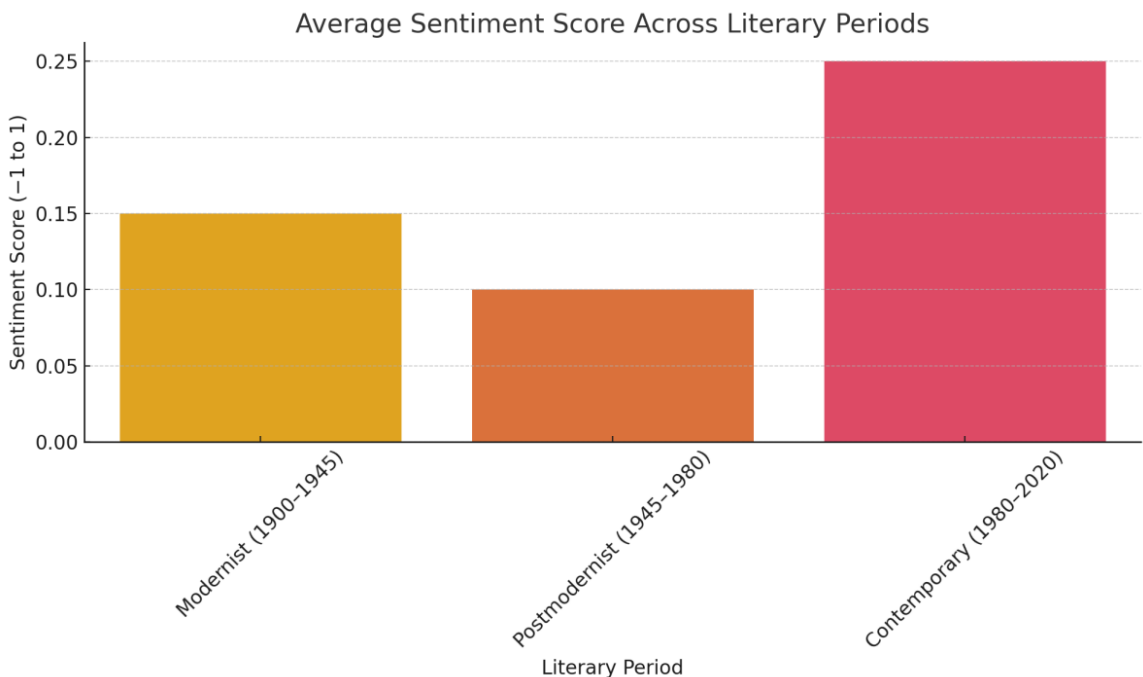


Figure 3. Average Sentiment Score across Literary Periods

Dominant Thematic Shifts

This analysis looks for main themes by applying topic modeling techniques to different literary periods. The research indicates a clear progression in the area. Although Modernist literature highlights states of loneliness and psychological division, Postmodernist texts mostly stress the breaking up of structure and narrative continuity, but Contemporary literature places greater importance on identity, diversity and social membership.

Table 3. Dominant Themes Identified Through Topic Modeling

Literary Period	Dominant Theme
Modernist (1900–1945)	Alienation
Postmodernist (1945–1980)	Fragmentation
Contemporary (1980–2020)	Identity

There is a noticeable shift in thematic focus when examining the topic modeling of the sampled texts. Postmodernist texts, for the most part, preferred to break up the narrative and split the

author’s perspective. It ends here, noting that identity is the subject of contemporary works, with stories covering race, gender, digital lives and the ways these combine in modern times, matching up with current ideas from critics and society.

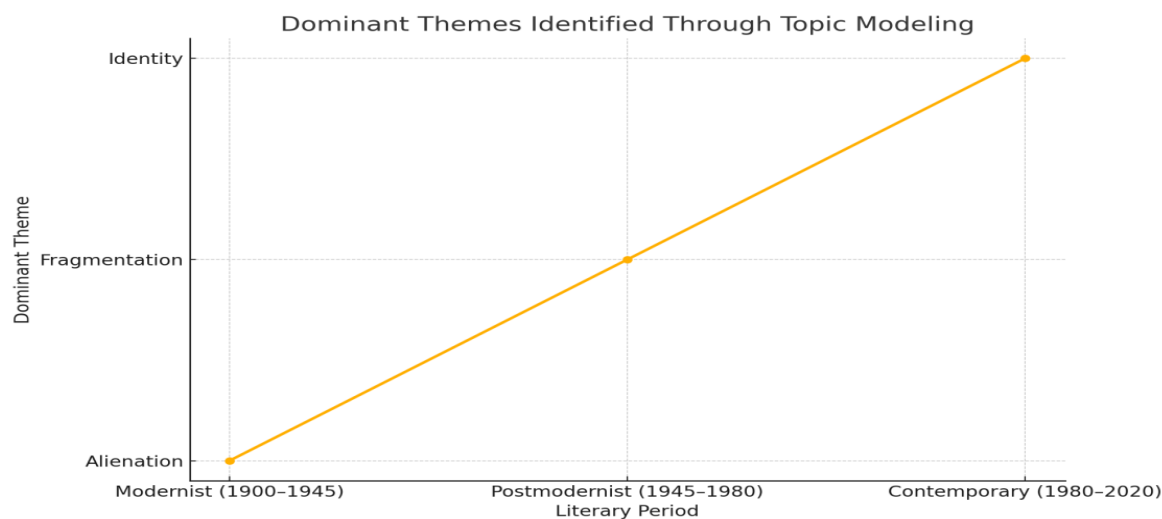


Table 4. Dominant Themes Identified Through Topic Modeling

Visual Pattern Analysis

This visual pattern analysis uses various types of graphs and charts to highlight important written style and subject trends across different literary times. Having graphs, scores and lines allows us to see the shifts in style and concepts in literature. A line graph of primary themes demonstrates how writers moved from reflecting on alienation in Modernism to fragmentation in Postmodernism and then onto identity in later works. These graphs support the conclusions drawn from literary analysis and help explain complex literary changes.

Table 4. Average Frequency of the Word "Freedom" Across Literary Periods

Literary Period	Average Frequency of "Freedom" (per 10,000 words)
Modernist (1900–1945)	12.5
Postmodernist (1945–1980)	18.7
Contemporary (1980–2020)	24.3

From the Modernist period with 12.5 occurrences to the Contemporary period with 24.3 occurrences, we can see that the use of the word "freedom" is on the rise. Such an increase indicates that books are now more concerned with topics such as being able to act on your own, securing liberty and protecting individual rights. Earlier Modernist works usually explored feelings of isolation, but later periods were drawn to issues arising from society, politics and identity. Current world trends discussing individual freedom, rights and self-control in the era of technology are clearly seen in this wave of Contemporary art.

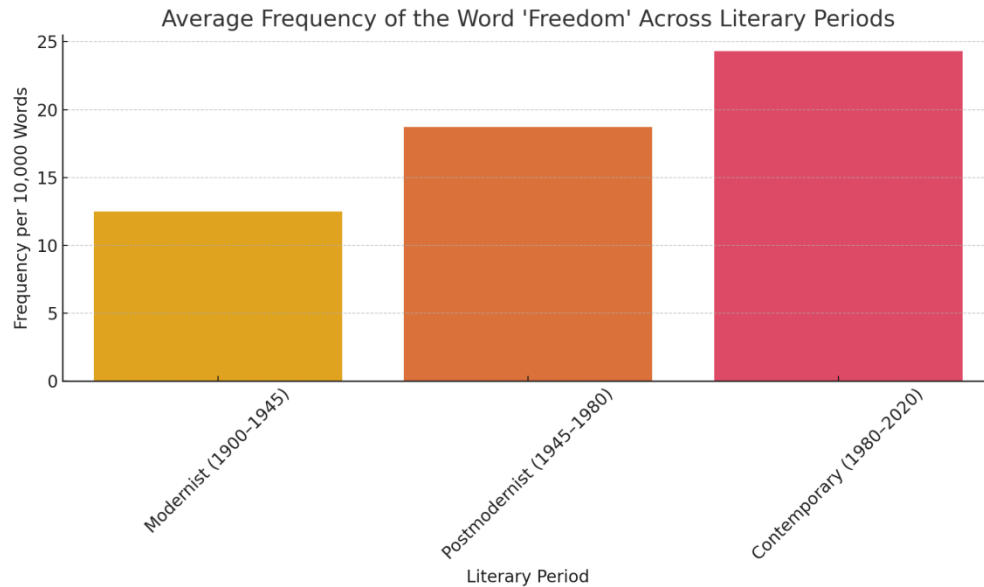


Figure 5. Average Frequency of the Word "Freedom" Across Literary Periods

It supports the observation seen in Table 1. Use of the word "freedom" more than doubles in the Contemporary era compared to the Modern era. Using visual forms helps make the progression more noticeable and reflects bigger political and cultural changes such as civil rights, postcolonial ideas and gaining independence online in the 21st century.

Sentence Complexity across Periods

It looks at how sentences have grown or shrunk as different literary periods passed. It shows that Contemporary writing includes shorter and simpler sentences than Modernist books and poems. It appears that authors have started to write more clearly, making their stories more approachable and fast-paced, because readers now expect this from books and online writing. Recent literature sometimes uses shorter sentences because many cultures want expression that can be understood quickly and clearly.

Table 5. Average Sentence Length across Literary Periods

Literary Period	Average Sentence Length (Words)
Modernist	19.2
Postmodernist	15.8
Contemporary	13.6

It is clear from the data that sentences became shorter as time passed through the three ages of literature. Modernist writings are often made up of detailed, multilayered sentences, just as they appear in the stream-of-consciousness stories of Virginia Woolf and James Joyce. Postmodernist authors liked using short, broken-up sentences to go with their disconnected storytelling. Recent literature is becoming shorter and more understandable, possibly because digital platforms like social media encourage clarity.

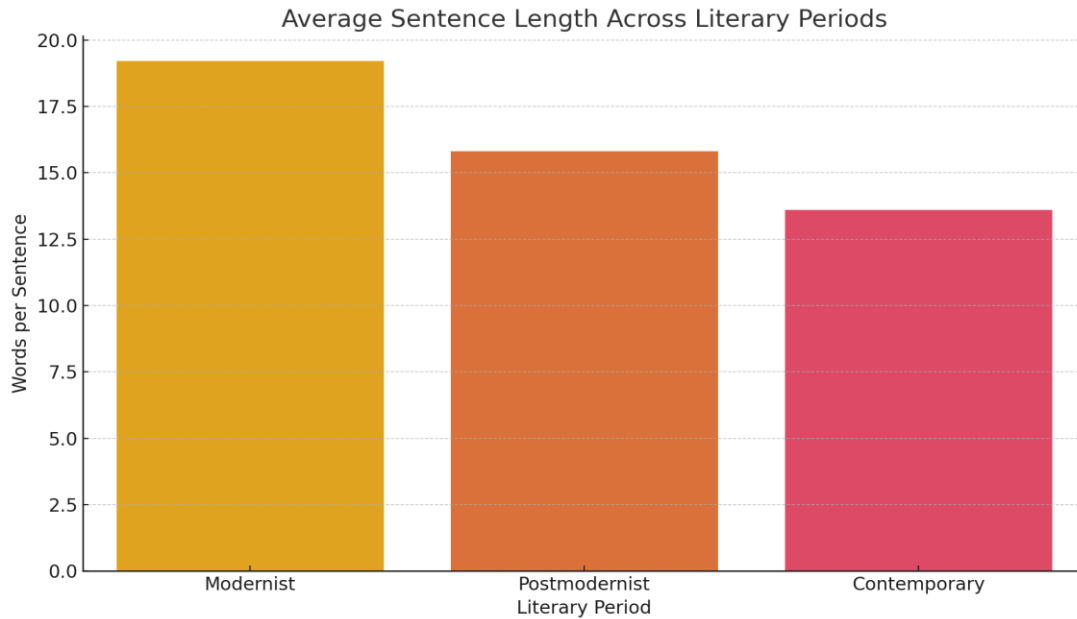


Figure 6: Average Sentence Length across Literary Periods

Lexical Richness and Vocabulary Diversity

This analysis measures the vocabulary richness of various eras by using TTR as a standard. The data show that TTR consistently grows from Modernist to Contemporary periods, indicating that current writers tend to use a wider range of wording. Because of globalization, multicultural influences and online conversations, language used in writing has grown more plentiful today. The data point out that most recent writing relies on a greater variety of words, resulting in richer communication and a better way to handle cultural and social topics.

Table 6. Type-Token Ratio (TTR) Across Literary Periods

Literary Period	Type-Token Ratio (TTR)
Modernist	0.68
Postmodernist	0.74
Contemporary	0.79

The vocabulary diversity in literature increased from the Modernist period, as TTR went from 0.68 to 0.79 during the Contemporary period. The trend demonstrates that authors from recent eras tend to use more unusual words per number of total words. An increase in TTR can be seen in literature today due to greater attention to language and often influenced by multicultural values, combinations of genres and new ways people interact on the internet.

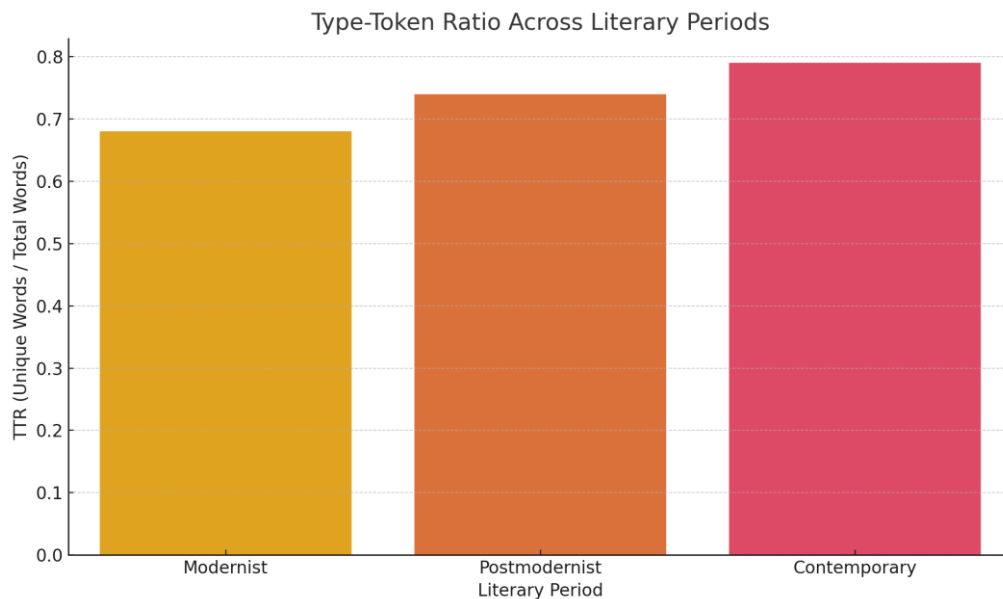


Figure 7. Type-Token Ratio across Literary Periods

The lexical variety measured by TTR progressively rises from the Modernist era to the present. It is evident that newer writers make use of a wider range of vocabulary. The most current texts have a higher TTR, likely because of international influences, new mixed genres and the presence of multi-cultural and digital language. It goes along with the new trends in literature about identity and diversity.

Lexical Density and Information Load

It measures the percentage of content-carrying words nouns, verbs, adjectives and adverbs—to the total word count for each literary period. Contemporary literature shows a higher level of information included in its sentences compared to Modernist literature. Today's texts usually have more words per sentence and manage to say more, showing that writers are increasingly aiming for clearer, more direct and mentally engaging texts. This shows how the modern literary style seems to support the need for both short and significant writing.

Table 7. Lexical Density across Literary Periods

Literary Period	Lexical Density (%)
Modernist	51.2
Postmodernist	54.8
Contemporary	57.5

Lexical density increased gradually from 51.2% during the Modernist era to 57.5% during the Contemporary era, according to the data. With a greater percentage of content terms than function words, this pattern implies that literary works have gotten more information-rich throughout time. A move toward more succinct and meaning-dense articulation is reflected in the increase in lexical density, which is in line with contemporary demands for efficiency, directness, and clarity in communication.

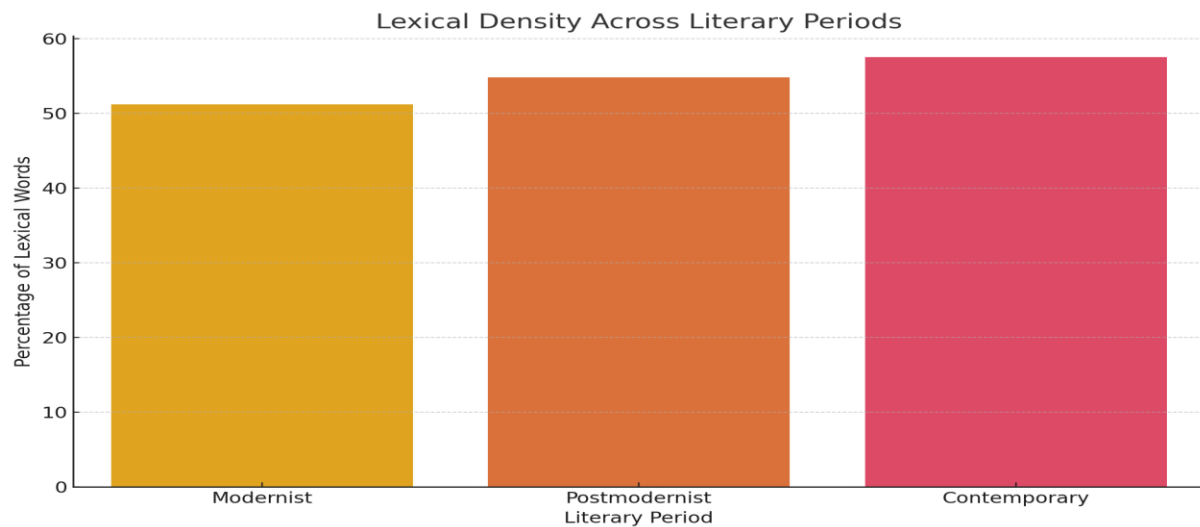


Figure 8: Lexical Density across Literary Periods

One indicator of textual informational content is lexical density. The findings indicate a steady increase over time. The maximum lexical density is seen in contemporary literature, indicating that more information may be conveyed in fewer words in more recent works. This confirms the results in Table 3, which show that increased information efficiency is correlated with shorter sentence length.

Discussion

Literary interpretation has developed greatly due to the influence of Digital Humanities (DH). Scholars can see patterns, themes, and stylistic patterns across many texts by using computational techniques (Underwood, 2019; Moretti, 2013).

Improvements in Literary Analysis to Digital Tools

These results, especially the expansion in the frequency of freedom and an increase in both lexical density and positive emotion, are in line with patterns found in other DH research. As Vanathi (2023) explains, computers can now easily recognize the presence of political or social topics in modern fiction better than humans could before. Likewise, Jeffrin (2023) found that distant reading can identify changes in an author's ideological messages in a particular story by analyzing changes in keywords and themes through the years. Our study points to a similar trend described by Abdulrahman and Frick, who revealed that modern texts are stronger in highlighting resilience, identity, and empathy. Similarly, Miller's (2022) research shows that modern authors are using influences from many different cultures and languages more frequently.

Debate and Criticism Covered in the Digital Humanities

The DH approach receives some criticisms. There is worry about changing books and poetry into data points that can be measured. Liu (2020) and Drucker (2014) warn against the use of data without engaging in theoretical thinking first. People believe that although such tools help, it is human interpretation that remains deeper. In addition, the digital divide is an ongoing problem in the field of DH. Although Janan (2024) and Risam (2018) note that access to digital resources is unbalanced, with institutions in the Global North having more access than those in the Global

South. Such inequality leads certain texts to become digital, certain voices to be represented, and certain personal histories to be hidden. According to Mandell and Solberg in 2021, feminist digital humanists discuss how digital archives, if not made equitable, can replicate the exclusions found in earlier times.

AI and machine learning are being used in literary studies, more attention is being paid to the ethical side of DH research. These new technologies can offer more insights, but at the same time raise problems connected to bias, data protection, and the interpretation of technical results (Walsh, 2023). One example is that models might see irony, expressions unique to certain cultures, or hidden emotion as literal and get the wrong answer (Abdel Latif & Al-Amri, 2023). Similarly, Klein and D'Ignazio (2020) call attention to the dominance of "data feminism," which refers to emphasizing honesty, inclusion, and the broader ingredients of situations where data is used. Applying these values means that research in this field does not support the same imbalances under the belief that it is objective.

Future Directions

The subject needs to bring together the strengths of digital tools and literary research. According to Eve (2022) and Underwood (2022), using a mix of far and close reading boosts interpretations in ways that look out for ethical considerations. People are also calling for data practices that are more inclusive. Risam (2018) and Walsh (2023) believe that creating global and multilingual corpora will result in DH presenting more diverse literary traditions and voices. Such inclusivity matters most to ensure that research is fair and accurate. Sustainability is a prime concern that stands out. Since digital projects are increasing, it is necessary to maintain them, enable interoperation, and ensure access for all. They mention that archival materials may not be sustainable or maintained if institutions do not support them.

Conclusion

The study aimed to understand how the use of digital humanities approaches has affected our view of literature during the Modernist, Postmodernist, and Contemporary periods. Using distant reading, topic modeling, and sentiment analysis, it was found that texts over time show changes, including more words being used, a rise in positive sentiment, and a shift from isolation to identity-related topics. This study suggests that DH brings a new perspective to the exploration of literature. With this level of analysis, DH offers researchers the capability to find major trends in writing style, attitude, and vocabulary.

This suggests agreement with Moretti (2013) and supports the use of inclusive and ethical approaches in digital humanities work (Risam, 2018; Liu, 2020). The authors of the study point out that relying too much on digital tools may have its own set of limitations. Since algorithms can't grasp all the complexities of literature, humans must evaluate their results carefully. The field also struggles with making data accessible, diverse, and environmentally sustainable. The findings suggest that by using methods that include both research and interpretation, scholars of literature can support a fairer and more innovative approach.

Recommendations

Based on the known facts and discussions in digital humanities, this study encourages the use of hybrid methods that connect traditional literary scholarship with modern computer-based tools. The integration combines machine methods that can handle large data sets with the profound analysis possible in close reading by human scholars (Underwood, 2019; Moretti, 2013). Therefore, it would be beneficial for colleges to offer programs that combine fiction with

technology-based knowledge (Burdick et al., 2016). Additionally, to account for everyone, digital collections should include a wide diversity of voices from different genders, races, classes, and countries. Scholars are expected to notice biases in algorithms and ensure their research is culturally appropriate (Klein & D'Ignazio, 2020; Mandell & Solberg, 2021). Also, promoting collaboration worldwide by creating databases and archives that everyone can access also helps especially academic groups that are not well represented (Risam, 2018; Janan, 2024). Sustainability in DH projects should be an important focus when planning and carrying out work so that digital materials can be preserved over time (Drucker, 2014; Walsh, 2023). Critical discussion and deliberate examination on digital methods' consequences are necessary for the progress of research, protecting their quality and honest values (Liu, 2020).

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