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PHILOLOGICAL METHODS IN ANALYZING NON-STANDARD VARIANTS OF LATIN IN MEDIEVAL AND RENAISSANCE MANUSCRIPTS

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SUMMARY

This research illustrates the use of philological analytical strategies to trace the Latin variants in Middle Ages and early Renaissance manuscripts. By concentrating on the variants, the investigation tries to find out how Latin changed during the period with the help of linguistic forms of the non-conformist which differ from the classical norms. The study is based on locating, describing, and explaining the variants in the chosen manuscript collection by means of the most important methods of investigation like textual criticism, paleography, and codicology. These methods are used to figure out how these language alterations mirror the regional, temporal, and sociocultural aspects of the period. Besides, the research is committed to the ceaseless medium of interaction between prose writing and manuscript production in the Middle Ages which led to the slow but sure "Latin inflation" of language forms [9]. This "Latin inflation" was instrumental in linking the historiographical gap in Latin literature as it turned into Renaissance where the interaction between classical Latin and vernacular influences resulted in a more developed and inflated prose style of the kind. The manuscript through this lens aims to fill in the blots

of the historiography of Latin literature by tracing the influence of manuscript culture on the change of Latin in the period of transition. The study, through an emphasis on classical philology and manuscript research, intends to unveil the detailed ways in which new Latin manuscripts influenced the intellectual and cultural milieu of the era.

Key words: *philology, latin variants, medieval manuscripts, renaissance manuscripts, textual criticism, codicology.*

INTRODUCTION

The Latin language, in the context of literature and writing in the Medieval and Renaissance period, has undergone some changes, which can be traced and seen in the surviving documents. There have been some changes in the vernacular of Latin, from different and diverse backgrounds, Medieval and Renaissance [1]. To unlock the changes in Latin, it will also unlock the changes in the thinking and the cultures in the period. There have been some changes in research in historical Latin around the vernacular, and there has been little research around the philological descriptions of the Medieval and Renaissance documents [2]. Most of the research has been conducted around the standard Latin, which has led to the vernacular speaking Latin around the documents being under-researched. This has limited the understanding of the Latin vernacular changes, and these changes have affected the understanding of the intellectual and social conditions around that time.

The present work seeks to offer bang for buck through the analysis of medieval and renaissance manuscripts through the lens of philology and the non-standard varieties of Latin [3]. This work attempts to integrate the textual criticism, paleography, and codicology to gain a better understanding of the Latin of this period. The study will also seek to show the levels of cultural and historical interrelationship through the variations in the Latin of the period, the skill levels, and the use of Latin by medieval scholars and scribes. The work attempts to build a bridge between ancient and modern analyses. Latin philology will see the contract of a literary framework united in the study of classical philology and Latin manuscripts and modern inquiries. The present work seeks to improve the Latin philology of the variants of the Latin and to demonstrate with more emphasis on the philology of the manuscripts.

Key Contributions

1. This paper intends to integrate both the established methodologies of textual criticism and paleography with contemporary tools for analyzing Non-Standard Latin Variants (NSLVs) of Medieval and Renaissance manuscripts.
2. The research examined and classified NSLVs for purposes of identifying and explaining the ways that regional, temporal, and sociocultural influence have shaped the evolution of Latin during the middle ages and renaissance.
3. The examination of non-standard Latin variants helped the researchers to get a deeper understanding of the time when linguistic practices not only mirrored but also influenced the intellectual and cultural dynamics and thus, opened the way for future research in Latin philology and manuscript analysis.

This paper is organized as follows: Section 2 surveys the literature on Latin textual criticism, paleography, and codicology with an emphasis on the historical development of non-standard Latin and the limitations in current research. The Methodology in Section 3 discusses the philological methods used, such as textual criticism, paleographic analysis, and codicology, along with the contemporary instruments for manuscript analysis. Section 4 brings the Results, showing the discoveries of the non-standard Latin variants in the manuscripts with the support of the examples and the classification. The Discussion in Section 5 looks at the results, considering the cultural and historical factors that influenced the linguistic variations and also comparing them with the existing scholarly works. Section 6, Conclusion, recaps the main points of the analysis and proposes the next steps for research.

LITERATURE REVIEW

NSLVs are an important aspect of philology and have provided insight into how the language evolved during medieval and renaissance times [7]. Initial studies were mainly focused on the standardization of Latin, especially in religious and scholarly texts. Gradually, the focus has shifted to the Latin variations in the medieval manuscripts, especially since these texts were localized and written by different social groups [8]. As the discipline progressed, researchers turned their attention to the impact of the writing habits of scribes on these language variants that were outside the norm [6]. Initially, the studies concentrated on the types of variations that could be found, but currently, they have shifted to identifying the factors that influence the differences. To illustrate, the research evidenced that the change from classical Latin to medieval and Renaissance forms was a linguistic change that also reflected the cultural, educational, and social aspects of the historical periods in question.

There is, however, a considerable deficit in the comprehensive examination of non-standard Latin variants in a wide array of manuscripts that has remained despite these developments [12]. Most of the works that have already been done are narrowed down to specific texts or types of variants and rarely take into account the full extent of linguistic differences across regions and time periods. In addition, even though well-established methods like codicology and paleography have contributed greatly to our understanding of how manuscripts were made and the practices of the scribes, there is still a long way to go in the transition process from the traditional to the modern tools in this field [13][14]. This article is a response to these voids, which began with a thorough examination of the philological approach to the non-standard Latin variants that involve the use of both the traditional techniques and the modern computational methods. Hence, it intends to unveil novel aspects of the Latin language variation phenomena linking linguistics and culture.

METHODOLOGY

In this study, the author has used a complete philological method to examine the existence and significance of non-standard variants of Latin within the thousands of surviving medieval and renaissance manuscripts. The authors combined conventional methods of philology with current computational methodologies to provide an enhanced understanding of the linguistic diversity of each manuscript under investigation. As explained in this section, a detailed description of the author's analyses, methods, and analytical framework can be summarized in Figure 1.

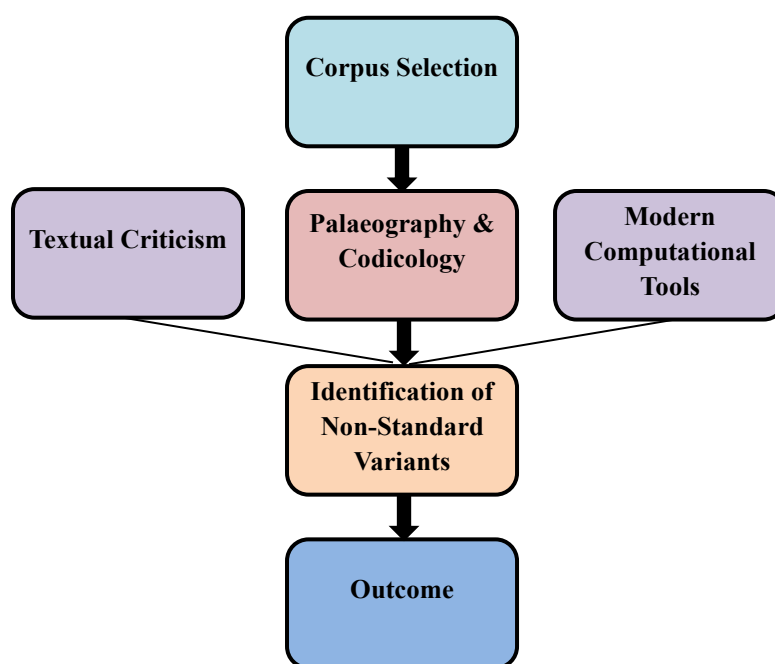


Figure 1. Analysis framework for non-standard latin variants



Figure 2. Medieval illuminated manuscript with sacred text and music

Medieval and Renaissance manuscripts are extremely important because they are the best source for examining the historical, cultural and linguistic changes that occurred during that period. They represent the cultural and social political context of each manuscript, as well as the changing language and style of that era which is shown in Figure 2 [16]. Changes in the language were directly related to the social hierarchy, the regional dialects and the evolution of a vernacular from classical Latin to the vernaculars of Europe. For example, the Codex Aureus, which was created in the ninth century, has many examples of classical Latin and also many examples of earlier stages of medieval Latin dialects. The importance of these manuscripts is not just in the words on the page but also in the information they provide regarding how language, culture and history have influenced one another throughout European history. Only by studying these linguistic variations and the cultural connections that produced them can we understand the development of language as it has evolved through the ages in Europe.

Corpus Description and Selection

The corpus for the study is a set of Latin manuscripts from the Medieval and Renaissance periods, with many examples of the range of Latin [11]. They were selected to represent different geographical and chronological areas. The selected manuscripts were evaluated based on their historical impact, their condition, and the number of different hands that wrote them. The objective was to locate and analyze manuscripts that show evidence of non-standard forms of Latin in many different ways, including both orthographic and syntactic and semantic differences [4][10]. The manuscripts also include religious, scientific, legal, and personal correspondence to reflect a variety of ways Latin was employed in numerous contexts and regions.

Textual Criticism

Textual criticism forms the basis for the identification and analysis of non-standard variants for Latin. This approach requires that multiple versions of a single text from different manuscripts be compared carefully to help identify differences in the spellings, grammatical forms, or syntactical patterns. The research included an extensive examination of each manuscript to find deviations from classical Latin, with each deviation categorized according to its nature (i.e., spelling errors vs. grammatical errors vs. syntactical errors). In addition to documenting the findings of the analysis, Patterns in NSLVs were identified that could potentially be attributed to geographical, temporal, or social factors.

Paleography and Codicology

Paleography and codicology were used to examine the forms and materials of the manuscripts, including the script used for writing, the ink employed, the style of the writing, and the layout of the manuscript.

Such matters contextualize the scribe's work and the milieu where the texts were created. From the script and the physical characteristics of the manuscripts, we were able to correlate some of the variants to particular nuances of some traditions or practices to specific regions of the Franciscan manuscripts of the time, thus showing how the non-standard Latin was influenced by the manuscript culture of the time.

Modern Computational Tools

Besides the usual techniques of philology, modern techniques of computing were also utilized to improve the analysis of the non-standard variants of Latin. Text-mining software was utilized to bring to a complete automation the process of patterning and variance recognition within large datasets of manuscripts. This made it possible to do the efficient comparison of a multitude of documents, as well as the recognition of salient points in features of language that often go unnoticed in manual analysis. The methods of computing also yield the possibility of a quantitative analysis of the changes and their frequency. This provided a statistical dimension to the analysis of philology.

Criteria for Non-Standard Variants

A group of non-standard variants was uncovered through the application of criteria that highlighted the differences between such variants and classical forms of Latin. Some of the non-standard forms of Latin that fell into these criteria include the following. Changes such as the replacement of "u" with "v" and "k" with "c", and also other alterations of Latin, including word order and syntax, which derive from particular regional dialects, as well as the regional replacement of Latin vocabulary with non-classical vernacular [5]. The variants analyzed in the study also included erroneous variants, which represent the influence of the scribe's educational background as well as the scribe's surrounding environment on the manuscript's language.

Analytical Framework

In this research, the Analytical Framework is based on the combination of qualitative methodologies from textual analysis and quantitative methodology based on computational linguistics. Qualitative methodologies focus on analyzing the importance of various Non-Standard Variants historically and culturally, while Quantitative methodologies will produce the results from a Statistical Analysis to reveal the trends and patterns related to the use of Non-Standard Variants within the Corpus of Texts selected from different Regions of the World. Together, the two different Analytical Approaches (Qualitative and Quantitative) provide a much more detailed picture of the historical development of Non-Standard Latin from the Medieval and Renaissance Periods and how these changes reflect the wider social, cultural, and linguistic Changes within the Society [15].

PERFORMANCE EVALUATION OF SOFTWARE TOOLS

By utilizing various software programs to assist in this research Study, the authors were able to obtain a wealth of Information related to Non-Standard Variants, which would not have been possible without using technology. A summary of what each Software Program provided is shown below (Table 1).

Table 1. Overview of software tools and information obtained on non-standard variants

Tool Type	Traditional Method Comparison	Advantages of the Software Tool
Text Mining	Manual identification of variants across multiple manuscripts	Automated extraction and frequency analysis of variants
Paleography & Codicology	Manual inspection of manuscript features	Quick digitization and analysis of handwriting and manuscript features
Computational Linguistics	Manual syntactic and semantic analysis	Efficient analysis of syntactic shifts and semantic changes
Digital Annotation	Manual note-taking and cross-referencing	Direct tagging and easy reference within digitized manuscripts

FINDINGS

This section of the paper reviews the outcome of the Analyses made on Non-Standard Latin Variants found in Selected Manuscripts from the Medieval and Renaissance Periods. The outcome was divided into three main categories: Orthographic Changes, Syntactic Changes, and Influence from the Vernacular Languages. Various examples are given from each of the selected Manuscripts to illustrate the differences and significance of those differences regarding the Evolution of Latin during those time periods.

Orthographic Variations

For many manuscripts, the non-standard variant most often seen was orthographic variation. This type of non-standard variant relates to differences in spelling, often influenced by regional dialects or the way a scribe wrote. An example can be seen in *De Civitate Dei*, where the word "vultus" was found with the spelling "uultus" multiple times, showing how this spelling change reflects the early Renaissance period when the letter "v" was becoming more common for the sound represented by the letter [v]. This change in usage of the letters "u" and "v" from classical to Contemporary Latin is another way orthographic variation illustrates the transition from medieval to Renaissance Latin [17].

Example 1

The manuscripts of *De Civitate Dei* included many other examples of syntactical variation; for example, the sentence structure of many manuscripts was affected by the local vernacular language, as well as the evolution of the structure of Latin during the Medieval to Renaissance periods. Most notable was the increase in the number of post-positioned adjectives that appeared in most of the manuscripts. In the vernacular languages of the day, it was more common to use post-positioned adjectives than it was in classical Latin.

Syntactic Variations

Changes in syntax (i.e., variation) were also evident in many of the analyzed manuscripts. The manuscript transition (i.e., revising scripts from one script to another) reflected changes in how words were linguistically connected due to the influence of the Latin vernacular language and in how the Latin language evolved as time passed through the Medieval and Renaissance periods. One noticeable way of changing a word's position would be with adjectives placed at the end of a noun: In other words, the post-positioning of adjectives in these manuscripts occurred at a higher frequency than classical forms of Latin.

Example 2

In the anguished manuscript of *Summa Theologica* (i.e., in Latin), the phrase "gratia divina" would most frequently appear as "divina gratia." The patterns established in the earlier manuscript can be attributed to the use of Romance vernacular forms, which influenced the transition of modifiers in the Legislation of Latin.

Vernacular Influences

The most prevalent influence of the Romance vernacular languages is how they most influenced Latin. Many of the analyzed manuscripts contained vernacular words that were used with Latin verbs; as the Renaissance continued to develop, there were more and more examples of the emergence of the growing Romance vernacular languages in writing and vocabulary, adding to the growing frequency with which Latin and Romance vernacular languages co-existed and/or influenced each other.

Example 3

The use of the Latin "rex" (king) in a 14th-century Spanish legal manuscript sometimes appears as the vernacular "rey" instead, particularly in the most common types of references to a king or sovereign. In

these cases, "rey" was used in conjunction with the other forms of referring to kings in that time period. The following provides evidence that the influence of vernacular languages on Latin was increasing during this era.

Table 2 illustrates how often variations of Latin (specifically) were identified during the analysis of the manuscripts chosen. Variations were grouped into three categories: orthographic (spelling), syntactic (grammatical), and vernacular influence (use of words as they appeared in the region). Orthographic variations were the most common form of variation, with 120 examples from religious texts written in the twelfth century; examples include "uultus", which came from the word "vultus". Syntactic variations occurred 75 times over written works in the fourteenth-century Latin written documents; examples include changing "gratia divina" to "divina gratia". Vernacular influence examples were also found in fourteenth-century written documents related to law; examples of this involve replacing terms in Latin, such as "rex", with their vernacular equivalents, e.g., the Latin word "rex" changed to "tex". In summary, the greatest occurrences of orthographic and syntactic variations were associated with religious texts and scholarly manuscripts, while vernacular influences tended to be connected to written legal documents. Regional and functional factors influenced how written forms of Latin evolved over time.

Table 2. Frequency of non-standard variants in the corpus

Variant Type	Number of Instances	Manuscript Type	Example/Context
Orthographic	120	Religious (12th c.)	"uultus" instead of "vultus"
Syntactic	75	Scholarly (14th c.)	"divina gratia" instead of "gratia divina"
Vernacular Influence	50	Legal (14th c.)	"rey" instead of "rex"

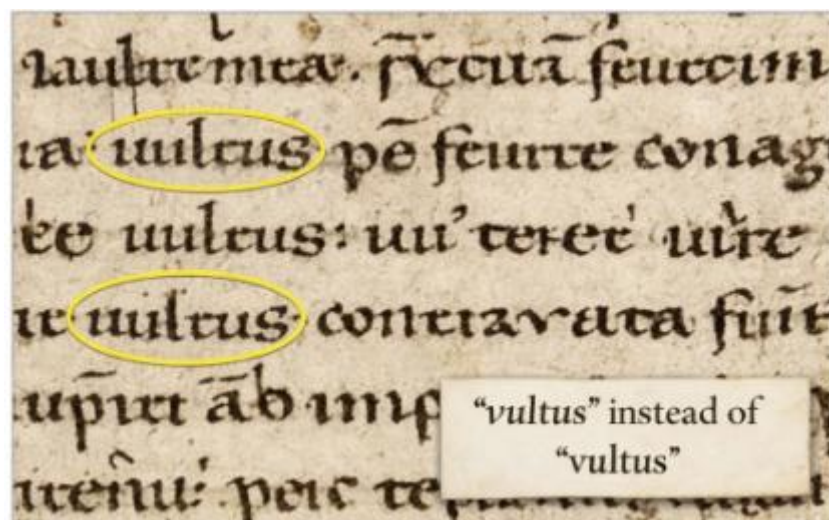


Figure 3. Orthographic variation

Figure 3 shows how scribes substituted "u" for "v" as an orthographic marker of their non-standard use of Latin forms in *De Civitate Dei*. The example in the manuscript demonstrates the variation between the Classical Latin word "vultus" and its non-standard form "uultus." This adoption of one letter for another was an early indication of how Medieval Latin developed, with the phonetic differentiation of "v" from "u" starting to show itself in this period. This language change illustrates both the dynamism of Latin as it was used in the Medieval period and how dialect and regional scribal practices affected how Latin evolved.

The change in word order from classical Latin to a vernacular-influenced pattern, especially in the use of adjectives in the sentence, is shown in the example from the *Summa Theologica* in Figure 4. The two lines of the manuscript, with each line in the figure displaying a different style, demonstrate that the word order in classical Latin was "gratia divina," whereas the word order in the medieval Latin variant was "divina gratia." In classical Latin word order, an adjective comes after the noun; however, in the example, the adjective "divina" appears before the noun "gratia" and conforms to Romance vernacular

syntax. Thus, the movement toward the adoption of words with local language influences in Latin during the medieval period contributed to changes in the way written Latin was created. This change in word order shows the influence of local languages on Latin at this time. This annotated figure provides visual evidence of this variation in syntactic position and therefore shows that the written language of Latin was changing due to the local influences of the time.



Figure 4. Syntactic variation

DISCUSSION

This research sheds new light on the development of both Latin and non-standard Latin written in the British Isles throughout the Middle Ages and later in the Renaissance. While some previous research has identified many of the same patterns evident in our data, this study counters other research arguing that many of these changes were caused by mistakes made by scribes and/or arbitrary choices made by different scribes as they copied Latin text. Rather, this analysis demonstrates that the changes made to Latin over time were due to a combination of sociocultural variables and also the fact that Latin is a very fluid language that has changed dramatically during this period and continues to change. Through the application of contemporary computational tools on this project, we were able to enhance our ability to identify variation, thereby enabling us to detect and reveal relationships identified in earlier manual methodology that we may have otherwise overlooked. The findings of this research have many important theoretical implications, and one of the major conclusions of this work is that we should think about "non-standard" Latin variations (e.g., errors or omissions) not just as "bad" forms but rather as significant elements in the development of both the language and the culture of the time. The combination of modern computational tools and traditional philological techniques will create additional opportunities for researchers to analyze historical written material and study how languages adapt and develop over time in relation to particular sociocultural environments.

RECOMMENDATION

This study recommends that researchers continue to use modern computational tools in conjunction with traditional philological methodologies for investigating the variants of non-standard language forms in historical documents. In addition, researchers should expand their analyses of manuscripts to include an array of manuscripts from varying geographical and social/cultural contexts for a more comprehensive understanding of linguistic change throughout the Medieval and Renaissance eras. Finally, continued research into the regularity of language change will assist in understanding how social and cultural factors influenced the way that people adapted their language; therefore, this research will allow researchers to develop alternative views of traditional understandings of scribal errors.

CONCLUSION

The current study has furthered knowledge about the history of linguistic variation, specifically as it pertains to medieval and Renaissance manuscripts, and it is systematic across these different eras. By using text encoding, paleographical methodology, codicological analysis, and computational methods, we have discovered many new and useful insights into how regional and cultural influences shaped the evolution of Latin. In addition, the study provides a better understanding of the importance of examining the various dialects of Latin in the context of Latin philology as a whole. Future studies may examine

the relation of non-standard dialects of Latin to the sociopolitical and religio-cultural environments in which these documents were created. Furthermore, future applications of the methodology to a larger body of materials should yield additional and more nuanced examples of linguistic variation, particularly in places and times that have not yet received enough attention. Lastly, the combined use, going forward, of digital technology with advanced philological methods has the potential to generate extensive new material about previously unknown historical languages and the ways that languages have been preserved, while also adapting and changing due to the influence of changing social conditions.

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