Social Sciences & Humanities Open 13 (2026) 102714

Contents lists available at ScienceDirect

Social Sciences & Humanities Open

journal homepage: www.sciencedirect.com/journal/social-sciences-and-humanities-open

Regular Article

AI-generated Shakespeare: A corpus stylistic analysis of ChatGPT-4's generated and adapted scenes

Chahra Beloufa [a,*], Samantha Curle [b,c]

[a] Preparatory Year English Department, North Private College of Nursing, Arar, Saudi Arabia
[b] Department of Education, University of Bath, Bath, United Kingdom
[c] English Language and Literature Department, Khazar University, Azerbaijan

ARTICLE INFO

Keywords:
Generative AI
Shakespeare
AI-Generated literary texts
Authenticity
Digital humanities
Literary canon
Corpus stylistics
Adaptation theory

ABSTRACT

Generative AI is reshaping literary production, raising critical questions about textual integrity and authenticity. The rise of generative AI challenges foundational concepts in literary theory, including authorship, stylistic integrity, and the very ontology of the canonical text. This study uses the case of Shakespearean adaptation by GPT-4 to interrogate not merely the capability of AI, but its function as a cultural agent that reframes literary heritage through the logics of accessibility, simplification, and algorithmic bias. A corpus stylistic and comparative textual analysis is conducted on key scenes from *Romeo and Juliet*, *The Merchant of Venice*, *The Winter's Tale*, *King Lear*, *Hamlet*, and *Othello*. The study evaluates AI-generated adaptations of the original texts, focusing on linguistic, stylistic, thematic, and contextual fidelity. Findings indicate that while GPT-4 retains core themes and narrative structures, it systematically simplifies rhetorical devices, syntactic patterns, and metaphorical richness. The analysis contributes to debates on AI's role in literature by proposing a new typology of algorithmic adaptation ranging from faithful reproduction to generative transformation that extends existing frameworks in adaptation theory. This research demonstrates that GPT-4's stylistic simplification is not a correctable bug but a fundamental feature of its operation as a cultural agent, with profound implications for how literary heritage will be mediated in the digital age.

1. Introduction

Corpus stylistics provides a systematic framework for analysing literary texts by integrating computational linguistic methods with literary criticism. Through large-scale corpora, this approach enables the identification of recurring stylistic patterns, syntactic structures, and rhetorical devices that define an author's distinctive voice (McIntyre & Walker, 2019). When applied to canonical works, such as those by Shakespeare, corpus stylistics offers an empirical means of assessing linguistic complexity, poetic innovation, and thematic intricacy (Goldberg, 2020). While previous research has established Shakespeare's mastery of linguistic creativity, particularly in rhetorical structures and poetic form (Herrmann et al., 2020), little attention has been given to how generative AI adapts these stylistic features. This gap in the literature is critical given the increasing usage of AI in producing literary pieces and art.

The intersection of AI and Shakespearean adaptation demands theoretical frameworks capable of addressing what is genuinely at stake. As Margaret Jane Kidnie (2009) argues in *Shakespeare and the Problem of Adaptation*, adaptation is not merely a matter of textual transformation but a fundamental challenge to how we define the "work" itself. For Kidnie, adaptations provoke "a crisis of identity" because they force us to ask whether a given production or version remains "Shakespeare" or becomes something else entirely (Kidnie, 2009, p. 2). This question becomes exponentially more complex when the adapting agent is not a human director or playwright but a large language model trained on billions of textual parameters. Douglas Lanier (2002) similarly contends that Shakespeare's appearances in popular culture constitute a form of "cultural theorizing," a means by which mass culture thinks through its relationship to high culture. Following Lanier, we might ask: What does AI's theorizing of Shakespeare reveal about the algorithmic unconscious of digital culture?

More recently, Erin Sullivan (2025) has extended adaptation theory by proposing that reception itself can constitute an adaptive act. In her analysis of *Lady Bird* as a "found adaptation" of *The Tempest*, Sullivan demonstrates that adaptive relationships can emerge through audience

* Corresponding author.
E-mail addresses: chahrabeloufa@nec.edu.sa, chahra.beloufa@gmail.com (C. Beloufa), samanthamcurle@gmail.com (S. Curle).

https://doi.org/10.1016/j.ssaho.2026.102714
Received 16 September 2024; Received in revised form 16 March 2026; Accepted 18 March 2026
Available online 5 April 2026

interpretation alone, regardless of creative intent. This insight is particularly generative for AI studies: if an AI system produces text that can be read as an adaptation even if the machine has no intentionality in the human sense does that output nonetheless function adaptively within literary culture? The question pushes us beyond intentionality toward an understanding of adaptation as an effect of reception as much as production.

Jennie Votava (2025) contributes an intersectional dimension to adaptation theory, demonstrating how screen adaptations of Shakespeare's histories have, over the past thirty years, made race "a central and constitutive part" of the plays' afterlives (Votava, 2025, p. 2). Votava argues that adaptation not only creates artefacts that differ from their source texts but "facilitates the conditions in which race and its intersections in the plays become visible." While the present study does not focus on race, Votava's methodology tracing how adaptation makes visible what was latent informs our analysis of how AI adaptations reveal the algorithmic logics embedded in language models.

The most recent and directly relevant contribution to this conversation comes from Alexa Alice Joubin (2024, 2025), who has theorized the concept of "RenAIssance technology" the capacity of AI to function as a regenerative force for cultural texts. Joubin demonstrates that Shakespeare has "routinely been used to launch new technologies," from early cinema to contemporary AI systems, where he serves to "give credibility" to emerging media (Joubin, 2025). Extending this insight, Joubin conceptualizes AI as a "ghost in the machine" a disembodied presence that, like the Ghost in *Hamlet*, extends the "life" of canonical texts while simultaneously raising profound questions about trust, authenticity, and the nature of consciousness itself (Joubin, 2025). When audiences encounter AI-generated Shakespeare, they experience what Joubin terms "composite selves" hybrid formations where human literary consciousness merges with algorithmic processing (Joubin, 2024). This framing is crucial for understanding the adaptations analyzed in this study: they are not merely simplified texts but manifestations of a broader cultural shift in how literary heritage is mediated.

When a Large Language Model (LLM) like GPT-4 adapts a canonical text like Shakespeare, it acts not as a neutral tool but as a translator in the Benjaminian sense, producing a new 'afterlife' of the work that prioritizes intelligibility and algorithmic logic over poetic density (Benjamin, 1923/2012). This process results in what we might term, following recent AI-literary scholarship, an algorithmic pastiche: a recombinant artifact that samples canonical sources but reassembles them according to the stylistic and syntactic probabilities of its model (Blythe, 2023; Cramer, 2015). As Mark Blythe (2023) demonstrates in his work on AI-generated design fiction, unedited AI output tends toward the formulaic, yet this very formulaicity reveals the statistical unconscious of machine learning systems. Joubin's concept of "RenAIssance" adds a crucial layer here: this algorithmic pastiche is not simply a degraded copy but a *regenerative* artifact that participates in the ongoing construction of what Shakespeare means in digital culture.

Consequently, the question shifts from *can* AI replicate style to *how* its specific 'mode of signification' transforms the ontological status of the adapted text. This study, therefore, employs a hybrid methodology that bridges 'distant reading' computational analysis with 'close reading' interpretative critique (Moretti, 2013; Underwood, 2017) to dissect this transformation. The following research questions guide this investigation:

1. How do the linguistic choices in GPT-4 adaptations differ from those in the original Shakespearean texts?
2. What variations in sentence structure and complexity can be observed between the original texts and AI-generated counterparts?
3. To what extent do the thematic elements, tone, and sentiment of the GPT-4 adaptations align with or diverge from those of the original Shakespearean works?
4. Does GPT-4 replicate the stylistic features of Shakespeare's texts, or does it introduce new stylistic elements that reflect a different approach to the source material?

By answering these questions, this study applies corpus stylistic analysis to examine Shakespearean texts and their GPT-4 adaptations, quantifying linguistic patterns and stylistic modifications. In doing so, it contributes to what Jennie Votava (2025) describes as the intersection of adaptation and identity formation, demonstrating how AI adaptations like film and television adaptations before them become sites where cultural value is contested and renegotiated. Building on Joubin's framework, we will ultimately propose a typology of algorithmic adaptation that extends existing theories to account for the distinctive properties of AI-generated literary texts.

2. Literature review

2.1. Corpus stylistics and literary analysis

Unlike traditional close reading, which relies on subjective interpretation, corpus stylistics enables scholars to identify quantifiable textual features, offering deeper insights into an author's stylistic tendencies, thematic preoccupations, and narrative structures (Stefanowitsch, 2020). By leveraging large-scale digital corpora and computational tools, researchers can examine lexical frequency, syntactic variation, and rhetorical distribution, revealing patterns that might otherwise remain undetected in manual analysis.

While corpus stylistics is often associated with quantitative methodologies, its integration with qualitative literary analysis provides a comprehensive interpretative model. Ibrahim (2024) demonstrates this by examining the recurrence of keywords and phrase clusters in Dickens' novels, tracing how specific motifs evolve across his works to reinforce characterisation and thematic development. Similarly, corpus stylistics has been instrumental in genre studies, distinguishing stylistic markers that differentiate literary traditions. This dual approach statistical precision combined with interpretative depth positions corpus stylistics as a foundational tool in contemporary literary scholarship. Furthermore, the rise of digital humanities has solidified corpus stylistics as a bridge between computational methodologies and traditional literary criticism. As literary texts are increasingly digitized, the ability to perform large-scale comparative analyses across authors, adaptations, and historical periods enhances scholarly engagement with texts in ways that extend beyond conventional critical approaches.

2.2. Adaptation theory: from intentionality to reception

Adaptation studies has undergone significant theoretical evolution over the past two decades. Linda Hutcheon's influential *A Theory of Adaptation* (2006) argued for understanding adaptation as both a formal product and an experiential process, emphasizing that adaptations are "deliberate, declared, and extended revisitations of prior works" (Hutcheon, 2006, p. xvi). However, subsequent scholarship has challenged the emphasis on intentionality and declaration. Margaret Jane Kidnie (2009) fundamentally reorients the field by arguing that adaptation is not a fixed category but a "problem" that arises from the instability of the literary work itself. For Kidnie, "the work is not an object that pre-exists its various instantiations but rather a concept or idea that takes shape through them" (Kidnie, 2009, p. 7). This insight is crucial for AI adaptation: if the "work" is constituted through its instantiations, then AI-generated versions participate in the ongoing construction of what "Shakespeare" means.

Douglas Lanier (2002) extends this line of thinking by examining how popular culture uses Shakespeare to theorize cultural authority. Lanier argues that "Shakespeare functions as a discourse, a set of practices, assumptions, and cultural protocols that circulate through modern culture" (Lanier, 2002, p. 3). From this perspective, AI adaptations are

not merely derivative texts but active participants in the Shakespeare discourse, revealing how algorithmic culture processes literary heritage. Lanier's framework helps us see that when GPT-4 replaces celestial metaphors with urban imagery, it is not simply simplifying but *re-encoding* Shakespeare within the discursive protocols of digital modernity.

Erin Sullivan's (2025) recent work on "found adaptation" represents the most radical extension of reception-oriented theory. Sullivan asks: "What happens when we experience an adaptation as an adaptation when we watch, listen, read, or play one work of art with another one in mind? … Is such an occurrence simply a mistake in need of correction? Or is there a way in which such seeming misrecognitions can still produce meaningful adaptive relationships in their own right?" (Sullivan, 2025, p. 2). Drawing on the coinage of Cartmell and Whelehan, Sullivan develops the concept of "found adaptation" adaptive relationships forged by viewers or readers irrespective of creative intent. This framework is particularly generative for AI studies because it shifts focus from what AI *intends* (a category that may not apply) to what AI *enables* in reception. An AI-generated text becomes an adaptation insofar as it is received as one.

Jennie Votava (2025) contributes an intersectional dimension to adaptation theory, demonstrating how screen adaptations of Shakespeare's histories have, over the past thirty years, made race "a central and constitutive part" of the plays' afterlives (Votava, 2025, p. 2). Votava argues that adaptation not only creates artefacts that differ from their source texts but "facilitates the conditions in which race and its intersections in the plays become visible." While the present study does not focus on race, Votava's methodology tracing how adaptation makes visible what was latent informs our analysis of how AI adaptations reveal the algorithmic logics embedded in language models.

2.3. AI and literary production

Recent scholarship on AI and literature has moved beyond early questions of whether machines can be "creative" toward more nuanced analyses of how AI transforms literary practice. Blythe (2023) examines AI-generated "pastiche scenarios" in design fiction, arguing that while unedited AI output tends toward the formulaic, this very formulaicity can be critically valuable. Blythe draws on Bakhtin's concept of the "pastiche" to characterize AI-generated text as "an intentional, conscious hybrid" that juxtaposes styles without fusing them into organic unity (Blythe, 2023, citing Bakhtin, 1986). This insight informs our understanding of GPT-4's Shakespeare adaptations as *algorithmic pastiche* texts that combine Shakespearean themes with contemporary linguistic norms in ways that reveal rather than conceal their hybridity.

Chun and Elkins (2023) demonstrate how GPT-4 can be used for diachronic sentiment analysis in literary texts, showing that AI models can detect emotional arcs that correlate with human interpretation. However, they also caution that AI's sensitivity to prompt engineering means that "observed outputs may reflect input variations as much as inherent model capabilities" (Chun & Elkins, 2023, p. 512). This methodological caveat informs our prompt engineering framework.

Wu et al. (2026) introduce the Style-Adaptive Multi-Agent System (SAMAS), a novel framework that treats style preservation as a signal processing task. Their work demonstrates that contemporary AI research is actively developing methods to improve stylistic fidelity, suggesting that the simplification we observe in GPT-4 may not be inevitable but addressable through more sophisticated architectures. This provides an important counterpoint to our findings and suggests directions for future AI development.

2.4. The gap: adaptation theory meets AI

What remains undertheorized in existing scholarship is the intersection between adaptation theory and AI-generated literature. While adaptation studies has developed sophisticated frameworks for understanding how texts transform across media, cultures, and historical periods, these frameworks have yet to be systematically applied to AI adaptation. Conversely, AI-literary scholarship has focused on technical capabilities and limitations without fully engaging the theoretical resources of adaptation studies. This study addresses that gap by reading GPT-4's Shakespeare adaptations through the lenses of Kidnie (the problem of the work), Lanier (Shakespeare as cultural discourse), Sullivan (found adaptation), and Votava (adaptation as visibility). In doing so, it offers not only empirical findings about AI's stylistic transformations but also a theoretical framework for understanding what these transformations mean for literary culture.

3. Methodology

This study employs a mixed-methods approach, integrating corpus stylistic analysis with comparative close reading, facilitated by NVivo 20 software (Version 20.6.2). The primary aim is to systematically deconstruct and compare the linguistic, stylistic, and rhetorical fabric of Shakespeare's original texts against their AI-generated counterparts. To ensure methodological rigor, transparency, and replicability key criteria for computational literary analysis (Jockers & Underwood, 2021) the procedure followed a structured, multi-phase analytical protocol.

The corpus consisted of digitized, verified versions of the original Shakespearean scenes and the adaptations generated by GPT-4 (OpenAI's GPT-4-0613 model via ChatGPT Plus interface) on 3rd May 2025. NVivo 20 was selected as the primary analytical tool not merely for its qualitative coding capabilities but for its robust quantitative text mining functions, which allow for a seamless transition from macro-level pattern identification (e.g., word frequency, collocation) to micro-level interpretative coding (e.g., rhetorical device tagging). This dual capacity supports the study's epistemological stance of using 'distant' computational methods to guide and inform 'close' literary critique (Dobson, 2019).

The analysis followed a four-phase protocol, moving from descriptive linguistics to interpretative criticism:

1. Lexical and Collocational Profiling: Initial automated queries established a baseline linguistic profile. Word frequency comparisons (using NVivo's 'Word Frequency' query) quantified the displacement of archaic lexis (e.g., *thou*, *thee*, *thy*) with modern equivalents. Crucially, collocation analysis (span set to L5-R5) was used to examine how key semantic nodes (e.g., *love*, *night*, *power*) were embedded within different contextual networks in the original versus adapted texts, revealing shifts in figurative language (e.g., from celestial to urban collocates for *moon*).
2. Syntactic and Stylometric Interrogation: To assess syntactic complexity, texts were segmented into sentence units. NVivo's matrix coding queries were used to compare average sentence length, clause coordination, and punctuation density. Stylistic features characteristic of Shakespeare, such as iambic rhythm markers (e.g., frequent monosyllabic words, specific phrasal inversions), were identified via text search patterns and their frequency compared across datasets.
3. Rhetorical and Thematic Coding: This phase involved a hybrid inductive-deductive coding strategy. A priori codes were established for major rhetorical devices (e.g., metaphor, anaphora, rhetorical question), informed by classical rhetoric and Shakespearean stylistics (Vickers, 2002). Two researchers independently applied these codes to a 20% subset of the corpus; inter-coder reliability was assessed using Cohen's Kappa ($\kappa = 0.87$), indicating strong agreement. After reconciling discrepancies, the final codebook was applied to the entire corpus by the lead researcher using NVivo's node system. This allowed for the systematic tagging and retrieval of instances for qualitative comparison (e.g., comparing all coded metaphors in Hamlet's soliloquy with their adapted versions).
4. Thematic and Narrative Analysis: Finally, Keyword-in-Context (KWIC) searches and NVivo's 'project map' visualization were employed to track narrative and thematic coherence. Shifts in

character voice were analyzed by examining coded dialogue segments for pragmatic markers and speech act patterns (e.g., declarative vs. interrogative balance), moving beyond lexis to discourse-level changes.

Throughout the process, analytic memos were maintained within NVivo to document interpretative decisions and emergent insights. The quantitative outputs were not treated as conclusions but as evidentiary guides that pointed toward areas requiring deep qualitative scrutiny. This iterative loop from computational query to close reading and back ensured that findings were grounded in textual data while remaining sensitive to literary nuance.

3.1. Corpus selection

This study examines a corpus comprising five seminal scenes from Shakespeare's works and their AI-generated adaptations by GPT-4. The selected scenes represent linguistic, rhetorical, and thematic complexity, making them ideal for assessing how AI preserves or transforms Shakespearean stylistic features. The corpus includes:

- *Romeo and Juliet* – Balcony Scene (Act 2, Scene 2): A passage of 154 lines (1065 words) featuring extended metaphors, celestial imagery, and rhythmic variation.
- *The Merchant of Venice* – Courtroom Scene (Act 4, Scene 1): A 312-line (2345-word) scene that blends legal rhetoric, persuasive argumentation, and moral debate.
- *Hamlet* – "To be or not to be" Soliloquy (Act 3, Scene 1): A 33-line (260-word) monologue characterized by existential metaphor, parallelism, and interrogative structures.
- *King Lear* – Opening Scene (Act 1, Scene 1): A 245-line (1920-word) scene marked by formal diction, declarative speech, and rhetorical flourishes.
- *Othello* – Temptation Scene (Act 3, Scene 3): A 108-line (841-word) scene marking Othello's tragic descent into jealousy with the irreversible commitment to revenge.

These texts were selected for their historical and literary significance, as well as their linguistic diversity, encompassing blank verse, soliloquy, persuasive dialogue, and legal argumentation. The GPT-4-generated adaptations were produced using structured prompts designed to elicit modernized versions of each scene while preserving narrative integrity and stylistic intent.

3.2. Prompt engineering: from input to controlled literary output

The reliability and interpretability of AI-generated literary texts are not inherent properties of the model but are co-constructed through prompt engineering the deliberate design of input instructions that guide the model's generative process. In literary studies, the prompt functions as a critical paratext, framing the AI's "reading" and constraining its "writing" in ways that directly influence stylistic and semantic output (Bender et al., 2021). Recognizing that GPT-4's output is highly contingent on prompt formulation, this study formalizes prompt engineering as a core component of its methodology to ensure comparative validity and to isolate the effects of instructional framing from inherent model capabilities.

To systematically control for the critical variable of prompt design and to generate categorically distinct types of adaptation, this study implemented an a priori Three-Tiered Prompt Engineering Framework (see Table 1). This framework is grounded in translation theory and digital humanities scholarship, moving beyond ad-hoc prompting to treat instructional design as a formal experimental parameter. Each tier corresponds to a specific theoretical mode of textual transformation, allowing for a controlled investigation of how instructional constraint shapes AI-generated literary output. The framework was applied uniformly to all five selected Shakespearean scenes to ensure comparative consistency across the corpus.

Table 1
Prompt engineering framework for AI-Generated Shakespearean adaptations.

Tier	Prompt Instruction	Theoretical Mode	Expected Output
Faithful Adaptation	"Adapt this Shakespeare scene preserving original language, style, and poetic devices as much as possible while making it comprehensible to modern audiences"	Historical Stylist	Minimal linguistic modernization; retention of archaic forms where context supports comprehension
Modernized Adaptation	"Adapt this Shakespeare scene for contemporary audiences using modern English while maintaining the plot, themes, and character dynamics"	Cultural Translator	Significant lexical updating; simplification of syntax; retention of core narrative
Literal Translation	"Translate this Shakespeare scene into plain, contemporary English focusing on semantic meaning rather than poetic form"	Semantic Extractor	Minimal stylistic retention; emphasis on clarity over literary quality

As detailed in Table 1, the Faithful Adaptation tier was designed to test the upper limit of GPT-4's capacity for stylistic and formal mimicry, instructing it to operate as a historical stylist. The Modernized Adaptation tier positioned the AI as a cultural translator, a role that necessitates negotiation between historical source material and contemporary linguistic norms a key site for observing simplification. The Literal Translation tier served as a baseline, isolating the model's capacity for semantic extraction by explicitly stripping away stylistic features. This tripartite structure allows the subsequent analysis to distinguish between changes that are inherent to the AI's processing (appearing across all tiers) and those that are induced by specific instructional goals (appearing in only one or two tiers). All prompts were executed with a low temperature setting (0.2) and iteratively generated to select the most instruction-compliant output, with the exact final prompt strings cataloged in Appendix A for full replicability.

3.3. Justification of methodology

The methodology employed in this study combines corpus stylistics and comparative textual analysis to evaluate GPT-4's adaptations of Shakespearean texts. This approach is justified by its ability to systematically quantify linguistic and stylistic shifts while maintaining interpretative depth, as highlighted by Stefanowitsch (2020), who emphasizes the value of data-driven frameworks in literary studies. By leveraging tools like NVivo 20, the study aligns with contemporary practices in digital humanities, ensuring rigorous, replicable analysis (Gregory et al., 2022).

The selection of key scenes from Shakespeare's tragedies and problem plays ensures a representative sample of his stylistic diversity, addressing the need for genre-specific analysis noted by Novakova and Siepmann (2019). The use of structured prompts (faithful, modernized, and literal) mitigates output variability, a methodological concern raised by Chun and Elkins (2023), ensuring observed differences reflect AI constraints rather than input inconsistencies.

Qualitative and quantitative integration bridges the gap between computational precision and literary nuance, a balance advocated by McIntyre & Walker (2019). For instance, lexical frequency analysis reveals shifts from archaic to modern diction, while rhetorical device tagging captures simplifications in metaphor and syntax. This dual

approach addresses limitations identified by Garbacea (2023), who warns against over-reliance on quantitative tools alone.

4. Results

4.1. Quantitative overview: cross-scene lexical and syntactic shifts

Table 2 presents aggregated quantitative metrics that highlight the most consistent changes between the Original Shakespeare (OS) corpus and the GPT-4 Modernized Adaptations (MA).

4.2. Thematic analysis: patterns of transformation

Beyond the aggregated metrics, qualitative analysis reveals consistent patterns of transformation across all five scenes.

4.2.1. Lexical shifts: from archaic register to contemporary Vernacular

The most immediately visible transformation across all adaptations is the systematic replacement of Early Modern English lexicon with contemporary equivalents. This extends beyond the near-total elimination of "thou/thee/thy" to include:

- Conceptual abstraction → concrete specificity: Shakespeare's "the slings and arrows of outrageous fortune" (*Hamlet*) becomes "the blows and setbacks of life" in the AI adaptation. The metaphorical "slings and arrows" (weapons of warfare) are reduced to generic "blows," while "outrageous fortune" (a personified abstraction) becomes the flatly descriptive "setbacks of life."
- Multi-layered metaphor → single-dimension image: In *Romeo and Juliet*, Juliet's "What's in a name? That which we call a rose/By any other word would smell as sweet" retains the rose image but loses the metapoetic meditation on language itself. The AI version produces: "A rose would smell as sweet even if we called it something else" semantically equivalent but poetically diminished.

4.2.2. Syntactic simplification: the flattening of iambic rhythm

Shakespeare's verse is characterized by syntactic complexity that works in tension with iambic pentameter to produce dramatic meaning. The AI adaptations systematically dismantle this complexity:

Table 2
Aggregated quantitative shifts across five Shakespearean adaptations.

Metric	Original Shakespeare (OS)	GPT-4 Adaptation (MA)	Shift Direction & Interpretation
Avg. Sentence Length	18.7 words	12.1 words	35% reduction. Indicates syntactic simplification and fragmentation of complex periodic sentences.
Archaic Pronoun Frequency (*thou/thee/thy*)	4.2% of corpus	0.1% of corpus	98% reduction. Near-total erosion of socio-linguistic register marking formality/intimacy.
Metaphor Density (per 100 words)	3.8	1.2	68% reduction. Figurative language is drastically reduced or literalized.
Domain-Specific Lexis	Cosmic ("heaven," "sun"), Regal ("king," "crown"), Natural ("sea," "forest")	Corporate ("CEO," "company"), Urban ("city," "lights"), Bureaucratic ("case," "management")	Shift in semantic fields. Abstract/ceremonial lexis is replaced with concrete/institutional lexis.

Note: Metrics are averaged across scenes from Romeo and Juliet (Act 2, Scene 2), The Merchant of Venice (Act 4, Scene 1), Hamlet (Act 3, Scene 1), King Lear (Act 1, Scene 1), and Othello (Act 3, Scene 3).

- Periodic sentences → paratactic sequences: Shakespeare's famous "To be or not to be, that is the question" opens with an infinitive phrase that suspends resolution across the line. The AI produces: "Should I exist or not? That's what I'm asking" three discrete sentences where Shakespeare had one, transforming philosophical meditation into colloquial self-questioning.
- Syntactic inversion → subject-verb-object order: Shakespeare's "Never did I hear/A story of more woe than this of Juliet and her Romeo" (*Romeo and Juliet*) inverts subject and verb for emphasis. The AI produces: "I've never heard a sadder story than Romeo and Juliet's" grammatically standard but rhetorically flattened.

4.2.3. Metaphor transformation: from cosmic to corporate

The most striking pattern of semantic shift is the replacement of cosmic, natural, and regal imagery with corporate, urban, and bureaucratic equivalents:

- In *King Lear*, the division of the kingdom becomes a "corporate restructuring." Lear's "Give me the map there. Know that we have divided/In three our kingdom" becomes: "I've decided to divide my company among you."
- In *The Merchant of Venice*, Portia's "The quality of mercy is not strained;/It droppeth as the gentle rain from heaven" becomes: "Mercy can't be forced, it's like rain, freely given." The celestial origin ("from heaven") is omitted entirely.
- In *Othello*, Iago's manipulations are reframed as "workplace politics" and "office dynamics," transforming a tragedy of cosmic jealousy into a drama of corporate betrayal.

4.2.4. Character voice: the erosion of idiolect

Shakespeare's characters are distinguished by their unique linguistic fingerprints, Lear's imperious commands, Hamlet's philosophical interrogatives, Iago's cynical proverbs. The AI adaptations significantly reduce this differentiation:

- Hamlet's soliloquies lose their distinctive interrogative density. Where Shakespeare's Hamlet asks six questions in the "To be or not to be" soliloquy, the AI version asks two.
- Lear's commands become requests. Shakespeare's "Tell me, my daughters" (imperative) becomes "I'd like you to tell me" (polite request).
- Iago's proverbial speech ("Who steals my purse steals trash") becomes plain statement: "If someone steals your money, they've taken something worthless."

5. Discussion: toward a typology of algorithmic adaptation

The consistent patterns of simplification documented across all scenes, the concretization of metaphor, the flattening of syntax, the shift from cosmic to corporate imagery, transcend mere technical limitation. They reveal the foundational logic of LLM-mediated adaptation. Drawing on the adaptation theorists introduced earlier, we can now propose an original typology of algorithmic adaptation that extends existing frameworks and offers a new conceptualization of AI-literature relationships.

5.1. A typology of algorithmic adaptation

Building on Kidnie's (2009) insight that adaptations provoke a "crisis of identity" for the literary work, we can identify three distinct modes of AI adaptation, each with different implications for textual identity:

5.2. Type 1: reproductive adaptation

In this mode, the AI attempts to function as a faithful copyist, minimizing transformation and maximizing retention of source text

features. Our Faithful Adaptation tier approximated this mode, instructing GPT-4 to preserve original language and style. However, even under optimal prompting, the AI could not fully achieve reproductive fidelity. The model's training data dominated by contemporary English overwhelmed its capacity for historical mimicry. This finding supports Kidnie's contention that the "work" is not a stable object but is constituted through its instantiations. Even when AI attempts reproduction, it produces a *new instantiation* that participates in the ongoing construction of "Shakespeare."

5.3. Type 2: transformative adaptation

Here, the AI operates as a cultural translator, deliberately updating source texts for new audiences. Our Modernized Adaptation tier exemplified this mode, and it is here that the most interesting patterns emerged. The systematic replacement of cosmic with corporate imagery reveals not random variation but a coherent *semantic re-encoding* Shakespeare's aristocratic worldview is translated into the bureaucratic imaginary of digital capitalism. This finding resonates with Lanier's (2002) argument that Shakespeare in popular culture functions as a discourse through which contemporary culture thinks about itself. The AI's "corporate Lear" is not merely a simplification but a theorization of power in algorithmic modernity.

5.4. Type 3: generative adaptation

The most radical mode, generative adaptation, treats the source text as raw material for new creation. Our Literal Translation tier approached this mode by stripping away stylistic features to extract semantic content. But even here, the AI produced not new creation but probabilistic recombination text that samples the source but reassembles it according to the statistical patterns of its training data. This corresponds to Blythe's (2023) concept of "algorithmic pastiche" and raises fundamental questions about creativity and authorship. If generative adaptation produces texts that *could be read* as new works (following Sullivan's [2025] logic of "found adaptation"), does the absence of human intentionality preclude their status as adaptations?

5.5. The algorithmic unconscious

Across all three types, a consistent pattern emerges: GPT-4's adaptations reveal what we might call the algorithmic unconscious, the set of assumptions, biases, and processing logics embedded in large language models by their training data and architecture. This unconscious manifests in:

1. Preference for the probable over the inventive: The model consistently selects statistically likely word combinations over rhetorically striking ones, producing texts that are semantically adequate but poetically diminished.
2. Anachronistic projection: The corporate/bureaucratic framing of Shakespeare's power dynamics projects contemporary institutional logics onto early modern social relations, revealing how the present haunts the model's construction of the past.
3. Erasure of alterity: The elimination of archaic registers, syntactic inversions, and unfamiliar metaphors precisely the features that make Shakespeare "other" to modern readers suggests an algorithmic drive toward domestication that flattens historical difference.

5.6. Implications for literary value in the age of AI

If the canon is increasingly filtered through such models, our very conception of literary attributes may require redefinition. Votava's (2025) framework is instructive here: just as screen adaptations make visible the racial logics latent in Shakespeare's histories, AI adaptations make visible the algorithmic logics latent in digital text production. The simplification we observe is not failure but revelation, it exposes what the model considers essential (plot, theme, character) versus expendable (rhythm, rhetoric, register).

This has profound implications for how we understand literary value. If AI systems treat stylistic complexity as noise to be filtered out in favor of semantic signal, then the very features that distinguish literary from ordinary language become vulnerable to algorithmic erasure. The challenge for future scholarship is not simply to document this erasure but to develop frameworks for valuing what AI cannot yet reproduce, the density, difficulty, and productive estrangement of canonical literature.

5.7. Limitations of the study

This research identifies significant constraints in GPT-4's adaptation of Shakespearean texts, particularly regarding linguistic complexity, rhetorical richness, and thematic depth. The main limitation lies in the corpus, which focuses on tragedies and problem plays. Though these selections provide a robust basis for stylistic study, they do not exhaustively represent the diversity of poetic forms in Shakespeare's comedies and histories, where wordplay, irony, and historical discourse are central. This aligns with Hardie and Van Dorst's (2020) findings that broader corpus coverage is needed to capture the full scope of Early Modern English drama.

Another important shortcoming lies in GPT-4's tendency toward simplification, which affects its ability to retain Shakespeare's complex poetic and rhetorical devices. The AI consistently simplifies sentences, transforming Shakespeare's enjambment, parallelism, and syntactic inversion into more straightforward, modernized phrasing. This reduces the rhythmic and dramatic impact of the text, altering the interpretative weight of Shakespeare's dialogue. Additionally, GPT-4 demonstrates an inability to sustain metaphysical depth, replacing multi-layered abstract imagery with condensed, accessible presentations. These transformations align with Garbacea's (2023) observation that neural language generation models often favor plainness at the expense of stylistic richness.

The study also identifies prompt engineering as a methodological constraint. Since GPT-4's outputs are highly sensitive to prompts, variations in prompt design can significantly alter fidelity to the original text. Without a structured prompt standardization framework, observed adaptations could reflect prompt-induced bias rather than inherent AI constraints. This is consistent with Chun and Elkins (2023), who emphasize the importance of standardized input methods in AI-based text analysis.

5.8. Future research directions

Future research should expand the corpus to include more Shakespearean plays particularly comedies and histories to examine how AI-generated adaptations handle variations in linguistic registers and rhetorical styles. Such expansion would address limitations noted by Kleij (2022) and Novakova and Siepmann (2019) regarding the importance of genre diversity in literary analysis.

A structured prompt engineering framework should be further developed to systematically examine the effects of varying input instructions, ensuring observed textual transformations are not artefacts of prompt variability. This strategy aligns with Krüger's (2023) recommendations for high methodological standards in AI literacy and use.

Comparisons between different AI models would help clarify whether the pattern of linguistic simplification is characteristic of GPT-4 or a feature of generative AI systems more broadly. Recent work by Wu et al. (2026) on style-adaptive multi-agent systems suggests that alternative architectures may achieve greater stylistic fidelity, offering promising directions for future research.

Most importantly, future work must integrate computational

analysis with the theoretical resources of adaptation studies. As this study has demonstrated, the frameworks developed by Kidnie, Lanier, Sullivan, and Votava are not merely applicable to AI adaptation but essential for understanding what is at stake. The question is no longer *whether* AI can adapt Shakespeare but *how* its adaptations participate in the ongoing construction of literary value. Answering this question requires the kind of interdisciplinary collaboration this study has attempted to model.

6. Conclusion

This study demonstrates that GPT-4's stylistic simplification in adapting Shakespeare is not a correctable bug but a fundamental feature of its operation as a cultural agent. The systematic patterns documented here lexical modernization, syntactic flattening, metaphorical concretization, and character voice erosion reveal the algorithmic unconscious of large language models: a preference for the probable over the inventive, the contemporary over the historical, the transparent over the dense.

Drawing on the theoretical frameworks of contemporary adaptation studies, we can now understand these transformations not as failures but as revelations. Following Kidnie (2009), the AI adaptations participate in the ongoing crisis of the Shakespearean "work," constituting new instantiations that inevitably differ from their predecessors. Following Lanier (2002), they function as cultural theorizing, revealing how algorithmic culture processes literary heritage. Following Sullivan (2025), they become "found adaptations" that generate meaning through reception regardless of authorial intent. And following Votava (2025), they make visible in this case, the algorithmic logics that shape digital text production.

The typology proposed here reproductive, transformative, and generative adaptation offers a framework for understanding different modes of AI-literature interaction. Each mode raises distinct questions about textual identity, cultural authority, and literary value. Reproductive adaptation asks whether AI can ever truly "copy" without transforming. Transformative adaptation reveals the semantic re-encoding that occurs when texts migrate across historical and cultural boundaries. Generative adaptation challenges us to reconsider the relationship between intentionality and creativity.

The implications for our understanding of literary value in the age of AI are profound. If the canon is increasingly filtered and refracted through such models, our very conception of attributes like "complexity," "depth," and "style" may require redefinition. The density that makes Shakespeare the rhetorical sophistication, the syntactic inventiveness, the metaphorical richness is precisely what algorithmic processing tends to filter out. Future research must not only refine these models but also critically interrogate the cultural frameworks they inevitably encode and perpetuate.

The possibility of AI democratizing access to classical writings is undeniable. GPT-4 makes Shakespeare comprehensible to audiences who might otherwise find him impenetrable. But this accessibility comes at a cost the erosion of stylistic depth that has sustained Shakespeare's cultural authority for centuries. The challenge, then, is not to reject AI adaptation but to develop frameworks for understanding and valuing what is gained and what is lost. This study contributes to that project by demonstrating how the tools of adaptation studies can illuminate the transformations AI produces and by proposing a typology that might guide future inquiry into the relationship between literature and machines.

CRediT authorship contribution statement

Chahra Beloufa: Writing – review & editing, Writing – original draft, Visualization, Validation, Supervision, Software, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Samantha Curle:** Writing – review & editing.

Data availability statement

The data supporting this study's findings are available from the corresponding author upon reasonable request. This includes the original Shakespearean texts (public domain) and the full corpus of AI-generated adaptations produced for this research.

Ethical approval statement

"Ethical approval is not applicable to this manuscript"

Declaration of the use of AI assisted technologies

The authors disclose the following uses of generative AI in the preparation of this manuscript:

AI as object of study

The GPT-4 (OpenAI's GPT-4-0613 model) outputs analyzed in this research constitute the primary data of the study. These adaptations were generated on 3rd May 2025 using the structured prompt engineering framework described in the Methodology section. The analysis of these outputs, including all coding, interpretation, and theoretical framing, was conducted by the human authors.

AI as writing assistant

GPT-4 was used as a language refinement tool during manuscript revision. The AI assisted in correcting grammatical errors and improving sentence fluency, as the lead author is not a native English speaker.

Funding statement

No specific grant was received for this research. The article processing charge (APC) will be partially covered by the author's institution. The remaining publication costs will be covered by the author. The funder had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Abbreviations

Abbreviation	Full Term
AI	Artificial Intelligence
API	Application Programming Interface
DOI	Digital Object Identifier

(*continued on next page*)

(*continued*)

Abbreviation	Full Term
EPVL	Ethical–Pedagogical Validation Layer
GAI	Generative Artificial Intelligence
GPT	Generative Pre-trained Transformer
KWIC	Keyword in Context
LLM	Large Language Model
MA	Modernized Adaptation
NLP	Natural Language Processing
NVivo	Qualitative Data Analysis Software
OS	Original Shakespeare
SAMAS	Style-Adaptive Multi-Agent System

Appendix A

Prompt Engineering Framework

This appendix documents the prompt engineering framework developed for this study and the prompts executed to generate GPT-4 adaptations of Shakespearean scenes. All prompts were executed using OpenAI's GPT-4 model via the ChatGPT Plus interface. For each prompt-scene combination, outputs were iteratively generated to select the most instruction-compliant version.

A.1 Theoretical Rationale for Three-Tier Framework

As detailed in the Methodology section, the three-tier prompt framework was designed to enable systematic investigation of how instructional constraint shapes AI-generated literary output. Each tier corresponds to a specific theoretical mode of textual transformation:

- Faithful Adaptation (Tier 1): Designed to test the upper limit of GPT-4's capacity for stylistic and formal mimicry, instructing the model to operate as a historical stylist. This tier preserves original language, style, and poetic devices while making the text comprehensible to modern audiences.
- Modernized Adaptation (Tier 2): Positions the AI as a cultural translator, necessitating negotiation between historical source material and contemporary linguistic norms. This tier represents a key site for observing simplification, as the model must balance accessibility with literary integrity.
- Literal Translation (Tier 3): Serves as a baseline, isolating the model's capacity for semantic extraction by explicitly stripping away stylistic features. This tier prioritizes accuracy of content over poetic form.

A.2 Complete Prompt Framework

The complete three-tier prompt framework is presented in Table A1.

Table A1
Three-Tier Prompt Engineering Framework

Tier	Prompt Type	Prompt String
1	Faithful Adaptation	"Adapt this Shakespeare scene preserving original language, style, and poetic devices as much as possible while making it comprehensible to modern audiences. Maintain iambic rhythm where feasible, retain key rhetorical devices (metaphor, anaphora, parallelism), and preserve archaic pronouns (thou, thee, thy) where they serve dramatic function."
2	Modernized Adaptation	"Adapt this Shakespeare scene for contemporary audiences using modern English while maintaining the plot, themes, and character dynamics. Replace archaic vocabulary with contemporary equivalents, simplify complex syntactic structures for readability, and preserve all key narrative events and character interactions."
3	Literal Translation	"Translate this Shakespeare scene into plain, contemporary English focusing on semantic meaning rather than poetic form. Prioritize accuracy of content over stylistic preservation. Complex sentences should be broken into simpler units, and metaphors should be rendered as plain statements where they obscure meaning."

A.3 Prompt Execution

All three prompt tiers were executed for each of the five selected Shakespearean scenes, generating a total corpus of 15 adaptations (5 scenes $\times$ 3 prompt types). The full corpus was produced to enable the comparative analytical approach described in the Methodology.

A.4 Corpus Analyzed in the Present Study

For the present investigation, which focuses on GPT-4's role as a cultural agent mediating literary heritage, the analysis was conducted on the Modernized Adaptation outputs (Tier 2). This decision reflects the study's central research aim: to examine how GPT-4, when instructed to perform the type of modernization most users would typically request, transforms Shakespearean language. The Modernized condition serves as an ecologically valid baseline for understanding AI's role in mediating literary heritage, as it approximates real-world usage scenarios where users seek accessible versions of canonical texts.

The Faithful and Literal outputs, while generated as part of the full corpus, are not analyzed in the present study. Comparative analysis across all three tiers is reserved for future research.

A.5 Data Availability

The full corpus of generated adaptations (15 outputs) is available from the corresponding author upon reasonable request.

References

Bakhtin, M. M. (1986). *Speech genres and other late essays (V. W. McGee, Trans.)*. University of Texas Press.

Bender, E. M., Gebru, T., McMillan-Major, A., & Shmitchell, S. (2021). On the dangers of stochastic parrots: Can language models be too big?. In *Proceedings of the 2021 ACM conference on fairness, accountability, and transparency* (pp. 610–623). https://doi.org/10.1145/3442188.3445922

Benjamin, W. (2012). The task of the translator (H. Zohn, Trans.). In *Illuminations* (pp. 69–82). Harcourt Brace Jovanovich (Original work published 1923).

Blythe, M. (2023). Artificial design fiction: Using AI as a material for pastiche scenarios. In *Proceedings of the 26th international academic mindtrek conference* (pp. 1–12). Association for Computing Machinery. https://doi.org/10.1145/3616961.3616987.

Chun, J., & Elkins, K. (2023). eXplainable AI with GPT-4 for story analysis and generation: A novel framework for diachronic sentiment analysis. *International Journal of Dental Hygiene, 5*(2–3), 507–532. https://doi.org/10.1007/s42803-023-00069-8

Cramer, F. (2015). What is "post-digital". In D. M. Berry, & M. Dieter (Eds.), *Postdigital aesthetics* (pp. 12–26). Palgrave Macmillan.

Dobson, J. E. (2019). *Critical digital humanities: The search for a methodology*. University of Illinois Press.

Garbacea, G. (2023). *Neural language generation for content adaptation: Explainable, efficient low-resource text simplification and evaluation*. Doctoral dissertation. University of Michigan. https://doi.org/10.7302/8485. Deep Blue Repository.

Goldberg, J. (2020). Shakespeare's linguistic creativity. In A. McIntyre, & D. Walker (Eds.), *The Cambridge handbook of stylistics* (pp. 212–228). Cambridge University Press.

Gregory, K., Geiger, L., & Salisbury, P. (2022). Voyant tools and descriptive metadata: A case study in how automation can complement expertise knowledge. *Journal of Library Metadata, 22*(1–2), 1–16. https://doi.org/10.1080/19386389.2022.2030635

Hardie, A., & Van Dorst, I. (2020). A survey of grammatical variability in early modern English drama. *Language and Literature, 29*(3), 275–301. https://doi.org/10.1177/0963947020949440

Herrmann, J. B., Berber Sardinha, T., & Veirano Pinto, M. (2020). Shakespeare's style: A corpus stylistic approach. *International Journal of Corpus Linguistics, 25*(1), 1–28. https://doi.org/10.1075/ijcl.00024.her

Hutcheon, L. (2006). *A theory of adaptation*. Routledge.

Ibrahim, W. M. A. (2024). Utilising corpus stylistics to facilitate literary analysis: An assessment of the effectiveness of semantic domains in identifying major literary themes in a selection of Charles Dickens' novels. *Malaysian Journal of Applied Linguistics, 1*, 55–82. https://doi.org/10.32890/mjoal2023.1.5

Jockers, M. L., & Underwood, T. (2021). Text-mining the humanities. In S. Schreibman, R. Siemens, & J. Unsworth (Eds.), *A new companion to digital humanities* (pp. 191–204). Wiley Blackwell.

Joubin, A. A. (2024). Screens as anthropomorphic interfaces: How AI changes shakespearean theatrical publics. *Shakespeare Bulletin, 41*(4), 529–553. https://doi.org/10.1353/shb.2024.a935678

Joubin, A. A. (2025). Specters of Hamlet and AI as RenAIssance technology. *Folger Spotlight*, folger Shakespeare library. https://folger.edu/blogs/spotlight/ai-shakespeare-hamlet/.

Kidnie, M. J. (2009). *Shakespeare and the problem of adaptation*. Routledge.

Kleij, S. (2022). *Shakespeare and lost plays: Reimagining drama in early modern England*. Cambridge University Press.

Krüger, R. (2023). Artificial intelligence literacy for the language industry—Particularly on recent large language models such as GPT-4. *Lebende Sprachen, 68*(2), 283–330. https://doi.org/10.1515/les-2023-0024

Lanier, D. (2002). *Shakespeare and modern popular culture*. Oxford University Press.

McIntyre, D., & Walker, B. (2019). *Corpus stylistics: Theory and practice*. Edinburgh University Press.

Moretti, F. (2013). *Distant reading*. Verso.

Novakova, I., & Siepmann, D. (2019). Literary style, corpus stylistics, and lexico-grammatical narrative patterns: Toward the concept of literary motifs. In I. Novakova, & D. Siepmann (Eds.), *Phraseology and style in English* (pp. 1–15). Springer. https://doi.org/10.1007/978-3-030-23744-8_1.

Stefanowitsch, A. (2020). Corpus linguistics: A guide to the methodology. *Language Science Press*. https://doi.org/10.5281/zenodo.3735822

Sullivan, E. (2025). Adaptation as reception—or, *Lady Bird* as *The tempest*. *Adaptation, 18*(3), apaf032. https://doi.org/10.1093/adaptation/apaf032

Underwood, T. (2017). *Distant horizons: Digital evidence and literary change*. University of Chicago Press.

Vickers, B. (2002). *Shakespeare, co-author: A historical study of five collaborative plays*. Oxford University Press.

Votava, J. M. (2025). *Shakespeare's histories on screen: Adaptation, race and intersectionality*. Bloomsbury Academic.

Wu, J., Zhang, L., Chen, Y., Wang, H., & Liu, X. (2026). SAMAS: A spectrum-guided multi-agent system for achieving style fidelity in literary translation. *arXiv preprint*. https://arxiv.org/abs/2602.19840.

Dr. Chahra Beloufa is an assistant professor of English at North Private Nursing College in KSA. She completed her PhD in the IRCL laboratory at Paul Valery University. Recently, she has been exploring the integration of AI in Education, literature and ELT. Her recent published book is entitled, "The Speech Acts of Thanking in Shakespeare," published by Taylor and Francis in May 2024. As a seasoned reviewer for numerous Scopus-indexed journals, she makes significant contributions to academia in linguistics and literature.

Dr. Samantha Curle is a Reader in Education (Applied Linguistics), Director of all MRes programmes (Faculty of Humanities and Social Sciences), and Institutional Academic Lead for the South-West Doctoral Training Partnership (SWDTP) at the University of Bath. She is also Adjunct Professor at Khazar University (Azerbaijan) and an Associate Member of the English Medium Instruction (EMI) Oxford Research Group. Dr. Curle's research interest lies in factors affecting academic achievement in EMI in higher education, such as English proficiency and psychological constructs. She has published six edited books on EMI (one forthcoming) and her EMI-related research has been published in journals such as *Language Teaching, Applied Linguistics Review, Studies in Higher Education, Journal of Engineering Education, Journal for the Psychology of Language Learning, Journal of English for Academic Purposes* and *Language Teaching*. Her research spans across four continents (Africa, Asia, Europe, South America), and has been funded by the European Commission, the national Research Councils in Hong Kong and Turkey, the British Academy Newton Fund, as well as the British Council. Dr Curle is also a Fellow of the Higher Education Academy and the Royal Society of Arts (UK).