

Unveiling Unamuno: A Digital Humanities Approach to His Poetic Legacy

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Abstract This study explores Miguel de Unamuno's poetry, a relatively neglected facet of his literary corpus when compared with his renowned novels and essays, employing distant reading techniques. As a pivotal member of the Generation of 1898, Unamuno's works are distinguished by his philosophical inquiries, which span the contradictions between religious faith and rational thinking, the longing for immortality against the inevitability of death, and the search for freedom amid political repression. His poetry uniquely reflects his meditations on these existential themes, utilizing natural imagery, symbolic language, and introspective tones to connect his philosophical and emotional concerns. By employing digital humanities methods, such as lexical analysis, thematic clustering, and topic modeling, this study examines the thematic and stylistic elements that set apart Unamuno's poetry. The analysis reveals how his poetic compositions expand his existential and philosophical inquiries, providing nuanced perspectives on the universal and deeply personal struggles that shape his literary vision. The study validates the capability of computational approaches to reveal the intricate interplay of ideas in literature, thereby enhancing interpretations of Unamuno's complex legacy.

Keywords Miguel de Unamuno; Generation of 98; Spanish Poetry; Distant Reading; Digital Humanities ¹

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Introduction

Miguel de Unamuno’s contributions to literature during the Spanish Silver Age were innovative, especially in novelistic forms. Numerous authors at this time endeavored to break away from traditional structures, with Unamuno at the forefront of this movement. Tello notes that some writers crafted their unique genres, which influenced subsequent literary developments, with Unamuno’s concept of the “Nivola” serving as a pivotal example. In the prologue to *Niebla* (1914), the character Víctor Goti introduces the term “Nivola” to denote a literary form distinct from conventional frameworks. Goyanes, discussing the flexibility of novels, argues that Unamuno’s *Nivola* exemplifies this adaptability, leading critics often to describe his works not as *novelas* but as *nivolas*, thereby cementing his reputation as a transformative figure in the evolution of the novel.

In contrast, Unamuno’s poetic endeavors have garnered less acclaim. Pastur criticized his poetry for lacking literary refinement and aesthetic sophistication, viewing it instead as an avenue through which Unamuno explored personal and existential concerns. For Unamuno, poetry served as a crucial instrument for understanding his existence and addressing profound questions of self and transcendence. Although his deviation from traditional poetic aesthetics might be considered innovative, his poetry has not been celebrated as groundbreaking to the same extent as his novels.

This disparity in reception between Unamuno’s novels and poetry highlights the necessity for alternative approaches to analyzing his work. The concept of Distant Reading, introduced by Franco Moretti in *Graphs, Maps, Trees*, offers a robust framework for analyzing Unamuno’s poetry. Distant reading signifies a paradigm shift in literary studies by emphasizing collective and systemic text analyses compared to the traditional emphasis on individual works. Moretti urges

literary historians to “shift their gaze” (Moretti 3) from isolated, exceptional events to the broader patterns and dynamics across a corpus. He argues that literature should be viewed not merely as a collection of individual texts but as an interconnected system, wherein the relationships and structures between texts reveal underlying trends and principles. Quantitative data is central to distant reading; Moretti emphasizes its value precisely because it operates independently of subjective interpretation. Yet, it also challenges researchers to develop interpretations that transcend the quantitative realm, often necessitating a reevaluation of existing theoretical frameworks. For instance, distant reading encourages the formulation of theories not of individual novels but of entire families of literary forms, emphasizing shared structural and thematic features across a corpus. Furthermore, distant reading facilitates an engagement with the “ninety-nine percent” (Moretti 77) of forgotten literature that traditionally remains outside the literary canon. Using tools like graphs and trees, this approach enables researchers to discern patterns and hierarchies within a vast textual landscape. Graphs, as Moretti notes, reduce qualitative differences into quantitative measures, while trees aim to delineate distinctions and relationships between data points, offering a multi-dimensional view on literary evolution.

In the context of Miguel de Unamuno’s poetry, distant reading offers an opportunity to elevate its traditionally underappreciated status. By employing computational tools to analyze his complete corpus, this study seeks to uncover the systematic relationships amongst recurring motifs—such as *vida* (life), *muerte* (death), *amor* (love), and *alma* (the soul)—and their linguistic and structural manifestations. This approach not only complements traditional close reading but also broadens the analytical scope, enabling a more comprehensive understanding of Unamuno’s contributions to modern Spanish literature.

Motifs in Unamuno’s Works

Miguel de Unamuno’s corpus intimately reflects his personal experiences. The autobiographical elements inherent in his literature are unmistakable. To comprehend his oeuvre fully, an overview of his biography is indispensable. Miguel de Unamuno y Jugo was born on September 29, 1864, in Bilbao. From an early age, he demonstrated remarkable linguistic aptitude. At the age of 16, he matriculated at the university, and by the age of 20, he earned his doctorate, having completed his studies at Madrid’s university in a mere three years. During his time in Madrid (spring 1881), however, his faith diminished as he delved deeply into positivism and socialism. In 1891, Unamuno married Concha Lizárraga, and they had nine

children, who brought him considerable joy and solace amidst numerous existential dilemmas. Although Bilbao offered comfort, Unamuno's intellectual ambitions drove him to relocate to a more central area. In 1891, he secured a position as a Greek professor at the University of Salamanca, where he relocated in June with his wife and spent the majority of his life. 1897 was a pivotal year for Unamuno; he departed from the socialist party and experienced a personal crisis when his son Raimundo ("Raimundín") became critically ill with meningitis. Unamuno himself endured severe neurosis, intensifying his existential awareness of mortality. That year, he commenced exploring agnosticism, grappling with the fears of oblivion and ultimate death, while also harboring an intense longing for immortality. In 1898, following Spain's loss of its last colonies, intellectuals of the Generation of '98¹ advocated for national renewal. Unamuno, a prominent member, championed the preservation of Spain's distinctive identity and traditions, whilst advocating integration with European civilization as a means to surmount the national crisis. Unamuno's stature and political influence expanded, and despite his left-wing ideology, he was appointed rector of the university in 1900 and became a minister in 1906. In 1924, with the onset of Primo de Rivera's dictatorship, Unamuno openly challenged the regime, resulting in his dismissal from his academic post and subsequent exile to France. During this period, he symbolized resistance against the dictatorship. In 1930, after Primo de Rivera's fall, Unamuno returned to Spain, actively supporting the abdication of Alfonso XIII and the establishment of a republic. Nevertheless, becoming disillusioned with politics, he retreated to Salamanca. During the Spanish Civil War, Unamuno initially supported the opposition, motivated by dissatisfaction with anarchist governance, but later he opposed the dictatorship. In 1936, he was placed under house arrest for his dissent. Miguel de Unamuno passed away on December 31, 1936, in his home in Salamanca.

1 The Generation of 1898 emerged from a combination of political and literary contexts, ultimately evolving into a purely literary movement. This first generation of modern writers in Spain can be characterized by their personal quest to renew ideals and beliefs, their interpretation of Spain's problems not as political, economic, or social issues but as rooted in the national mentality, and their use of literature as a means to explore and propose solutions to the country's profound spiritual and intellectual crises following its complete defeat in 1898 (Shaw 30-31). The members of this generation excelled in various genres, including as novels, poetry, essays, travelogues, and plays, with a notable emphasis on prose writing. They revived interest in folklore, traditions, classical literature, and landscapes—particularly those of Castile—while exploring themes that resonated deeply with Spanish society. Additionally, they often highlighted ordinary people, daily events, and their own personal experiences or childhood memories, frequently adopting a confessional tone that gave their works an autobiographical quality (Molina).

Unamuno's poetry, composed primarily after the age of 40, exhibits philosophical and intellectual tendencies akin to those found in his novels. Religion serves as a foundation for his literary and philosophical inquiries. His inaugural poetry collection, *Poesías* (1907), was crafted during a period of profound religious turmoil that began in 1899 when his faith started to falter. For Unamuno, religion was not merely a dogmatic system, but a deeply personal and existential conundrum. His works frequently confront doubt, as illustrated by his habitual citation of Mark 9:24: "I do believe; help me overcome my unbelief!" This interplay between faith and doubt, which he described as "a faith that grows in doubt," forms the core of his writings (*San Manuel Bueno, mártir*; Sánchez Ríos 26). His poetry critiques institutionalized religion, viewing it as excessively rigid and contrary to Christian principles, while advocating for a more intimate, personal faith. His landscapes are portrayed not for their aesthetic appeal but as manifestations of spiritual and doctrinal conflicts (Sánchez Ríos 23). This existential perspective on religion imbues his entire oeuvre.

Unamuno's profound patriotism and love for Spain shine through his works. His poetry collections frequently celebrate Spain's landscapes, particularly those of his native Bilbao and Salamanca, notably Castilla, which he regarded as the spiritual heart of the nation. For Unamuno, Castilla epitomized "lo español", the essence of Spanish identity, and acted as a catalyst for national renewal. This patriotic fervor also permeates his political writings, wherein he addresses sociopolitical and moral dilemmas from a subjective yet discerning standpoint. In *Cancionero*, for instance, he confronts national issues with a combination of satire and sincerity, manifesting his commitment to the Spanish ethos (Alvar 27).

Family occupies a pivotal role in Unamuno's oeuvre, serving both as inspiration and as a reflection of his personal life. His profound affection for his children, especially Raimundo, who succumbed to meningitis, is apparent in his poetry and novels. In Unamuno's perspective, women symbolize peace and stability, a notion echoed in characters like *Tía Tula* and the Virgin Mary, who represent maternal grace and the pillars of society (Alvar 35–36). His poetry frequently depicts family moments and memories, exploring themes of love, loss, and the enduring connections of home.

Death is a pervasive theme in Unamuno's works, wherein he contemplates life's impermanence and humanity's quest for immortality. In *Rosario de sonetos líricos* and his posthumous *Cancionero*, Unamuno deliberates on eternity, positing that the essential purpose of life is the pursuit of immortality. This existential inquiry is central to works such as *Niebla*, where the protagonist, Augusto, grapples

with his creator, embodying humanity's deep-seated desire to overcome mortality.

Unamuno's literary innovations are most notably manifested in his invention of the *nivola*, a term introduced in *Niebla* to subvert conventional narrative forms. Eschewing strict structures, he employed experimental techniques like the "oviparous method," enabling characters such as Augusto to claim independence from their creator. His questioning of omniscient narration and traditional plot structures sets his work apart from 19th-century realism. In his poetry, Unamuno rejected the aesthetic formalism typical of Symbolist poetry in favor of a straightforward language that articulates visceral emotional and intellectual turmoil. His verse, devoid of traditional aestheticism, offers a candid and heartfelt exposition of his distressed self, prioritizing truth over aesthetic perfection (Morejón 137).

Through these interconnected themes—religion, patriotism, family, death, and innovation—Unamuno's oeuvre transcends conventional literary categories and structures. His poetry and novels delve into the essence of human existence, searching for significance amidst the uncertainties of life and death. By weaving his personal trials and philosophical explorations into his works, Unamuno not only revitalized Spanish literature but also provided a distinct perspective on the intricacies of life, faith, and art.

Unamuno's literary achievements, whether they manifest in poetry, novels, or other forms, demonstrate his pursuit of universal truths through individual expression. His repudiation of rigid boundaries and commitment to delving into life's enigmas forged a literary philosophy where creation itself evolved into the paramount form of expression. Although his poetry has not garnered the same acclaim as his novels, it remains an essential component of his legacy, providing profound insights into his philosophical and existential concerns. Unamuno distinguished his poetry by his overt rejection of modernism, which he perceived as excessively centered on "pure sensation" and formal innovation, frequently devoid of the emotional depth he esteemed. While his early works ventured into more liberated forms, he eventually favored traditional metrical structures, indicating a preference for established poetic conventions in his later works. Philosophical and existential themes are central to his poetry, where he confronts issues such as suffering, the illusory nature of life, and the notion of death as a moment of awakening to authentic reality. A pervasive existential dread characterizes his poetry, which often explores a fear of the unknown and the limitations of human comprehension. This existential emphasis is deftly interwoven with symbolism and interrogative elements, as Unamuno frequently uses natural motifs to connect his philosophical reflections with his poetic expressions. For him, these elements

serve as bridges between the internal self and external realities, thereby creating a cohesive and introspective body of work.

Critics have noted certain imbalances in his poetry, attributed to his rapid and prolific production. Often, complaints focus on inconsistent rhyme schemes and an excessive dependency on enjambment, which some argue detracts from the overall aesthetic refinement of his works. Despite these critiques, Ferreter Mora recognized Unamuno as fundamentally a poet who expanded the concept of poetry to encompass all literary forms. For Unamuno, poetry served as a means to penetrate the essence of things, merging humanity with the external world in a unified expression. Maria Zambrano, a distinguished interpreter of Unamuno, argued that his limitations in philosophical thought compelled him to explore various literary genres. She regarded his “failure” in poetry and his unfulfilled desire for “white, pure, liberal, evident, vivid words” as catalysts for his experimentation in other genres, including the novel. This perspective highlights Unamuno’s relentless creative ambition and his dissatisfaction with conventional boundaries. Donald Shaw noted that Unamuno’s reputation as a poet has been primarily recognized by a select group of anthropologists, such as Vivanco, and less so by literary critics. Nonetheless, Unamuno’s aspiration to be remembered as a poet underscores the importance he placed on his poetic works. This gap between his aspirations and critical reception warrants a deeper exploration of his poetic legacy. Julian Marías emphasized that although Unamuno began writing poetry later in life, it was not a secondary pursuit but the foundation of his unique literary voice. His novels depict human life descriptively and imaginatively, while his poetry approaches meaning obliquely through mood and symbolic suggestion. This approach resonates with his thematic concerns, particularly his reflections on death and the transcendence of existence.

Methodology

For our analysis, we procured scanned copies of three volumes (XIII–XV) from Unamuno’s complete works, *Obras Completas* by Afrodisio Aguado, S.A., which include a compilation of his annotated poetic works. We extracted solely the text components and preprocessed them into a more refined, digitized format. Table 1 enumerates the author’s poetic works by poetry book, accompanied by their respective word token counts. In total, 216, 179 word tokens from his poems were analyzed.

Unamuno's Poems		
0	Poesías Sueltas	29,481
1	Poesías (1907)	33,646
2	Rosario de sonetos líricos (1911)	12,669
3	El Cristo de Velázquez (1920)	17,903
4	Andanzas y Visiones Españolas (1922)	4,299
5	Rimas de dentro (1923)	4,742
6	Teresa (1924)	14,952
7	De Fuerteventura a París (1925)	11,264
8	Romancero del destierro (1928)	7,209
9	Cancionero (póstuma)	80,014

[Table 1]

Unamuno's poetry collections encompass a diverse array of themes, mirroring his personal, philosophical, and political experiences. At the age of 43, in 1907, Unamuno published his inaugural poetry collection, *Poesías*. In 1911, he released *Rosario de sonetos líricos*, which consists of 128 sonnets. *El Cristo de Velázquez* (1920) is a profound poetry collection, replete with religious language that articulates his mystical and private experiences (Valero Celma 104). In 1922, Unamuno published *Andanzas y visiones españolas*, a travelogue featuring poems about the landscapes of Spain. *Rimas de dentro*, published in 1923, is a collection that reflects his introspections on various topics encountered in his daily life. After self-imposing exile away from the dictatorship, Unamuno, at sixty years of age, published *Teresa* in 1924, signifying a shift from his earlier works. This collection features prose poems that explore themes of love and a yearning for freedom from political oppression. During his exile, he issued *De Fuerteventura a París* in 1925, which encompasses poems of personal reflection, political themes, portrayals of Fuerteventura, and feelings of hope, despair, and nostalgia. In 1927, he composed *Romancero del destierro*, a collection that laments Spain's political situation and serves as a testament to his physical, mental, and political exile. From 1928 to 1936, he authored poems later assembled posthumously in *Cancionero* (1953).

Moreover, Unamuno's narrative works were included in the compilation, alongside those of seventeen 20th-century Spanish poets, as featured in the initial volume of *Antología de la poesía española (1900-1980)* by Gustavo Correa, to

provide a contrastive analysis¹. Utilizing R, Python, and Voyant, we conducted various text-mining analyses, including assessments of overall stylistic attributes, lexical features, word and lemma frequencies, document similarity, correspondence analysis, LDA topic modeling, and co-occurrence analysis.

4. Result

4.1. Stylistic Comparison with Other Spanish Modern Poets

To examine the overall stylometric properties of Unamuno's poems, we analyzed the Type-Token Ratio (TTR), Lexical Density (LD), Big Words Ratio, and Mean Verse Length. These metrics were then compared to the averages of poems by other Spanish poets (see Table 2)^{2,3}. The Type-Token Ratio (TTR) for Unamuno's poems is 0.148607, ranking 10th among the poets analyzed. This indicates that although his vocabulary demonstrates moderate variety, it is relatively repetitive when compared to his peers, which aligns with his philosophical and reflective focus on recurring

1 Unamuno's narrative works are primarily found in volumes II and IX, which include *Paz en la guerra* (1897), *Amor y pedagogía* (1902), *El espejo de la muerte* (*Cuentos*) (1913), *Niebla* (1914), *Abel Sánchez* (1917), *Tres novelas ejemplares y un prólogo* (*Dos madres*, *El marqués de Lumbría*, *Nada menos que todo un hombre*) (1920), *La tía Tula*, *Cómo se hace una novela* (1927), *Don Sandalio, jugador de ajedrez* (1931), and *San Manuel Bueno, mártir* (1931). On the other hand, the 17 poets featured in the first volume of Gustavo Correa's anthology include Miguel de Unamuno, Juan Ramón Jiménez, Manuel Machado, Antonio Machado, Ramón del Valle Inclán, José Moreno Villa, León Felipe, Gerardo Diego, Federico García Lorca, Dámaso Alonso, Pedro Salinas, Rafael Alberti, Jorge Guillén, Vicente Aleixandre, Emilio Prados, Manuel Altolaguirre, and Luis Cernuda.

2 The Type-Token Ratio (TTR) measures the ratio of unique word types to the total number of tokens. A higher TTR indicates a text with diverse vocabulary and multiple topics or themes approached from varying perspectives, while a lower TTR suggests limited and repetitive vocabulary usage. Lexical Density (LD) refers to the proportion of lexical items—content words such as nouns, verbs, adjectives, and adverbs—to the total text length. A higher lexical density implies that the text is more informative, whereas a lower density often reflects simpler, less informative text, characteristic of spoken language. The Big Words Ratio reflects the percentage of words with six or more letters. A higher percentage of big words typically suggests a greater level of complexity and difficulty in comprehension, while a lower percentage may indicate simpler, more accessible language. Finally, the Mean Verse Length evaluates the average sentence or line length in the text. Longer sentences tend to be associated with more complex and intricate reasoning, often used in detailed explanations, while shorter sentences are generally easier to understand and are more suited to direct and straightforward communication (Savoy 26-31).

3 Note that these stylometric findings apply specifically to the selected anthology of Unamuno's poems and may not fully represent the stylistic diversity of his complete poetic works.

themes. The Big Words Ratio, which reflects the percentage of words with six or more letters, is 0.172424 (Rank: 6th for $BW \geq 6$) and 0.06151 (Rank: 9th for $BW \geq 8$). These rankings underscore Unamuno's preference for moderately complex words, enhancing the intellectual rigor and sophistication of his poetry. Unamuno's Mean Verse Length, measured in both words and characters per line, is significantly high. With an average of 34.21212 words per line (Rank: 3rd) and 98.26936 characters per line (Rank: 2nd), his poems are among the longest in the dataset. This length reflects his penchant for complex, extended sentences, characteristic of detailed philosophical discourse and introspection. Finally, the Lexical Density (LD), which measures the proportion of content words, is 0.257357 for Unamuno, placing him 7th overall. This above-average density indicates that his poems are relatively informative and convey substantial conceptual depth, often prioritizing content over structural simplicity.

Author	TTR	LD	BW ≥ 6	BW ≥ 8	Mean_Line_Length h#1 (words per line)	Mean_Line_Length h#2 (chars per line)	Rank_TTR	Rank_LD	RankBW ≥ 6	RankBW ≥ 8	Rank_Mean_Line_Length#1 (words per line)	Rank_Mean_Line_Length#2 (chars per line)
01-Unamuno.txt	0.148607	0.257357	0.172424	0.06151	34.21212	98.26936	10	7	6	9	3	2
Average in Anthology	0.152316	0.249708	0.163498	0.062296	28.17295	78.22039						

[Table 2]

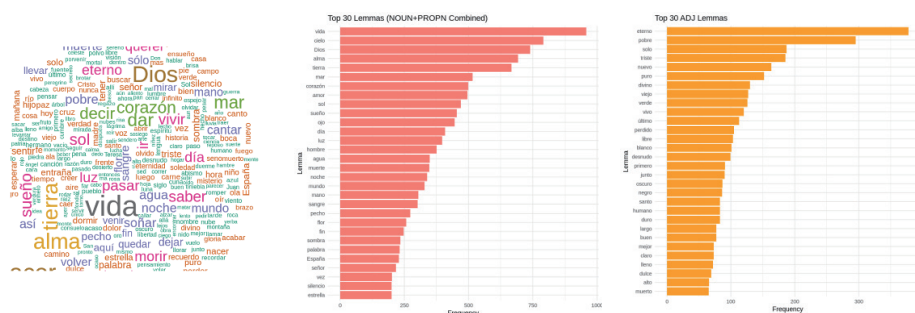
Additionally, we examined the relative frequencies of each content word category, including proper nouns, as detailed in Table 3. Unamuno's relative frequencies for adjectives (4.24%), nouns (13.68%), and verbs (6.11%) closely align with the averages found in anthologies, positioning him within the middle range for these parts of speech. This indicates a balanced and conventional use of content words, reflecting his philosophical depth without significant stylistic extremes (see Table 3). Despite this, his notably low adverb frequency (1.70%, ranked 14th) underscores a preference for direct expression, reducing reliance on adverbs to modify meaning. Conversely, his high frequency of proper nouns (3.64%, ranked 2nd) underscores his strong emphasis on personal names, places, or culturally specific references. This indicates an interest in grounding abstract philosophical ideas in tangible, personal, or historical contexts.

Author	ADJ	ADV	NOUN	PROPN	VERB	Rank_ADJ	Rank_ADV	Rank_NOUN	Rank_PROPN	Rank_VERB
01-Unamuno.txt	4.24%	1.70%	13.68%	3.64%	6.11%	5	14	6	2	7
Average in Anthology	4.18%	2.61%	12.93%	2.61%	5.90%					

[Table 3]

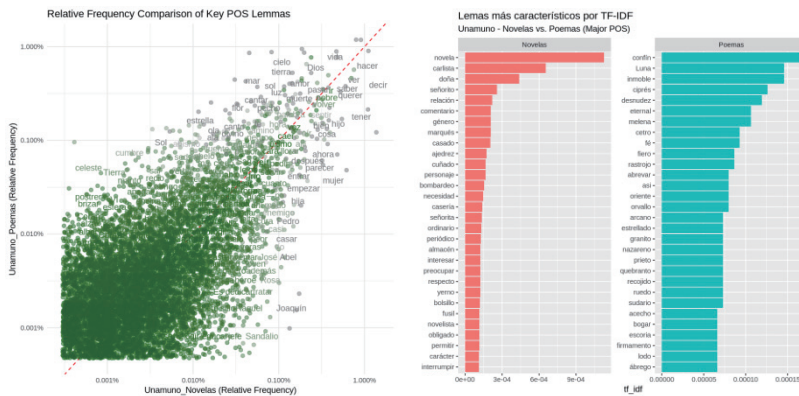
4.2. A Holistic View of Thematic Patterns in Unamuno's Poetry

Miguel de Unamuno's poetry is profoundly influenced by his *Sentimiento trágico de la vida* (tragic sense of life), a cornerstone of his philosophical outlook. His poems provide a deep reflection on his existential struggles with religion, death, and the divine-human relationship. These are not simply artistic expressions but profound meditations on the human condition, articulated through symbolic language and natural imagery. Themes such as immortality, the soul, and the tension between faith and doubt pervade his work, frequently obscuring the lines between spiritual inquiry and metaphysical questioning. The left portion of Figure 2 visualizes the most frequent lemmas in Unamuno's entire collection of poetry. The high-frequency words in Unamuno's poetry clearly mirror his philosophical and existential concerns. Terms like *vida* (life), *Dios* (God), *alma* (soul), *muerte* (death), *amor* (love), and *sueño* (dream) highlight abstract, universal, and introspective themes. These words echo his enduring exploration of human existence, his confrontation with faith, and his quest for immortality. Additionally, natural imagery—terms such as *cielo* (heaven), *tierra* (earth), *sol* (sun), *mar* (sea), and *noche* (night)—enhance Unamuno's preoccupation with the eternal and transcendent. These motifs often serve as symbols of the conflict between the finite and the infinite, showcasing his belief in the interrelation of the human and the divine. His poetry adeptly merges metaphysical inquiry with evocative portrayals of the natural world, thus providing a backdrop for his existential and spiritual deliberations.



emphasize his concentration on existence, faith, and mortality. Words like *corazón* (heart) and *sueño* (dream) enrich the emotional depth, while *España* (Spain) reflects his ties to national identity. Terms like *fin* (end) and *silencio* (silence) indicate his interest in finality and the ineffable, anchoring his poetry in both personal and universal concerns. The Top 30 Adjective Lemmas on the right side of Figure 2 accentuate Unamuno/s tonal and thematic richness. Words like *eterno* (eternal), *divino* (divine), and *puro* (pure) highlight spiritual aspirations, while *pobre* (poor), *solo* (alone), and *triste* (sad) convey solitude and melancholy. Adjectives like *vivo* (alive) and *humano* (human) temper these darker tones with vitality and complexity, reflecting the dualities and paradoxes central to Unamuno's philosophy and poetic style.

To further understand the distinctiveness of his poetry, it proves insightful to briefly compare it with his more narrative-driven novels, which similarly explore existential questions.

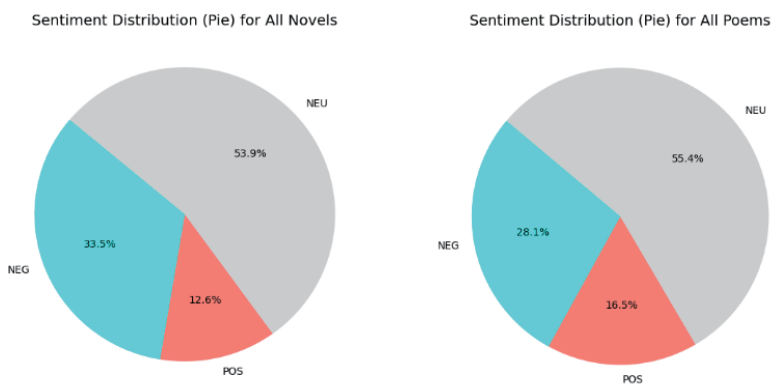


[Figure 2]

The two visualizations in Figure 2 together underscore how Unamuno's poetry, compared to his novels, accentuates symbolic and introspective representations of religion, death, and patriotism. The scatterplot on the left side compares relative lemma frequencies and contrasts the frequency of key lemmas (base word forms) tagged with specific parts of speech (POS) in two text corpora: Unamuno's poetry and his novels. Both axes are plotted on a logarithmic scale to encompass the wide range of frequencies, from very rare to more common lemmas. Words associated with nature and abstract concepts, such as *estrella* (star), *sol* (sun), *brisa* (breeze), and *cumbre* (summit), are notably higher on the y-axis, reflecting their prevalence in the poetic corpus. Conversely, proper nouns and character-specific terms, such

as *Pedro*, *Abel*, and *Sandalio*, are grouped along the lower x-axis, indicating their narrative-driven usage in novels. Despite these genre-specific tendencies, existential and spiritual themes such as *vida* (life), *muerte* (death), and *alma* (soul) appear as recurrent motifs across both genres, albeit with nuanced differences in frequency. This demonstrates Unamuno's skill in balancing universal themes while tailoring his language to the distinct demands of poetry and narrative.

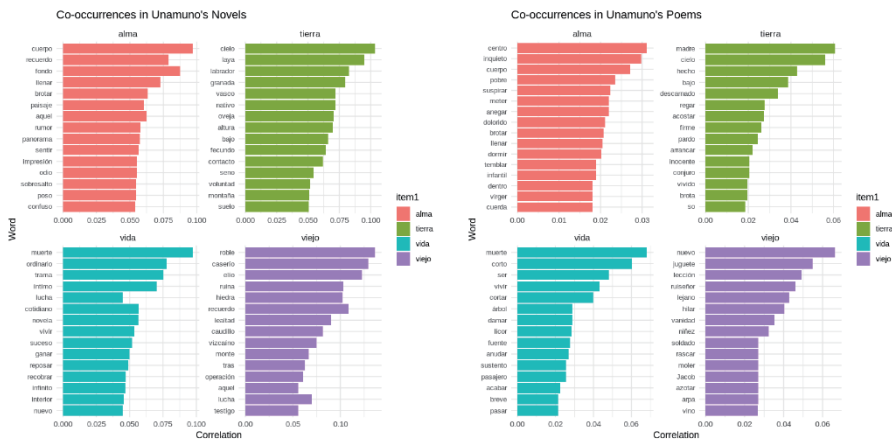
On the other hand, the TF-IDF comparison on the rightside illuminates distinct thematic and linguistic focuses in Unamuno's poetry and novels, as depicted in the bar charts, with characters' names omitted for clearer analysis. In poetry, high TF-IDF lemmas such as *confín* (horizon), *luna* (moon), and *eterno* (eternal) highlight its introspective and symbolic nature, focusing on spirituality, existential reflection, and metaphysical expansiveness. Terms like *ciprés* (cypress) and *estrella* (star) evoke natural and celestial imagery, often serving as metaphors for immortality and the tension between human finitude and the infinite. These words capture Unamuno's personal and philosophical engagement with themes of faith, doubt, and the quest for eternity. In contrast, the novels' top TF-IDF lemmas, including *novela* (novel), *carlista* (Carlists), and *relación* (relationship), indicate a focus on narrative structure and societal dynamics. Words like *señorito* (young gentleman) and *casería* (farmstead) point to an emphasis on class, social roles, and historical settings. The exclusion of character names allows a more focused examination of these structural and thematic elements, underscoring the broader societal and relational issues central to his novels.



[Figure 3]

We further conducted sentiment analysis using the PySentimiento library, a powerful tool specifically tailored to analyze the emotions and sentiment in text,

particularly attuned to the nuances of the Spanish language¹. Analyzing positive and negative sentiments, Unamuno's poetry exhibits 28.1% negative and 16.5% positive sentiments, significantly highlighting themes of melancholy and existential struggle. His novels, on the other hand, demonstrate an even stronger negative bias, with 33.5% negative and only 12.6% positive sentiments, indicating deeper engagement with conflict and darker themes in narrative form. These findings emphasize Unamuno's thematic consistency across genres, with his poetry offering marginally more moments of optimism compared to the pronounced negativity in his novels.



[Figure 4]

Finally, Figure 4 presents the results of a co-occurrence analysis for selected target words in Unamuno's poetry and novels. Co-occurring words were identified within the same line for poetry and within the same sentence for novels, reflecting the symbolic conciseness of poetry and the context-rich nature of prose, with a minimum frequency threshold of 10 occurrences. We selected words such as *tierra* (earth), *vida* (life), *alma* (soul), and *viejo* (old/old man) to scrutinize their co-occurrences, exploring how these words elucidate contrasts between Unamuno's novels and poems. In novels, *tierra* appears alongside words such as *labrador* (farmer), *suelo* (soil), and *fecundo* (fertile), underscoring the land's material and

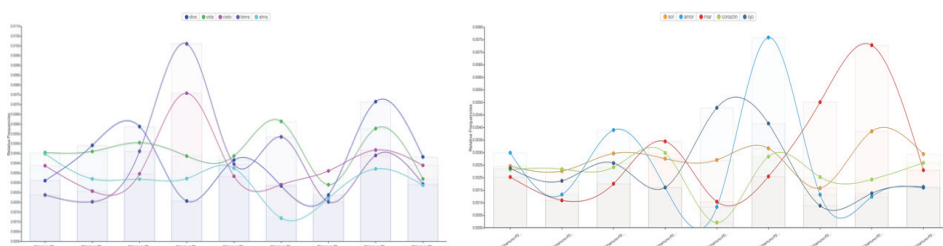
1 PySentimiento employs pre-trained transformer-based models such as BERT and RoBERTa, which provide high accuracy in detecting sentiment polarities: positive (POS), negative (NEG), and neutral (NEU). In the sentiment analysis conducted using PySentimiento, which is a context-based rather than dictionary-based tool, neutral sentiment dominates in both poetry (55.4%) and novels (53.9%). This prevalence reflects the inherent nature of the texts, as PySentimiento analyzes sentiment within its full contextual framework without requiring stopword removal.

economic significance, associated with survival and productivity. Conversely, in poems, *tierra* co-occurs with *árbol* (tree), *brotó* (sprouts), and *conjuro* (spell), transforming the land into a spiritual symbol of life, growth, and mystical transcendence. Similarly, *vida* in novels is connected with words like *cotidiano* (everyday), *lucha* (struggle), and *trama* (plot), depicting life as a sequence of conflicts and routines. However, in poems, *vida* is paired with *breve* (brief), *corto* (short), and *licor* (liquor), highlighting its ephemeral nature and prompting reflection on its transience and beauty.

This symbolic and existential focus in poetry extends to *alma* (soul) and *viejo* (old/old man). In novels, *alma* is associated with *cuero* (body), *sentir* (to feel), and *recuerdo* (memory), illustrating the soul as anchored in physical and emotional experiences. In poetry, *alma* is frequently paired with *inquieto* (restless), *suspiros* (sighs), and *dolor* (pain), exploring spiritual disquiet and existential yearning. For *viejo*, novels underscore societal and historical roles through associations with *caserío* (farmhouse), *ruina* (ruin), and *caudillo* (leader), while poetry uses *viejo* as a metaphor for reflection and transience, with terms like *juguete* (toy), *lección* (lesson), and *arca* (chest). Together, these contrasts demonstrate that whereas Unamuno's novels are centered on tangible realities and social dynamics, his poetry explores abstract, symbolic, and metaphysical dimensions, providing a contemplative perspective on human existence.

4.3 Tracing Unamuno's Poetic Evolution through Thematic Clustering

The high-frequency words in Unamuno's poetry significantly reflect his philosophical musings and existential contemplations. An analysis of these words' relative significance across his works produced noteworthy insights:



[Figure 5]

The top ten high-frequency words pivotal in Unamuno's poetic lexicon were examined using Voyant Tools and depicted in the Trends feature. The analysis revealed that *Dios* (God) featured most prominently in *Romancero del destierro* and *El Cristo de Velázquez*. The term *vida* (life) was most frequent in *Teresa*. *Cielo*

(heaven or sky) and *tierra*(earth) were notably significant in *Andanzas y visiones españolas*. *Alma* (soul) appeared most frequently in *Poesías* and *Rimas de dentro*. *Sol* (sun) was the most recurrent across all collections, especially in *Romancero del destierro*. *Mar*(sea) exhibited an increasing frequency and significance in Unamuno's later works. *Amor* (love) reached its highest frequencies in *Teresa*. *Corazón* (heart) was prominent in both *Andanzas y visiones españolas* and *Teresa*. *Ojos* (eyes), though less frequent, held considerable philosophical importance in Unamuno's reflections, especially in *Rimas de dentro* and *Teresa*.

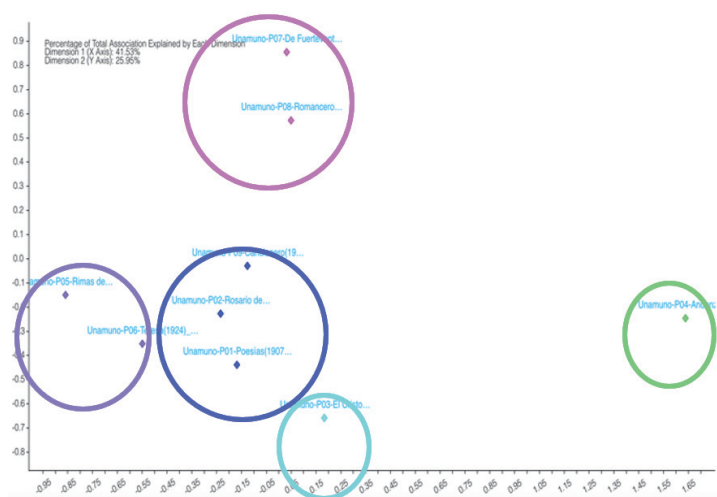
Words such as *Dios*, *vida*, *alma*, and *amor* underscore abstract and introspective themes, while terms like *corazón* and *ojos* are closely linked with Christ-like imagery. Natural imagery words such as *cielo*, *tierra*, *sol*, and *mar* emphasize eternal and transcendent concepts, often related to the notion of immortality. These terms were not only used for vivid descriptions but also served as symbolic language conveying Unamuno's philosophical positions. Moreover, Unamuno emphasized the significance of poetic language, meticulously selecting words to articulate his ideas.

The defining characteristics of Unamuno's poetry collections lie in their expression of the poet's most sincere and intimate thoughts, with biographical elements consistently apparent across all his works. This consistency may lead to the perception that his poetry frequently addresses the same themes and topics. However, as the writer's experiences, environment, and the passage of time evolved, the themes he sought to express likely underwent changes as well. Furthermore, even identical poetic words may have acquired deeper meanings and been employed in new contexts, influenced by these dynamic factors.

Therefore, the analysis commences by examining similarities between poetry collections based on their publication years to discern the periods during which specific poetic expressions most effectively conveyed his thoughts. To accomplish this, the lemmatized versions of all his poetry collections¹ were analyzed using Voyant Tools. By examining document similarities with TF-IDF and visualizing the outcomes via a scatterplot, five clusters were identified, providing the following insights (see Figure 6):

Through the analysis of document similarities, it became apparent that the poet's works are categorized according to his life stages. However, an intriguing aspect of this data reveals that *Cancionero* (1954), penned between 1928 and 1936, the year of his demise, coalesces with the two early works, *Poesías* and *Rosario*

¹ The poetry collection *Poesías sueltas* is excluded to avoid intensifying confusion when analyzing the poetic themes by publication dates.



[Figure 6]

de líricos sonetos. Poesías, published in 1907, represents the poet's inaugural collection and was a subject of considerable controversy. *Rosario de líricos sonetos* comprises a total of 128 sonnets composed between September 1910 and February 1911. Relative to other collections, this one attracted less attention. The sections that address day-to-day life demonstrate similarities with *Poesías* and the diary-style composition in *Cancionero*. Further insight into why his posthumous collection aligns with his first is provided by Kock, who contends that *Cancionero* represents "Miguel's literary will" and although the poet in *Cancionero* differs from the one in *Poesías*, he frequently references earlier poems, thereby rendering them emblematic of his entire poetic oeuvre (36).

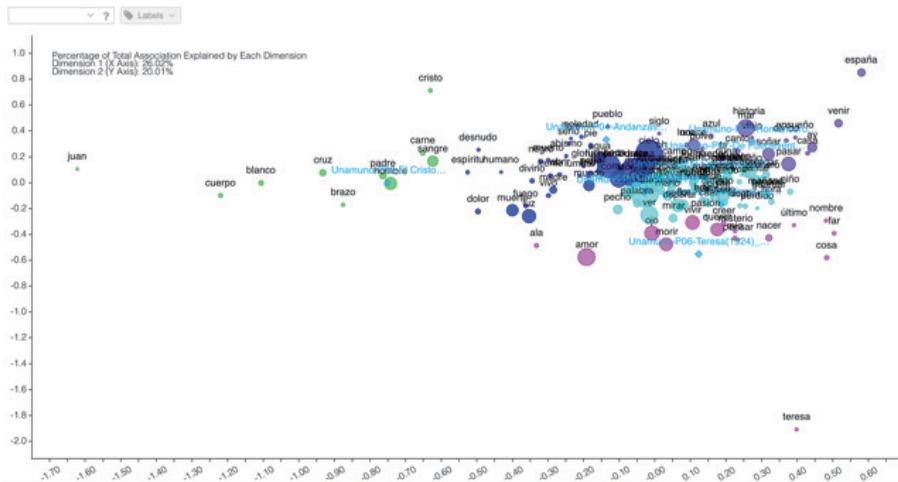
Among Unamuno's poetry collections, *El Cristo de Velázquez*, published in 1920, is the most thoroughly examined and forms a distinct cluster. It is characterized by its rich symbolic language and emphasis on visual perception, describing what the poet directly observed in the painting. Another distinct cluster is *Andanzas y visiones españolas*, published in 1922. This work, structured according to the author's travels, intertwines poetry with predominantly prose narratives.

The next cluster groups *Rimas de dentro* (1923) and *Teresa* (1924). *Rimas de dentro* comprises a collection of 20 poems structured like a diary, with dates recorded alongside each poem. The collection encompasses a variety of themes and philosophical reflections, reconstructing the poet's convictions through verses that advocate freedom in defiance of conventional norms. Unamuno's defiant spirit in *Rimas de dentro* transitions into the innovative poetic forms found in *Teresa*, which was introduced to the public when the poet was 60 years old. Although penned in

verse, *Teresa* integrates a prose love story, featuring Unamuno himself under the pseudonym Miguel, while the character Rafael serves as his literary alter ego. This narrative articulates a yearning to revert to earlier times, embodying an existential desire to return to an original state, a recurring dream for the poet. Unamuno elaborates that this narrative weaves together Miguel's prose and Rafael's poetry (Gullón 221).

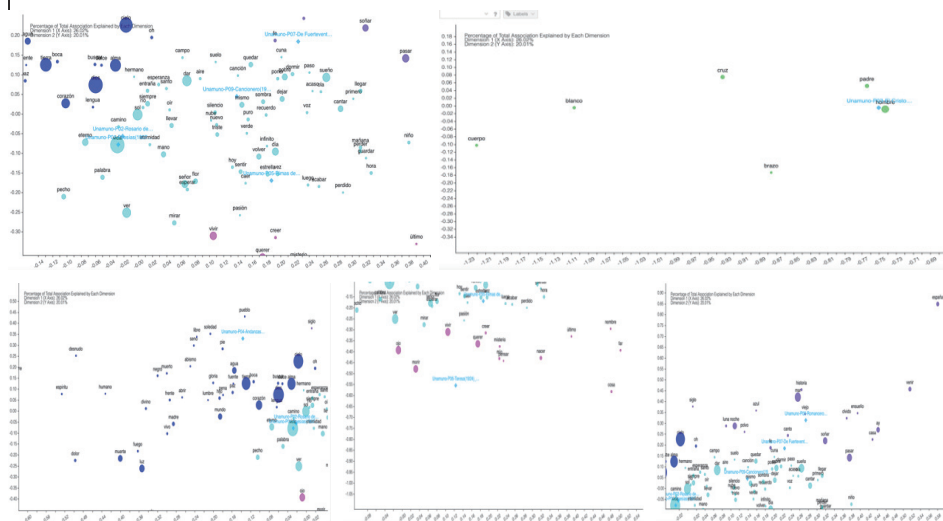
The next cluster includes poems written during the poet's exile, a critical phase in his life. This clustering arises, in some ways, intuitively. The poet's concerns for Spain, his distress over being stranded away from his homeland, his isolation, and his intensified longing for immortality and eternal significance likely influenced his thoughts during the latter part of his life.

To further explore, we examine the prominent words in each work by assessing their distribution through scatter plots and trend analysis. Initially, to analyze the distribution of terms, correspondence analysis was employed using relative frequency. Visualization of these results with a scatter plot identified five distinct clusters, providing key insights (see Figure 7):



[Figure 7]

The scatter plot, segmented into five clusters, reveals that thematically related words with strong correlations are grouped closely together, with words of greater significance denoted by larger circles. Each cluster provided the following results. In line with the outcomes of document similarity analysis, it was noted that the proximity of words is also indicative of the relationships and associations between the works.



[Figure 8]

The analysis results illuminate the themes of Unamuno's poetry collections.¹ Specifically, Cluster 1 encompasses his early works, including *Poesías* and *Rosario de sonetos líricos*, and the posthumously released *Cancionero*. It can be argued that these collections amalgamate the central themes of Unamuno's introspections, which resonate throughout his entire body of poetry.

The term *vida* (life) features the most prominent circle, signifying its substantial significance and influence in his oeuvre. In *Poesías*, religion distinctly plays an essential role. His faith dwindled by 1895, and by 1897, his rising doubt and disbelief in God were exacerbated by his son's severe bout with meningitis. One of his most acclaimed poems, *Credo Poético*, begins with the verse: "Piensa el sentimiento, siente el pensamiento" ("Feel the thought, think the feeling") (67),

¹ The results of Correspondence Analysis:

Cluster 1 (sky blue): *vida* (life), *sol* (sun), *dar* (to give), *sueño* (dream), *día* (day), *ver* (to see), *palabra* (word), *eterno* (eternal), *volver* (to return), *quedar* (to remain), *sentir* (to feel)...

Cluster 2 (green): *cuerpo* (body), *blanco* (white), *cruz* (cross), *brazo* (arm), *padre* (father), *hombre* (man), *cristo* (Christ), *carne* (flesh), *sangre* (blood)...

Cluster 3 (blue): *tierra* (earth), *cielo* (heaven/sky), *dios* (God), *alma* (soul), *corazón* (heart), *agua* (water), *mundo* (world), *muerte* (death), *luz* (light), *soledad* (solitude), *humano* (human), *divino* (divine)

Cluster 4 (pink): *vivir* (to live), *morir* (to die), *querer* (to love/want), *ojo* (eye), *creer* (to believe), *misterio* (mystery), *mío* (mine), *pensar* (to think), *nacer* (to be born), *último* (last), *nombre* (name), *cosa* (thing)

Cluster 5 (purple): *mar* (sea), *soñar* (to dream), *noche* (night), *pasar* (to pass), *historia* (history/story), *canto* (song), *azul* (blue), *luna* (moon), *casa* (house), *venir* (to come), *España* (Spain).

illustrating the interaction between *pensar* (thinking) and *sentir* (feeling), linking reason and emotion. Another central theme in this cluster is *sueño* (dream). Manuel Alvar argues that Unamuno utilizes the concept of *sueño* (dream) both to soothe and invigorate the soul (16). Alvar additionally notes “recurring themes” in his introduction to *Poesías*, including discussions on *dolor* (pain)—autobiographical torment regarding his son’s illness and death, historical national tragedies, and God’s silence (23). Moreover, Unamuno’s poetry comprises reflections on family and his poetics, critiquing the prevalent symbolism of the era. He contended that poetry should transcend superficiality, discovering meaning in *palabra* (the word) itself and serving as a conduit to express his profound thoughts and *espíritu* (spirit). Sánchez Ríos described the themes of *Rosario de sonetos líricos* as encompassing political and religious critiques, personal life—family dynamics, spiritual condition, reflective poetry, existential struggles concerning religion, and nature-themed poems (15). The posthumously released compilation *Cancionero* includes a vast array of 1,755 poems. Its themes are equally varied, covering political musings, with many concepts and ideas from *Poesías* revisited and expanded upon.

Cluster 2 is closely associated with *El Cristo de Velázquez*, and the enumerated terms represent prevalent themes in this poetry. Gutiérrez Pérez delineates the stages in which Unamuno reflects upon Velázquez’s Christ Crucified. In the initial part of the poem, where Unamuno portrays the *cuerpo* (body) of Christ, the term *blanco* (white) is frequently employed. The color white serves as a symbol of purity and is prominently reiterated throughout the poem (326). Another significant theme is water, not merely an ordinary element, but in its biblical transformation into wine, symbolizing the *sangre* (blood) of Christ (328). Subsequently, 14 poems celebrate Christ’s dual nature as divine and human (330). Thereafter, 27 poems concentrate on the suffering body of Christ, initiating with a passage that meticulously examines the painting from top to bottom. The poet vividly captures Christ’s facial and bodily features through his verses. The concluding poems of this series address the renewed life and love emanating from His sacrifice (335).

Cluster 3 relates to terms associated with *Andanzas y visiones españolas*. In the preface, Unamuno characterizes this work as a sequential travel narrative. While predominantly prose, the text encompasses diverse literary forms, including poetry. However, Manuel Blanco posits that the cohesion of the book stems from Unamuno’s lyrical articulation of his sentiments and interpretations of *paisajes españoles* (146). Furthermore, this is not merely a travelogue, as the journey also inspired *El Cristo de Velázquez* (160). The collection conveys a profound sense of *soledad* (solitude), highlighting Unamuno’s perspective that the essence of a

landscape resides in its solitude. He notes that authentic landscapes exist not in expansive open spaces but within secluded, personal enclaves (de la Calzada 59). The text also incorporates recollections of his native Bilbao and his cherished Salamanca, where key elements such as *cielo* (sky) and *tierra* (earth) are notably prominent.¹ Cluster 3 exhibits a close relationship to Cluster 1. For instance, although *campo* (field) is categorized under Cluster 1, it also correlates with this work. The connection lies in Unamuno's metaphorical use of nature, equating the infinite campo with perpetual suffering. De la Calzada elucidates how Unamuno's agony transcends through campo, encompassing not only physical but also religious, moral, and metaphysical afflictions (59). Within the landscapes of Castilla, the writer contemplates God. Castilian landscapes, characterized by their tranquility and silence, possess a profound internal vitality and an aspiration for eternal, unblemished existence (64).

Cluster 4 consists of words situated between *Teresa* and *Rimas de dentro*. Although *Rimas de dentro* was published in 1923, the poems were composed between 1907 and 1910. The themes of the poems are diverse, encompassing daily life—at home, riding a train, observing landscapes, and beyond. While one might assume that this collection should be grouped with his earlier poetry, its placement in a separate cluster can be elucidated by examining his poem *Aldebarán*. Composed in 1908, this poem vividly captures Unamuno's spiritual torment. The red star *Aldebarán* is described as “*un rubí encendido en la frente divina*” symbolizing God's eye, bleeding and red (Menéndez Pidal 55). In this poem, the word *ojo* (eye) is reiterated multiple times. The enigmatic star *Aldebarán* symbolizes God, and from God's perspective, humanity appears fragile, pitiable, and defenseless. As Unamuno contemplates eternity, his sole response is *silencio* (silence). In *Teresa*, the word *ojo* (eye) similarly functions as a metaphor. Her eyes are depicted as if they were birds pulling a *carro* (chariot), symbolizing a journey toward higher aspirations. The protagonists of the story, Rafael and Teresa, are lovers, but Teresa becomes gravely ill. Despite her valiant struggle to cling to life, she ultimately succumbs. The themes of *vivir* (to live) and *morir* (to die) are intricately linked. Induráin analyzed the themes of love, life, and death in *Teresa*, positing that for Unamuno, love and death are essential components of life. Ultimately, these three elements converge in *Teresa*, forming eternal love, eternal death, and eternal life (403). This thematic connection justifies the grouping of these two works within the same cluster. Moreover, this theme permeates works like *Cancionero* and others

1 For instance, Salamanca is described lyrically as, *como poso de cielo en la tierra resplende tu pompa, Salamanca* (de la Calzada 150).

closely associated with Cluster 1.

Cluster 5 encompasses terms distinctly correlated with works issued in the latter years of Unamuno's life, specifically *De Fuerteventura a París*¹ and *Romancero del destierro*. His period of exile represented a significant transition in Unamuno's life, characterized by a profound longing for locations such as Salamanca, Bilbao, and his childhood home. Concurrently, he derived inspiration from the sea and the natural environment of Fuerteventura, giving rise to politically charged sonnets and reflective monologues imbued with nostalgia, particularly those influenced by the island's seascape. *La mar* (the sea) and other natural elements, such as *la noche* (the night), stars, moon, sun, and clouds, prominently feature in his imagery, epitomizing the zenith of his lyrical expression (43). During this phase, the sea transcended its role as a mere element of nature for Unamuno; it assumed philosophical and divine significance (44). His poetry from this era mirrors his complex emotions, his solitude, and his reflections on the history of Spain. The autobiographical element of his work is pronounced, with references to his life in Paris including landmarks like the Arc de Triomphe and the Seine River. Most of these works were penned in Hendaya and disclose Unamuno's internal conflict about Spain's political scene. As with other collections, recollections of Spain and his political distress predominantly influence the tone of the poems. In this collection, *la noche* symbolizes death, while life is portrayed as *soñar* (to dream). *La mar* continues to be a central motif, signifying the depths of the soul and internal existence.

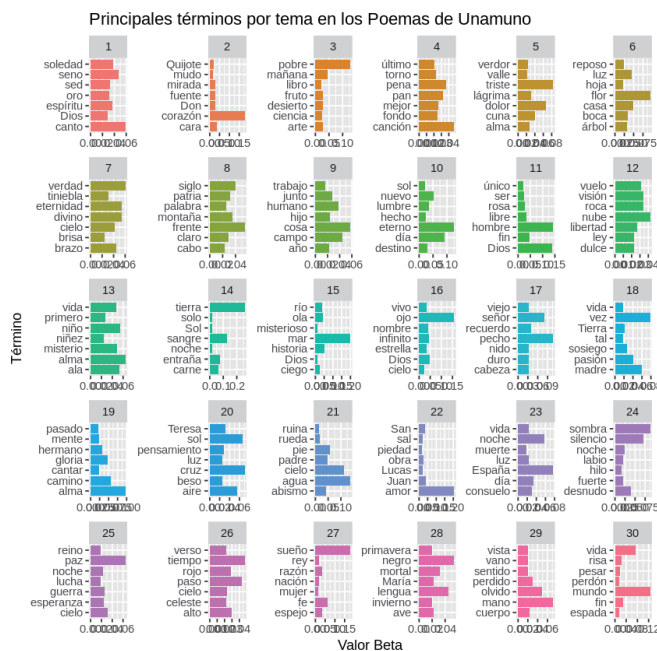
For each cluster, thematic keywords that correspond to specific works were identified. Notably, in Cluster 1, terms reflecting Unamuno's musings on daily life were evenly distributed across four works. Nonetheless, it is not accurate to claim that these thematic keywords are uniquely crucial to any single work. The keywords are interwoven and mutually enhance each other, forming significant connections.

Machine learning facilitated a comprehensive understanding of his poetic vocabulary, uncovering the persistent motifs throughout his collections. Subsequently, an analysis embracing all of Unamuno's poetry collections was performed using R code to execute LDA topic modeling analysis.

Employing the LDA topic modeling technique via R enhanced the process of theme extraction, allowing for more nuanced identification of motifs.

Among Unamuno's foremost concerns, his religious preoccupations were perhaps the most pronounced. Themes linked to *Dios* (God) were predominantly associated with topics 1, 7, 11, 14, 15, and 16. His persistent concern and affection

1 Of the 103 sonnets in the collection, the first 76 were written during his exile on the island of Fuerteventura, while the remaining 37 were composed in Paris.



[Figure 9]

for his homeland were evident, exemplifying his nationalistic sentiments, which became emblematic for the Generation of '98, manifesting in topics 2, 8, 12, 23, and 27. Additionally, topics relating to his daily struggles included 3, 4, 9, 13, 17, 18, 19, 26, and 30.

Each topic is interconnected rather than isolated, with themes that overlap and complement each other. Analyzing keywords for each work and applying LDA topic modeling, we found that this method is highly effective for quickly grasping and understanding extensive content.

5. Conclusion

This study has revealed the significant potential of digital humanities techniques in providing fresh insights into the poetry of Miguel de Unamuno, a relatively overlooked component of his literary oeuvre. By employing text-mining methodologies such as lexical analysis, thematic clustering, and topic modeling, we have exposed the complex interplay of themes, symbols, and stylistic elements that characterize Unamuno's poetic corpus.

The results underscore the recurring motifs of *Dios* (God), *vida* (life), *alma* (soul), *muerte* (death), and *amor* (love), which constitute the core of his existential exploration, reflecting his enduring engagement with issues of faith, mortality, and the human contingency. The incorporation of natural imagery, including terms like

cielo (heaven), *mar* (sea), and *sol* (sun), further illustrates Unamuno's capacity to intertwine metaphysical meditation with symbolic depictions of the natural world. These elements highlight the universal reach of his poetry while presenting it as a deeply personal reflection of his internal conflicts and philosophical explorations.

The stylistic analyses revealed that Unamuno's poetic language, though occasionally criticized for its lack of aesthetic polish, is deliberate and reflects the philosophical rigor of his themes. Metrics such as high lexical density and complex verse structures are indicative of the intellectual depth of his themes, while his distinctive use of proper nouns anchors his abstract inquiries in concrete cultural and historical contexts.

Furthermore, the temporal and thematic clustering of his poetry collections illustrates the evolution of his thought over time. Significant shifts in thematic emphasis, such as the increased focus on exile and national identity during his later years, reflect his personal experiences and the sociopolitical context. These insights were further enriched through the application of topic modeling, which revealed overlapping yet distinct thematic clusters throughout his works, underscoring the interconnectedness of his poetic concerns.

Ultimately, this study reaffirms the significance of Miguel de Unamuno's poetry as an essential element of his literary corpus. Although his novels have historically overshadowed his poetry, our analysis demonstrates that his poetic works provide equally profound insights into his philosophical and existential concerns. By employing computational methodologies, this research not only deepens our understanding of Unamuno's poetic vision but also illustrates the broader capabilities of digital humanities in revealing new aspects of literary analysis.

In conclusion, this study bridges the divide between traditional close reading and distant reading, offering a comprehensive examination of Unamuno's poetic legacy. It invites future scholarship to incorporate digital methods into the study of Spanish literature, thereby enriching interpretations of canonical figures like Unamuno and highlighting the broader cultural and intellectual currents of the Spanish Silver Age.

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