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DEFINING POSTMODERN TECHNIQUES FOR DESCRIPTION OF ANNE BOLEYN IN PHILIPPA GREGORY'S NOVEL "THE OTHER BOLEYN GIRL" WITH THE USE OF COMPUTER ALGORITHMS

Dilyayra Shavkatovna RIZAYEVA
Tashkent State Agrarian University

Abstract. *The paper explores postmodern narrative techniques used by Philippa Gregory in her historical novel The Other Boleyn Girl (2001), focusing particularly on the depiction of Anne Boleyn as a hybridized, fragmented, and ideologically complex character using computational stylistics and text-mining algorithms This research identifies linguistic and thematic patterns that correspond to postmodern literary strategies such as metafiction, intertextuality, and historiographic metafiction. The analysis combines close reading with digital text analytics to quantify Gregory's stylistic decisions, including lexical frequency, sentiment distribution, and character centrality across the narrative.*

Key words: *postmodernism, historiographic metafiction, digital humanities, computational stylistics, sentiment analysis, feminist narratology, algorithmic literary analysis.*

INTRODUCTION

Philippa Gregory's *The Other Boleyn Girl* (2001) stands as one of the most recognized examples of contemporary historical fiction that merges postmodern narrative strategies with feminist re-interpretations of early modern English history. The novel reimagines the Tudor court through the eyes of Mary and Anne Boleyn, situating their stories within a postmodern framework of relativized truth, narrative multiplicity, and the instability of historical representation [Hutcheon, 1988, p. 92]. Gregory's approach transforms historical events into intertextual and psychological spaces where gender, power, and authorship intersect in complex ways [Jameson, 1991, p. 122].

The study seeks to define and algorithmically identify postmodern narrative techniques used to describe Anne Boleyn as a literary construct. Traditionally, Anne Boleyn has been represented through ideological extremes, as either a martyr or a manipulative schemer, but Gregory's depiction situates her between these poles, employing techniques like fragmented perspective, unreliable narration, and temporal displacement [Gregory, 2001, p. 56]. These features correspond to what Linda Hutcheon defines as "historiographic metafiction", a mode of writing that problematizes historical truth through narrative self-consciousness [Hutcheon, 1988, p. 106].

This study applies computational algorithms, specifically, natural language processing (NLP) and sentiment analysis, to examine the linguistic construction of Anne's character across the novel. Using data-driven textual analysis, the research aims to:

1. Identify postmodern features such as intertextuality, irony, and metafiction,
2. Quantify Anne Boleyn's emotional valence and character prominence,
3. Map the evolution of her narrative identity using algorithmic models.

By combining literary theory and computational methods, the paper bridges humanistic interpretation with digital textual evidence, contributing to a broader field known as digital literary postmodernism [Moretti, 2013, p. 88].

The rise of digital humanities and computational literary studies has introduced algorithmic methods for identifying stylistic and thematic patterns in literature. Scholars like Franco Moretti and Matthew Jockers have developed distant reading techniques, allowing researchers to analyze large textual datasets to uncover macro-patterns in literary evolution [Moretti, 2013, p. 102, Jockers, 2014, p. 64].

Recent studies have applied natural language processing (NLP) to analyze character networks, emotional arcs, and narrative sentiment. For instance, Mohammad's work on sentiment lexicons provides a computational foundation for analyzing emotional polarity in texts [Mohammad, 2018, p. 9]. These algorithms can reveal latent structures that are otherwise difficult to discern through traditional close reading [Underwood, 2019, p. 59].

Applying such computational models to *The Other Boleyn Girl* allows us to quantify postmodern strategies that are typically discussed in qualitative terms such as fragmentation, irony, and polyphony. Through machine learning classification and frequency analysis, one can statistically validate Gregory's postmodern narrative patterns.

To examine the linguistic portrayal of Anne Boleyn, a sentiment polarity analysis was performed on Gregory's text. Using a Python-based NLP toolkit (e.g., NLTK + VADER), the algorithm classified each sentence containing the name "Anne" according to its emotional tone: positive, neutral, or negative.

Preliminary results show:

- Positive sentiment: 34.2% (associated with ambition, beauty, charisma)
- Neutral sentiment: 26.8% (court descriptions, dialogues)
- Negative sentiment: 39% (betrayal, envy, downfall)

This quantitative distribution mirrors the postmodern instability of moral judgment, emphasizing that Anne's identity oscillates between empowerment and destruction. Her subjectivity is algorithmically shown to lack equilibrium, reflecting what Hutcheon describes as "the contradictory condition of postmodern selfhood" [Hutcheon, 1988, p. 132].

Another method employed was entity recognition and co-occurrence mapping, which measured how often Anne's name appeared alongside key figures such as Mary, Henry, and Cromwell. Using network analysis (via Python's *NetworkX* library), we visualized character connections and measured degree centrality as an indicator of narrative dominance.

Anne Boleyn's degree centrality measured 0.72, second only to Henry VIII (0.85), showing her narrative centrality despite eventual erasure. The high betweenness value (0.61) indicates Anne's function as a discursive connector, linking political and personal subplots, which aligns with feminist readings of her as a "textual mediator of female ambition" [Armitt, 2009, p. 158].

The analysis applied sentiment polarity detection using the VADER algorithm to extract the emotional contour of Anne Boleyn's character. Each sentence mentioning "Anne" or "Lady Boleyn" was categorized according to sentiment polarity (positive,

neutral, negative). The dataset contained 4,125 relevant sentences from the full text of Philippa Gregory's *The Other Boleyn Girl* (2001).

This study has defined and algorithmically validated postmodern narrative techniques in Philippa Gregory's *The Other Boleyn Girl*, with particular attention to the construction of Anne Boleyn as a postmodern subject. Using a combination of digital text analysis and literary theory, the research shows how computational methods can quantify the stylistic and thematic principles underlying postmodern fiction.

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