Digital Approaches to Poetic Style
A Quantitative Stylistic Analysis of Italian Petrarchism

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Abstract Petrarch can be considered one of the most influential poets of European literature. One of the main reasons for this is his collection of Italian love poems known as *Canzoniere*, which for centuries became a role model for many European poets trying to imitate Petrarch's poetic style. Research has acknowledged Petrarch's influence on later poetry and even created a term to describe this phenomenon: Petrarchism. Yet, despite the many studies describing Petrarch's impact on various European authors and texts, the notion of Petrarchism itself continues to be under discussion. This article raises the question to what extent digital methods can provide new impulses for research on Petrarchism. More specifically, a quantitative stylometric analysis of a corpus of Italian love poetry is conducted to find stylistically distinctive elements for Petrarchism.

Keywords Petrarch, Petrarchism, *stylo*, quantitative analysis, contrastive analysis

1. Petrarch: Italian Author, European Role Model

1.1 Petrarch's *Canzoniere*

The Italian Francesco Petrarca (1304–74), commonly anglicized as Petrarch, can be considered one of the most influential authors of European literature. His works left their mark on the literary landscape not only of his time, but also on the texts of many later writers. Based on the language, Petrarch's writings can be divided into two categories. On the one hand, he published different texts in Latin, including an epic poem, a collection of biographies of famous historic persons and a collection of letters. On the

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other hand, one of the main reasons for Petrarch's fame is however his well-received collection of love poems written in Italian and known as *Canzoniere*.[1]

The central theme of *Canzoniere* is the lyrical I's unrequited love for a married woman called Laura, a love that continues even after the woman's death. The 366 poems in the collection draw on central motifs of the Latin, Provençal and Italian literature and are arranged according to an elaborate structure. This structure not only provides a temporal order that is supported by references to specific dates and periods of the ecclesiastical year (Barolini 1989; Fornasiero 2001, 59–89), but also establishes a narrative dimension, creating an autobiographic tale that begins with the lyrical I's love at first sight for Laura and ends with the supposed renunciation of its love for her (Geyer 2009; Wehle 2009).[2] Thus, *Canzoniere* gives a detailed account of the lyrical I's feelings for Laura, which are often contradictory: the lyrical I is frequently torn between a sentiment of pleasure provided by its love and the pain resulting from its unfulfilled desire for Laura. This conflicting emotional state of the lyrical I, often referred to as *dolendi voluptas* by scholars, is a fine example of the oppositeness that permeates the form and content of Petrarch's *Canzoniere* (Friedrich 1964, 217–19; Forster 1969).

1.2 Approaches to a Definition of Petrarchism

Canzoniere had an enormous impact on European love poetry. In fact, the text became a role model for a great number of authors trying to imitate Petrarch's poetic style in Italy and beyond. Petrarch's influence appears most clearly in Italian collections of poems also entitled *Canzoniere*, alluding to Petrarch's work. Apart from such obvious references, literary scholars have pointed out elements they consider characteristic for Petrarch's poetic style in the texts of many other European authors. Research even invented the term *Petrarchism* to describe Petrarch's impact on his literary successors.

There is a vivid scholarly research discourse on Petrarchism (Hempfer, Regn, and Scheffel 2005). While most studies focus on the impact of Petrarch's poetic style on single authors or texts (e.g. Pyritz 1963; Regn 1987; Warning 1987; Morales Saravia 1998; Schiffer 2000; Schneider 2007; Marnoto 2015), some contributions aim to describe Petrarch's influence on the later literary landscape systematically (e.g. Baldacci 1957; Forster 1969, 61–83; Hoffmeister 1973; Nardone 1998; Bernsen 2011; Regn 2013). Among the latter, three approaches stand out: The first one conceives Pertrarchism as a literary system of elements (Hempfer 1987; 1991; Regn 1987; 1993). In other

1 Over the many years that Petrarch worked on the collection, its title and structure changed several times (Wilkins 1948; Santagata 1993).

2 For an overview of the sources and intertextual references in Petrarch's Canzoniere see Petrarca (2015).

words, a text has to include at least a minimum number of certain elements in order to be considered Petrarchistic. Referring to Mikhail Bakhtin's notion of *Dialogism*, the second concept considers Petrarchism a form of literary appropriation of competing lyrical dictions (Warning 1987). Warning argues that a text can be called Petrarchistic as long as the Petrarchistic discourse is the dominant one. If it is supplanted by other types of discourse instead, the text in question is not Petrarchistic. The third concept tries to combine the two opposing conceptions (e.g. Huß 2001).

The different approaches proved valuable for shedding light not only on Petrarchism in general, but also on the various ways single authors adapt Petrarch's poetic style. Research even managed to identify some recurring elements in European literature that seem characteristic for Petrarch's way of composing poetry, including:

— the above-mentioned concept of *dolendi voluptas* (see 1.1);
— stylistic devices that express contrast, e.g. the oxymoron (Friedrich 1964, 217; Regn 2013);
— the idealization of the beloved woman both ethically and aesthetically (Regn 2013).

Nonetheless, there is still no conclusive list of elements that would allow us to distinguish Petrarchistic texts from non Petrarchistic literature. In order to create a list of stylistically distinctive elements of Petrarchism, it would be useful to analyze a large corpus of texts considered to be Petrarchistic and written by different authors, instead of focusing on single authors or texts, like most of the research literature has done so far. In fact, even publications with the goal to study Petrarchism as a European phenomenon usually analyze small numbers or even single texts or authors.[3] Quantitative approaches however, which in recent years enjoyed increasing popularity thanks to the ascent of the digital humanities, give the chance to analyze Petrarchism on a large scale.

2. Digital Text Analysis and Poetry

Digital literary studies have experienced a veritable boom in the last years, as some widely received studies provided illustrative examples for the possibilities digital tools offer, especially for quantitative approaches to large text collections (e.g. Jockers 2013; Moretti 2013).[4] This led to a variety of different studies on major literary genres, in particular prose and drama. Although the number of digital analyses that deal with

3 There are, however, some exceptions, e.g. Baldacci (1957); Hoffmeister (1973); Nardone (1998).
4 For an overview of quantitative analyses in the digital humanities see Schöch (2017).

poetry is lower compared to the latter two genres, there are some publications that can be divided into three groups based on their approach: studies that analyze the metric structure of poetic texts (e.g. Beaudouin and Yvon 1996; Navarro Colorado 2018a), publications which focus on poetic language (e.g. Rhody 2012; Navarro Colorado 2018b) and stylometric approaches (e.g. Hoover 2008; Rojas Castro 2018).

Nonetheless, there have been no digital approaches to define or analyze Petrarchism on an international or even national level so far. However, a digital quantitative analysis could help identifying stylistically distinctive features of Petrarchistic poetry on a scale that goes beyond the level of a single text or author.

3. Digital Approaches to a Quantitative Stylistic Analysis of Petrarchism

3.1 Approach

If Petrarchism, as the name suggests, refers to a specific type of influence of Petrarch's *Canzoniere* on the texts of other poets, then in Petrarch's poetry and in the works of his poetic successors there must be aspects that distinguish these texts from non Petrarchistic literature. In order to find these distinctive elements, it is necessary to compare definitely Petrarchistic texts with poetry that is certainly not Petrarchistic on a broad basis. Contrastive analyses are suitable for this purpose, as demonstrated by various contrastive studies in recent years (e.g. Schöch 2018; Ilsemann 2019; Rebora et al. 2019) in which the distance measure Zeta has proven useful. Moreover, Zeta is quite user-friendly thanks to its implementation in the R package *stylo* (Eder, Rybicki, and Kestemont, 2016) and the Python library *pyzeta* (Schöch 2019) and will therefore also be used here.

In the following, such a contrastive analysis is conducted by using *stylo* to study a corpus of twelve collections of Italian poetry.[5] The analysis consists of four steps: the first step examines the whole corpus with regard to the stylistic similarity between the different collections of poems contained in it. In the second step the collections of Italian love poetry written before and Petrarch's *Canzoniere* are analyzed contrastively. The third step consists of a contrastive analysis between the Italian love poetry written before and poetic collections published after the *Canzoniere*. The fourth and last step compares the results of steps two and three.

5 See 3.3 for the structure of the corpus in detail.

3.2 Genre and Language

When dealing with premodern Italian poetry, it is recommended to keep two things in mind. The first aspect concerns the structure of poetic texts in general. One of the most characteristic features of poetry is that it is often composed of verses. At first glance verses are usually associated with deliberate line breaks. Although this is often the case, the fact that a poem consists of verses may have more consequences for the text. Verses can also provide a metric structure and thereby a rhythm. This is an important point because it means that in order to analyze poetic texts it is frequently necessary to take into account not only the graphic dimension of the text, but also acoustic aspects.[6] Moreover, the fact that poetry is often composed of verses results in poetic texts being shorter on average than prose texts. The second aspect that needs to be considered when working with premodern Italian poetry is that the texts in question are centuries old. On the one hand, this means that there are authors of whom only few texts have survived. On the other, it implies that the texts were written at a time when the standardization of the Italian written language was in its early stages.[7] Therefore, it is not unusual to find various variants for the same linguistic phenomenon in different texts of the same time.

These two aspects have two consequences for the analysis. The first concerns the evaluation of possible results. The results of a quantitative stylometric analysis primarily refer to the graphic level of the text, whereas aspects relating to the acoustic dimension are not revealed. Therefore, whatever stylometric approaches may teach us about Petrarchistic poetry, it may only be one part of the solution and a first step toward a definition of Petrarchism. The second consequence regards the choice of the texts for the corpus. For a quantitatively sound analysis, every text in the corpus must have a certain length. This is the reason why only poetic collections with a length of at least 1,000 verses were taken into account. Especially in the twelfth and thirteenth century there are however quite a few authors, of whom only a few Italian poems have been preserved. Leaving out such texts would have meant ignoring a substantial part of early Italian poetry. In order to solve this problem, anthologies of early Italian poetry were included in the corpus.

3.3 Corpus

Table 1 provides an overview of the corpus analyzed in this essay, which includes three parts. The first part consists of four collections of Italian love poetry written before Petrarch's *Canzoniere*: poems of the *Scuola Siciliana*, Tuscan poetry, *Dolce Stil Novo* and

6 Apart from the verse, e.g. rhymes and stylistic devices may influence the acoustic dimension of a poetic text.

7 For an overview of the history of the Italian language see Blasi (2008, especially 3–70).

Table 1 Corpus

Part	Author(s)	Type of text	Title/school	Centuries	Number of characters
A	various	Anthology	*Scuola siciliana*	12th–13th	350,359
	various	Anthology	Tuscan Poetry	13th	130,950
	various	Anthology	*Dolce Stil Novo*	13th–14th	162,349
	Dante	Love poems	*Rime*	13th	59,842
B	Petrarch	Collection	*Canzoniere*	14th	287,288
C	Bandello, Matteo	Collection	*Canzoniere*	16th	182,676
	Conti, Giusto de'	Collection	*Canzoniere*	15th	164,530
	de Medici, Lorenzo de'	Collection	*Canzoniere*	15th	119,608
	Galli, Angelo	Collection	*Canzoniere*	15th	353,230
	Rossi, Niccolò de'	Collection	*Canzoniere*	14th	221,159
	Sforza, Alessandro	Collection	*Canzoniere*	15th	227,557
	Tansillo, Luigi	Collection	*Canzoniere*	16th	327,730

Dante's love poetry.[8] Petrarch's *Canzoniere* is the second part. The third part consists of collections of Italian poems published after Petrarch's *Canzoniere*, but bearing the same title. These collections were deliberately chosen, because their title suggests that the respective author was familiar with Petrarch's work. All the texts are based on curated editions, whose electronic versions were obtained via the digital library *Biblioteca Italiana* (Quondam, Alfonzetti, and Asperti 2019). For the analyses, each collection was stripped of page and line numbers, titles, notes and editorial information and saved in a single plain text file (UTF-8).

3.4 Analysis of the Stylistic Similarity of the Texts

Figure 1 shows the stylometric similarity of all the texts in the corpus based on the 3,000 most frequent words according to the Classic Delta distance.[9]

8 In the case of Scuola siciliana, Dolce Stil Novo, the Tuscan poetry and Dante's poems, the texts were extracted from larger collections, also available via Biblioteca Italiana (Scuola siciliana: Panvini 1962–64; Dolce Stil Novo: Contini 1960; the Tuscan poetry: Zaccagnini and Parducci 1915; Dante's love poetry: Contini 1973).

9 Classic Delta is based on the distance measure Burrows' Delta introduced by John Burrows (2002). In order to calculate Classic Delta, the word frequencies in a corpus are first converted into relative word frequencies and then subjected to a Z-transformation. Based on the resulting values, the similarity between the texts in the corpus is then determined using the Manhattan distance.

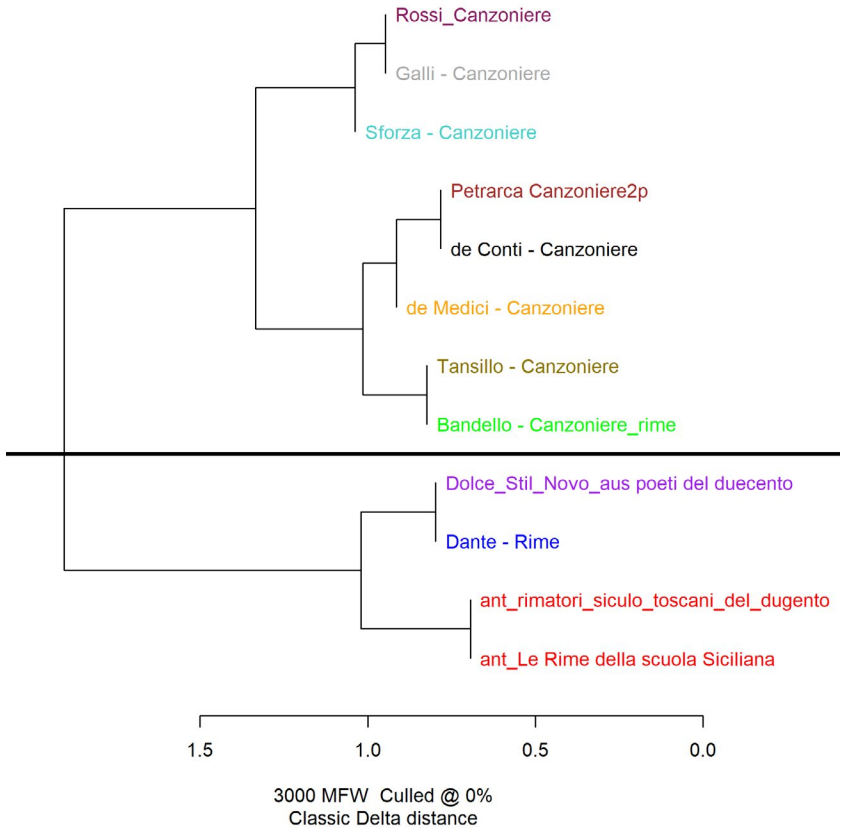

Fig. 1 Stylometric similarity, cluster analysis, 3,000 most frequent words, Classic Delta (corpus parts A, B, C), (Rohden, CC BY).

The dendrogram illustrates a clear distinction between all the collections of poems entitled *Canzoniere*, including Petrarch's text on the one hand (above the line), and the love poetry composed before on the other (below the line).[10] The dendrogram in Figure 2, based on the same number of most frequent words, but according to the Würzburg distance,[11] confirms the contrast between the *Canzonieri* since Petrarch and the love poetry composed before.

10 The black line in the lower part of the dendrogram was added manually.

11 In contrast to Burrows' Delta, the Würzburg distance uses the Cosine distance instead of the Manhattan distance to calculate the similarity (Jannidis et al. 2015).

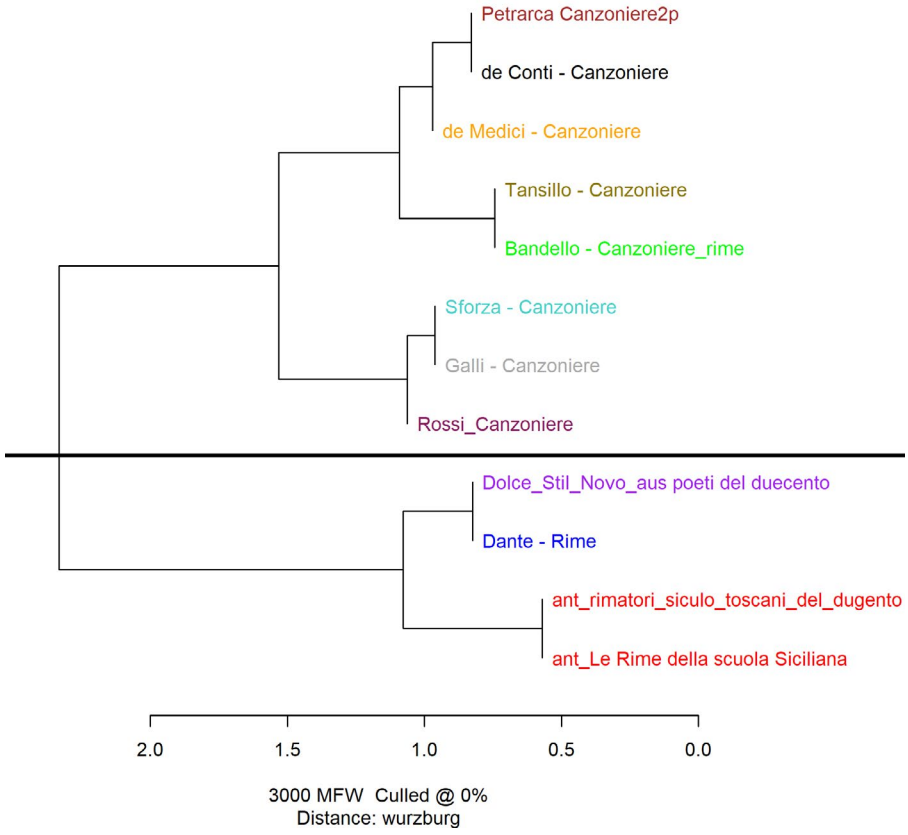

Fig. 2 Stylometric similarity, cluster analysis, 3,000 most frequent words, Würzburg (corpus parts A, B, C), (Rohden, CC BY).

From a stylometric point of view both dendrograms therefore suggest a clear difference between the *Canzonieri* since Petrarch and the love poetry written before. However, the question arises as to what causes these stylometric differences. Can they possibly be traced back to writing variants or instead to other stylistic elements? Contrastive text analyses can shed light on this.

3.5 Contrastive Analysis of Petrarch's *Canzoniere* and the Italian Love Poetry Written Before

A contrastive analysis reveals stylometric differences between Petrarch's *Canzoniere* and the Italian love poetry written before, as well, as Figure 3 shows.

First of all, what is conspicuous about Figure 3 is the fact that there are various variants of one and the same lemma. One example is the word *dolze* ('sweet'), written

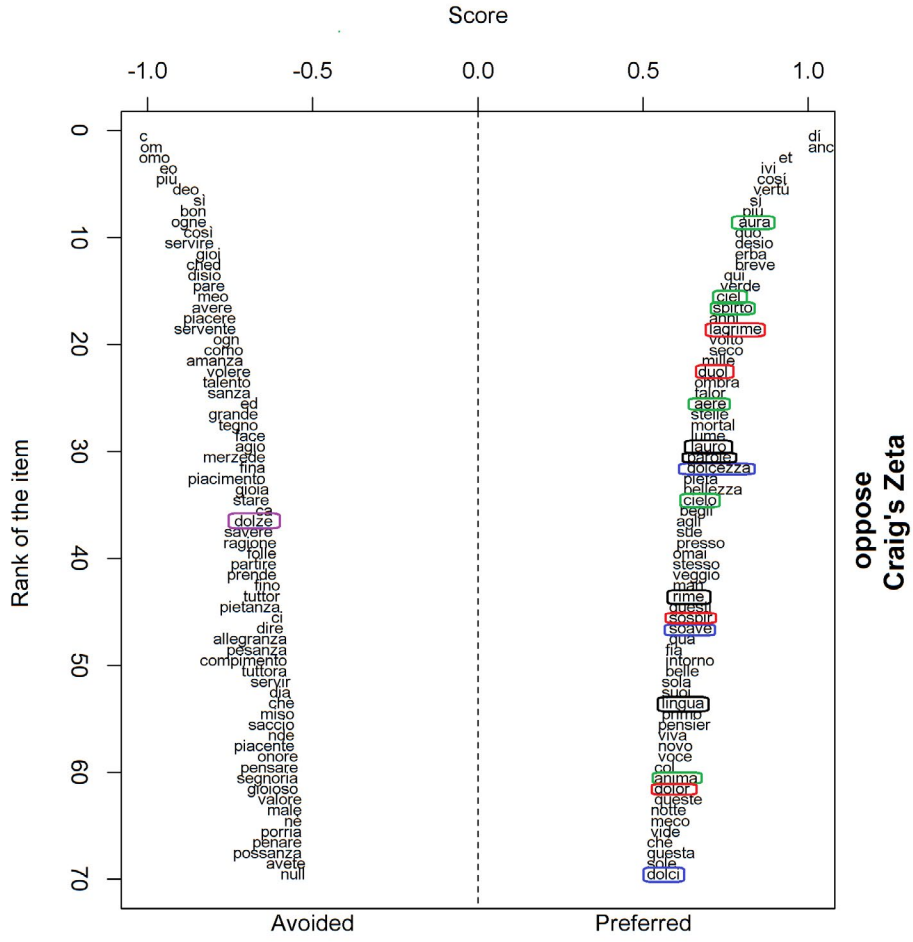

Fig. 3 Contrastive analysis of Petrarch's *Canzoniere* and the Italian love poetry written before, Oppose, slice length 3,000, Occurrence Threshold 30, Craig's Zeta (corpus parts A vs B), (Rohden, CC BY).

with a <z>, which is avoided in Petrarch's *Canzoniere*, whereas the plural *dolci* with a <c> as well as the noun *dolcezza* ('sweetness') are preferred by him.[12] This is a reminder of the fact that early Italian poetry may include different variants of the same lemma. Apart from *dolce*, there is also another expression designating sweetness: *soave*. The presence of various words for sweetness in Petrarch's *Canzoniere* can be regarded as a reference to the literary movement *Dolce Stil Novo*.[13] Another group of words preferred by Petrarch deals with different forms of pain, in particular *duol* and *dolor* (both referring to 'pain'), *lagrime* ('tears') and *sospir* ('sigh'). These words emphasize the importance of the motif of pain, not least for the concept of *dolendi voluptas*. Another interesting aspect of the words listed in Figure 3 are nouns that imply a spiritual dimension of Petrarch's poetry: *aura* ('aura, air'), *ciel* and *cielo* ('sky, heaven'), *spirto* ('spirit, soul'), *aere* ('sky, heaven') and *anima* ('soul, spirit'). These words suggest the idealization of the beloved woman, a common motif in the poetry of *Dolce Stil Novo* and in Dante's love poems (e.g. Seitschek 2014). Four nouns are noteworthy, as well: *lauro* ('laurel'), *parole* ('words'), *rime* ('rhymes') and *lingua* ('language, tongue'). These words can be seen as a reference to poetry itself, since words and rhymes are among its most basic components. The laurel is particularly interesting, as it has two meanings in Petrarch's *Canzoniere*. On the one hand it symbolizes the crown of the poet, the highest poetic award as well as a sign of poetic fame.[14] On the other *lauro* can also allude to the beloved Laura, due to the similar spelling of both words. The motif of the laurel therefore elucidates the duality of Petrarch's poetry, which deals with love, yet at the same time serves Petrarch's goal to become a famous poet (e.g. Wehle 2009).

3.6 Contrastive Analysis of the *Canzonieri* after Petrarch and the Italian Love Poetry Written Before

Although some expressions may differ, a contrastive analysis of the *Canzonieri* after Petrarch and the Italian love poetry composed before (Figure 4) confirms many of the observations described in 3.5.

A reference to poetry is present in form of the three words *stile*, *stil* ('style') and *carte* ('papers'). The nouns *gloria* ('glory') and *fama* ('fame') clearly refer to the motif of poetic fame, a motif symbolized in Petrarch's *Canzoniere* by the laurel. Furthermore, in

12 While dolze is marked purple, all the other words referring to the semantic field of sweetness are marked blue. Color-marked in this and all following figures are words referring to: sweetness (blue), pain (red), spirit/soul/heaven (green), poetry (black), happiness/pleasure (orange).

13 For an overview of Dolce Stil Novo see Pirovano (2014).

14 In fact, in 1341 the Roman Senator Ursus d'Anguillara officially granted Petrarch this award by giving him a crown made of laurel, thus crowning him poeta laureatus (Suerbaum 1972).

the *Canzonieri* after Petrarch there is even stronger evidence for the idealization of the beloved woman, as the words *eterno* and *eterna* ('eternal'), *alma* ('spirit, soul'), *celeste* ('celestial, heavenly'), *sacro* ('holy') and *ciel* ('sky, heaven') demonstrate. The concept of sweetness can be found in Figure 4, as well, although in this case it is only represented by a single adjective (*suave*). Moreover, the element of pain is included in the wordlist, although also only with a single word (*duol*). Instead, there are three adjectives that imply happiness or pleasure: *felice* ('happy') and *lieto* as well as *lieta* ('happy'). These three words not only show that the aspect of duality which can be found in Petrarch's

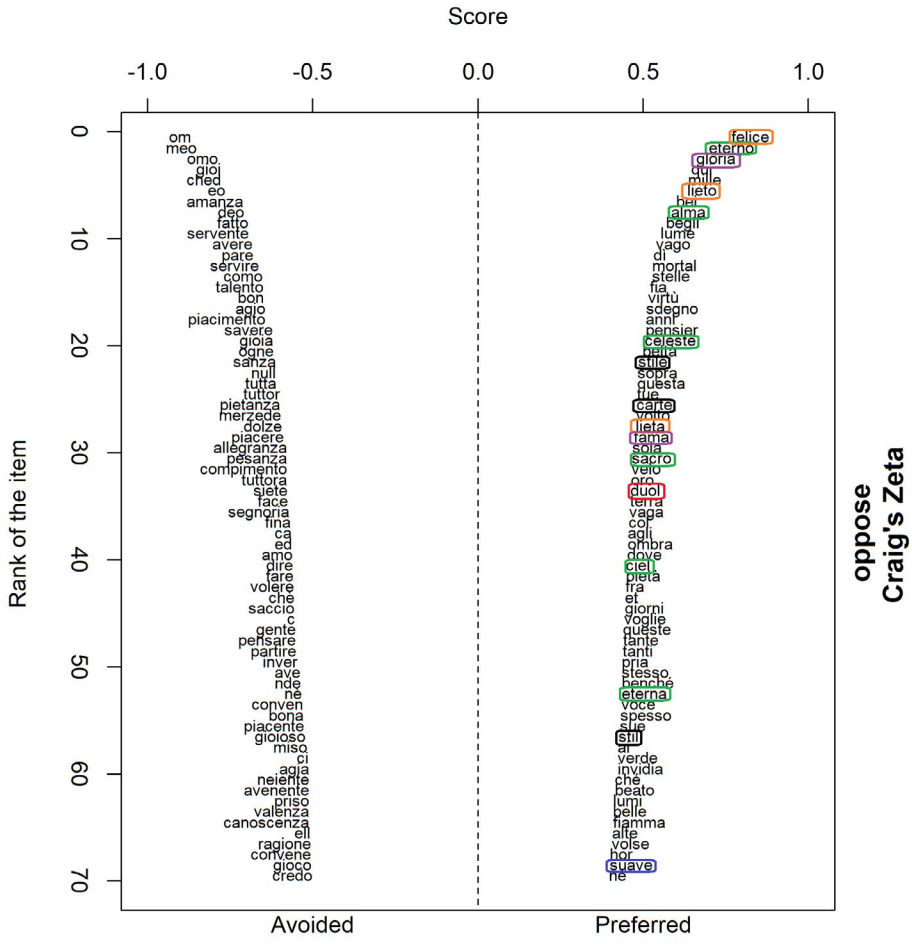

Fig. 4 Contrastive analysis of the *Canzonieri* after Petrarch and the Italian love poetry written before, Oppose, slice length 3,000, Occurrence Threshold 30, Craig's Zeta (corpus parts A vs C), (Rohden, CC BY).

collection is part of later *Canzonieri*, as well, but they also refer to the second component of the concept of *dolendi voluptas* besides pain: pleasure.

3.7 Comparison of the Results

By pointing out notable differences between the Italian love poetry written before Petrarch in contrast to the *Canzonieri* since Petrarch, Figures 3 and 4 confirm relevant observations of literary research on Petrarchism from a quantitative perspective (e.g. Forster 1969; Regn 2013).

A closer look at the wordlists generated by the two contrastive analyses however reveals two more differences. The first one does not concern the content of the words, but rather the numerical ratio between two parts of speech, nouns and verbs. According to the results of the contrastive analysis based on Craig's Zeta,[15] while there is only a difference of approximately 22 percent between the number of nouns avoided (73) and those preferred (89) in the love poetry written before Petrarch, in Petrarch's *Canzoniere*, the number of verbs avoided (88) is more than three times higher than the number of verbs preferred (23). A contrastive analysis of the same texts based on Eder's Zeta leads to similar results,[16] although in this case the number of nouns preferred (83) is nearly twice as high as the number of nouns avoided (48), while the number of verbs avoided (62) is more than three times higher than the number of verbs preferred (20). Thus, when compared to the love poetry written before, Petrarch's *Canzoniere* seems to prefer nouns at the expense of verbs. A similar preference for nouns can be observed for the *Canzonieri* written after Petrarch in contrast to the love poetry composed before the *Canzoniere*.

In the case of Craig's Zeta, the number of nouns preferred (205) is nearly two times higher than the number of those avoided (104), while the number of verbs avoided (114) is about 34 percent higher than the number of verbs preferred (85). An analysis based on Eder's Zeta obtains similar results, with the number of nouns preferred (205) being more than twice as high as the number of nouns avoided (96) and the number of verbs avoided (138) being approximately 47 percent higher than those preferred (94). Table 2 summarizes the preference for nouns at the expense of verbs in

15 Craig's Zeta (Craig and Kinney 2009, 18–22) is a variant of the distance measure Burrows' Zeta (Burrows 2007) originally developed by John Burrows. For the calculation, the corpus to be analyzed is first divided into a target and a comparison partition. Then the document proportions are calculated for each feature in both partitions. To determine the Zeta values, the document proportions of the comparison partition are subtracted from those of the target partition. For the mathematical background of Zeta, see Schöch (2018).

16 Unlike Craig's Zeta, the Zeta values for Eder's Zeta are not calculated by subtraction, but based on the Canberra distance.

the *Canzonieri* since Petrarch compared to the love poetry written before, as illustrated by the contrastive analyses.

Table 2 Number of nouns and verbs preferred and avoided in the *Canzonieri* since Petrarch compared to the love poetry written before according to the contrastive analyses (A vs B vs C)

	A vs B		A vs C	
	Craigs's Zeta	Eder's Zeta	Craigs's Zeta	Eder's Zeta
Verbs preferred	23	20	85	94
Verbs avoided	88	62	114	138
Nouns preferred	89	83	205	205
Nouns avoided	73	48	104	96

The tendency in the *Canzonieri* since Petrarch to prefer nouns at the expense of verbs, which can be seen in the example of the contrastive analyses, is confirmed by the absolute word frequencies. This shows a comparison of the 1,000 most frequent words in the love poetry before Petrarch, his *Canzoniere*, and the *Canzonieri* written after Petrarch. Whereas the 1,000 most frequent words of the love poetry written before Petrarch include 256 verbs and 195 nouns, Petrarch's *Canzoniere* comprises 198 verbs and 261 nouns, and the *Canzonieri* since Petrarch include 176 verbs and 235 nouns. Table 3 summarizes the preference for nouns at the expense of verbs in the *Canzonieri* since Petrarch compared to the love poetry written before, as illustrated by the 1,000 most frequent words.

Table 3 Number of nouns and verbs in the *Canzonieri* since Petrarch compared to the love poetry written before according to the 1,000 most frequent words (A, B, C)

	Number of verbs	Number of nouns
A	256	195
B	198	261
C	176	235

The results of the contrastive analyses and the 1,000 most frequent words of each of the three parts of the corpus thus suggest that the *Canzonieri* since Petrarch prefer nouns at the expense of verbs. An examination of the preferred words revealed by the contrastive analyses shows that certain kinds of nouns are preferred, namely words which belong to one of the categories listed in Table 4.

While the first three groups confirm what research literature has already pointed out, groups four and five are astonishing. The nouns in group four allude to a corporal dimension in the *Canzonieri* since Petrarch. This confirms Paolo Rigo's thesis

Table 4 Groups of nouns preferred in the *Canzonieri* since Petrarch in contrast to the Italian love poetry written before (A vs B & C)

Number	Category	Examples
1	poetry/language	*rime, stile, versi*
2	fame	*lauro, fama, gloria*
3	soul/spirit	*anima, alma, aura*
4	body	*volto, piede, seno*
5	landscape	*erba, valli, colli*

that the motif of the body can be found various works by Petrarch (Rigo 2017). The predominance of this topic in the *Canzoniere* is however remarkable, not only because Laura dies in the course of the collection. It is also noteworthy since the simultaneous preference for nouns belonging to the semantic field of the soul/spirit on the one hand and the category of the body on the other adds to the dualistic structure that has been described as characteristic for Petrarch's conception of love (e.g. Regn 2013). This contrast of body and soul/spirit appears to be an important aspect in the later *Canzonieri*, as well. In this respect the present study confirms Stephan Leopold's thesis, whose psychoanalytic reading of Petrarchism indicates the relevance of the body as a motif in the works of seven European authors apart from Petrarch (Leopold 2009).

The fifth group of words, which emphasizes the role of the landscape in all *Canzonieri*, is equally notable. Studies have described the importance of the landscape in Petrarch's texts, although this is in a famous letter describing Petrarch's ascent of *Mont Ventoux*, rather than in his poems.[17] Yet in Petrarch's *Canzoniere* the landscape represents more than an earthly opposite of the idealized, heavenly Laura: as Elissa Tognozzi argues, the landscape in Petrarch's *Canzoniere* corresponds with the lyrical I's psychological and sentimental condition (Tognozzi 1998). The fact that nouns belonging to the semantic category of the landscape are among the preferred nouns in the *Canzonieri* since Petrarch, however, suggests that the relation between lyrical I, beloved and landscape may be a relevant motif of Italian Petrarchism in general.

Perhaps even more illuminating than the preferred words is the second aspect, the avoided ones. Among the latter there are surprisingly many variants of a notion that forms the basis of all love poetry: love, as the ratio of the preferred and avoided writing variants of *amore*/*amare* ('love/to love') in Table 5 shows.

17 For a study on the landscape in Petrarch's Canzoniere, see Stierle (1979); the critical review of that study in König (1980); Güntert (2012). For literature on Petrarch's ascent of Mont Ventoux, see e.g. Kablitz (1994); Pfeiffer (1997); Ulmer (2010, 34–47); Campana Comparini (2010); Behrens (2016). For contributions on Petrarch's conception of the landscape in general, see Luciani and Mosser (2009); Tosco (2011, 103–30).

Table 5 Avoided and preferred variants of *amore/amare* ('love/to love') according to the contrastive analyses

Analysis	Writing variants of *amore/amare* preferred	Writing variants of *amore/amare* avoided
A vs B, Craig's Zeta	0	8
A vs B, Eder's Zeta	1	5
A vs C, Craig's Zeta	0	8
A vs C, Eder's Zeta	0	7

According to the word list based on Craig's Zeta, compared to the love poetry written before, Petrarch's *Canzoniere* avoids eight variants and prefers none.[18] The situation is similar for Eder's Zeta (five variants avoided, one preferred).[19] A similar picture emerges for the *Canzonieri* written after Petrarch. In comparison to the love poetry written before Petrarch, according to Craig's Zeta eight variants are avoided and none is preferred,[20] and for Eder's Zeta seven are avoided and none is preferred. [21]

The results of the contrastive analyses thus indicate that the *Canzonieri* since Petrarch, one of the most important role models for love poetry in history, mostly avoid addressing their central theme literally: love. A comparison of the cumulative frequencies of the occurring variants of *amore/amare* ('love/to love') supports this finding (see Table 6).[22]

Table 6 Cumulative frequencies of the occurring variants of *amore/amare* x 100

Part	Total number of words	Absolute frequency	Relative frequency
A	161,270	1,398	0.866869226
B	69,773	187	0.268011982
C	435,367	1,560	0.358318384

Table 6 illustrates that the cumulative relative frequencies of the occurring variants of *amore/amare* ('love/to love') are considerably higher in the love poetry before Petrarch than in Petrarch's *Canzoniere* and in the *Canzonieri* after Petrarch. One possible explanation could be the highly personal dimension that characterizes Petrarch's *Canzoniere*. Through his preoccupation with his beloved Laura, the lyrical I also comes to terms

18 The variants avoided are: ama, amante, amanza, amare, amato, amo, amore, amoroso.
19 The variants avoided are: ama, amante, amare, amato, amo. The variant preferred is amorosi.
20 The variants avoided are: amante, amanti, amanza, amare, amato, amo, amorosa, amoroso.
21 The variants avoided are: amante, amanti, amare, amato, amo, amorosa, amoroso.
22 To determine the cumulative relative frequencies, the tool TXM was used.

with his own emotional state, so that the poetic description of his love for Laura leads to a profound exploration of his personal feelings (Geyer 2009; Wehle 2009). The lyrical I's feelings are verbalized by expressions that go beyond the semantic field of love in the literal sense, which could also explain the occurrence of words from the semantic fields of body and landscape (Tognozzi 1998).

4. Conclusion

The aim of this study was to find elements that make it possible to distinguish Petrarchistic texts from non Petrarchistic literature through quantitative stylistic analyses of a corpus of Italian poetry. These analyses lead to two main results. On the one hand, some aspects that were already described in research on Petrarchism could be confirmed: first, a preference for words which express pain and pleasure in the *Canzonieri* since Petrarch, contributing to a dichotomy fundamental for the concept of *dolendi voluptas*. Second, a predilection for expressions referring to sweetness, which can be regarded an allusion to the poetry of *Dolce Stil Novo*. Third, the existence of a group of preferred words with a spiritual connotation in all *Canzonieri* since Petrarch, implying the idealization of the beloved woman. Fourth, a preference for nouns that allude to poetry. On the other hand, some elements, which have received only little attention in the scholarly discourse about Italian Petrarchism so far, could be revealed. Regarding the parts of speech, the results show a predilection for nouns at the expense of verbs in all *Canzonieri* since Petrarch. The nouns preferred can be divided into five categories, two of which are notable, because they were only occasionally taken into account in the research literature on Italian Petrarchism: a group of expressions belonging to the semantic field of the human body and a number of words from the semantic field of the landscape. Moreover, and maybe most notably, the results of the contrastive analyses and the cumulative frequencies suggest that the *Canzonieri* since Petrarch mostly avoid using variants of the word 'love', which suggests that these texts tend to avoid addressing their fundamental theme directly.

In the future, it would be interesting to analyze later collections of poems considered Petrarchistic in contrast to poetry of the same time which is not, e.g. collections belonging to other poetic schools. Moreover, it would be enlightening to study potentially Petrarchistic literature in other languages. This would help to answer the question whether it is possible to distinguish diverse kinds of Petrarchism in different areas or time periods. Only a broad study of European poetry from different periods and in diverse languages can provide a clearer picture of Petrarch's impact on world literature and therefore a more comprehensive understanding of Petrarchism.

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