



Visualizing the *Fragmenta's* poetic systems

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Abstract

Digital tools offer new dimensions and additional contexts both in teaching and in researching Petrarch's *Rerum vulgarium fragmenta*, providing users with visual insights into his carefully planned work. The features of the *Petrarchive* (www.petrarchive.org) emphasize intentionally the physical and visual properties of Petrarch's poetry while offering the user a comprehensive view of the structure and content of the collection of 366 poems. This essay investigates these interactive visual representations of the material and spatial systems of the *Fragmenta* as a means to better understanding historical shifts in genre and form as well as Petrarch's anxieties about the sequencing of the poems in the *Fragmenta*. In so doing, the author elucidates the deep interaction between the digital code created to build the *Petrarchive's* visual indexes and remediate the original Medieval forms of the chartae on which the poems are written. The examples demonstrate that the interplay between the digital tool and Petrarch's poetic system offers rich meaning about thematic and figurative understandings of the *Fragmenta*.

When talking about Petrarch's *Rerum vulgarium fragmenta*, the connection between textual-material features of the handwritten manuscripts and its digital encoding exceeds the mere reproduction of the texts, allowing us to investigate the central role of the "indexicality" of its textual systems. Although they might seem like complete opposites, the physical materiality of the manuscript and the strip of digital code have a remarkably fertile interconnection. It is not surprising to talk about "code" both in terms of material literary production (*codex*) and in terms of the series of alphanumeric instructions used to represent a text on the web (code) (Magni 2016). Material philology and digital code share the basic issue of representation of texts, both on a theoretical and on a pragmatic basis: digital tools allow us not only to translate and display textual components, including scribal errors, erasures, marginalia and palimpsests, but also material and visual components, such as *mise en page* and *mise en text*, blank spaces and visual dynamics of the *charte*, both at a micro- and a macro-text level in order to represent features that have traditionally been overlooked by editors and to conduct searches for information and textual conditions that could otherwise not be retrieved. At times, the process of creating a digital code drives editors to re-think the dynamics of the texts themselves, as Marta Werner (2008) confesses about her work of digitally editing Emily Dickinson's letters: "I have tried to restore as far as possible their material integrity and to give readers unmediated (or, rather, **less mediated**) access to Dickinson's manuscripts as she left them. In so doing, *Radical Scatters* encourages **new investigations** into both the dynamics of Dickinson's compositional process and the play of autonomy and intertextuality in her late work." (30, emphasis added). This essay investigates the problem of space, genre and architecture of the

page in Petrarch's songbook proposing new and "less mediated" digital solutions adopted in building visual indexes for the *Petrarchine* (Storey, Walsh and Magni), a new rich-text digital edition combining different levels of visualization of the text: facsimile high-quality images of Vat.Lat.3195, its diplomatic transcriptions and edited forms.

The *Rerum vulgarium fragmenta* is an icon in the western literary tradition, yet it still presents problematic issues debated among scholars about its 'final' textual and material forms. Although we possess a partial holograph (Vaticano Latino 3195) in part transcribed by a copyist¹ and in part by the poet himself, we need to keep in mind that the *Fragmenta* was not finished at the time of Petrarch's death. Being the latest authorial witness of the songbook, Vaticano Latino 3195 is often erroneously considered the "original" and "final" form.² Its unbound gatherings, though, were probably still open to further modifications and experimentations. It is critical, therefore, to reflect on Petrarch's *Fragmenta* in terms of what it is and what it can still tell us after centuries of studies not only in terms of textual content (interpretation), but also in terms of the culture that produced it and the careful attention of the poet in the construction of the songbook as a book, and not just as a juxtaposition of 366 poems. As Storey noted:

la tenace rivendicazione di Petrarca dell'**integrità testuale** e i suoi metodi editoriali innovativi ne fanno uno dei protagonisti militanti della riforma culturale e letteraria del tempo, paladino tanto della tutela della **produzione 'fisica'** dei manoscritti, quanto del miglioramento della comprensibilità della scrittura e del testo. [...] la sua **inesausta ricerca della 'pagina perfetta'** derivava da un approccio all'oggetto-libro, materiale ed artistico insieme, fondato sull'armonia della carta e sull'armonia dell'intrecciarsi delle interrelazioni tra genere e forma, testo e *mise en page*" (131-2, emphasis added).

The study of the materiality of texts is not a mere philological practice but it entails deep cultural and historical considerations: material products are always a compromise between two (or even three) cultures, the one in which the work is created and the one that produces (and then re-produces) it for its transmission. Manuscripts and printed books are not simple containers, but cultural artifacts that are prepared and are themselves products of a historical interpretation.

In the case of Petrarch's *Fragmenta*, material and philological features are so authorially driven that we cannot disregard them while reading and interpreting its texts (Barolini 2007). It is certainly not a surprise to know how much the poet himself was involved in personally directing and then transcribing the songbook in its textual contents and in the material organization of the work as a whole. Main characteristics of his carefully structured poetics are 1) 31-line-per-*charta* canvas, strictly linked to the thematic integrity of each page; 2) multiple forms of indexicality and subsequent

¹ In a recent publication Monica Berté doubts about the identity of the copyist of Vat.Lat.3195, proposing to separate the historical figure of young Malpighini from that of Petrarch's scribe: this recent theory suggests the urge to question with a more historical approach the figure of the *Fragmenta's* copyist, an approach that can be addressed with the visual resources digital tools can offer.

² For a reflection on the implications of using the word "original" see Storey 2011.

simplicity of reading at each level of textual engagement; 3) transcriptional and organizational principles for the 31-canvas lines (first of all the four-sonnets-per-*charta* principle with sonnets transcribed over 7 transcriptional lines, two verses per line read horizontally, and second the sonnet-sestina *charta* with its contrasting two-column reading strategies, horizontal for sonnet and vertical for sestina); and 4) pivotal functionality of space both at a micro-text and at a macro-text level. Through a careful digital reconstruction, it is now possible to bring to the surface Petrarch's research of the "pagina perfetta" ("perfect page") and keep Petrarch's texts and their original cultural contexts at the center.

There are many moments in the process of encoding Petrarch's texts that pushed us to reflect upon and rethink the dynamics of the edition in the context of medieval manuscript production. The string of alphanumeric information used to build the digital code of Petrarch's *Fragmenta* (XML-TEI) translates to the machine not only the textual content but also philological, material and visual information creating an indissoluble link between object and related markup. Here is a brief example of the beginning of *charta* 1recto:

```
<pb n="charta 1 verso" facs="../images/vat-lat3195-f/vat-lat3195-f-001v.jpg" />
<lg xml :id="rvf005" type="sonnet" n="5">
  <lg type="octave">
    <lg type="dblvs" corresp="#canvasline">
      <l n="1"><hi rendition="#red #fs24pt">Q</hi><hi rendition="#small-caps">u</
      hi>ando io<choice><orig>mouo</orig><reg>movo</reg></choice> i sospiri a
      chiamar
      <choice><orig>uoi</orig><reg>voi</reg></choice><supplied>,</supplied></l>
      <l n="2"><choice><orig>El</orig><reg>E'l</reg></choice> nome che nel cor mi
      scrisse
      <choice><orig>amore</orig><reg>Amore</reg></choice>&v2c ;</l>
    </lg>[...]
```

In this basic strip of encoding, the tag <pb> indicates a page break including the facsimile image (facs="../images/vat-lat3195-f/vat-lat3195-f-001v.jpg") of *charta* 1verso (n="charta 1 verso") and is followed by the markup of the first line group (<lg>) transcribed on the same *charta*: sonnet *Rvf* 5 (type="sonnet" n="5"). Every single tag of the alphanumeric strip of encoding refers to and translates one specific textual, prosodic or visual component of the medieval manuscript: the *charta* is divided into multiple <lg> (line group) units: the first is a "sonnet" line group (*Rvf* 5). This fourteen-verse line group is then subdivided into two subsequent <lg>: octave (lg type="octave"),

the first four verses organized over four canvas lines (lg type="dblvr" correps="#canvasline"); and sestet (lg type="sestet"), the remaining six verses transcribed over two canvas lines (lg type="dblvr" correps="#canvasline"). The result of the transformation of the encoding onto the web page is a more authentic representation of Petrarch's editorial principles for which he worked restlessly for over a decade, supervising the copyist work first, and attempting to continue it later. The encoding, in fact, translates and renders the different levels of visualization and philologies of the text: photographic, diplomatic and edited, all visualized in their new digital form on the web page. Looking back at the actual encoding of *charta* 1verso, at a closer look it clearly signals the co-presence of these levels of representation: the high-definition image (<pb>), the diplomatic transcription (<orig> which stands for 'original') and the edited text (<reg> which stands for regularized). A simple strip of encoding like

```
<choice><orig>mouo</orig><reg>movo</reg></choice>
```

is telling the machine and therefore the user that in this moment of the text (*Rvf*5 line1) the original text in diplomatic transcription present the verb "mouo" which has been normalized by the *Petrarch* editors in the edited (and more modern) form "movo". The advantages of this born-digital approach are evident in both its simplicity and depth: transparency of encoding (ways of always tracing back the editorial decisions) and maintenance of medieval contexts, its material structures and a more modernized/accessible text.

In the digital representation of the textual and visual components of the *Fragmenta*'s poetics, the different kinds of indexes and accesses to the texts proposed by the *Petrarch* represent a clear example of how digital tools provide new ways of visualizing and investigating the dynamic relationships between genres and poems both at a micro- and at a macro-text level. The first and more 'traditional' way of accessing Petrarch's 366 poems is the textual index. A careful encoding and a digital platform allow the presence of hyperlinks directly connecting to the textual transcriptions of individual *chartae* and individual poems inside each of those *chartae*.

```
<body>
  <tr>
    <td><a href="content/c001r.xml#rvf001">1</a></td>
    <td>1r</td>
    <td><a href="content/c001r.xml#rvf001">Voi ch'ascoltate in rime sparse
    il suono</a></td>
    <td>Sonnet</td>
  </tr>
</body>
```

In the html encoding above, digitally translating the first entry of the textual index (*Rf1*), the html element `<tr>` signals the beginning and end of one line in which four child-elements `<td>` will be included: poem number (`<td>1</td>`), *charta* number (`<td>1r</td>`), first verse (`<td>Voi c'ascoltate...</td>`) and literary genre (`<td>Sonnet</td>`). Hyperlinks to the transcriptions of the specific poem (in this case the first sonnet, *Rf1*) are embedded both in the poem number and in the first line (html element `<a>`), so that users can easily navigate between the index and the textual transcriptions.

| Poem No. | Charta No. | First line | Genre |
|---------------------|------------|--|--------|
| Vatican Latino 3195 | | | |
| 1 | 1r | Voi ch'ascoltate in rime sparse il suono | Sonnet |

Figure 1. Portion of text index from [Petrarchivae](#): *Voi ch'ascoltate in rime sparse il suono* (*Rf1*).

The result on the screen is a traditional index allowing different points of navigation into the songbook. The encoding and flexibility of the digital medium also allow multiple reorientations of the index, sorting the 366 entries according to 1) poem number (corresponding to the material position of the poems in MS. Vat.Lat.3195), 2) first line (alphabetical order from A to Z and vice versa), 3) genre. But the true innovation of digital approaches is the possibility of new visual access to Petrarch's work. The *Petrarchivae* visual index offers indeed three ways of representation of the macrostructures of the 366 poems: 1) the whole manuscript in one single box (Fig.2); 2) all the *chartae* organized and visualized by *charta*, with the recto and verso side by side; 3) and organized by fascicles. In Fig. 2 below, the visual index shows the entirety of MS. Vat.Lat.3195 with its different layers of composition, its two hands of transcription – the copyist's in brown and Petrarch's in blue – its disposition of the different genres on the manuscript *charta*, and its distinctive use of space as a form of punctuation at multiple levels not only separating the potential never-completed collection in two parts, but also signaling crucial moments in the transcription:

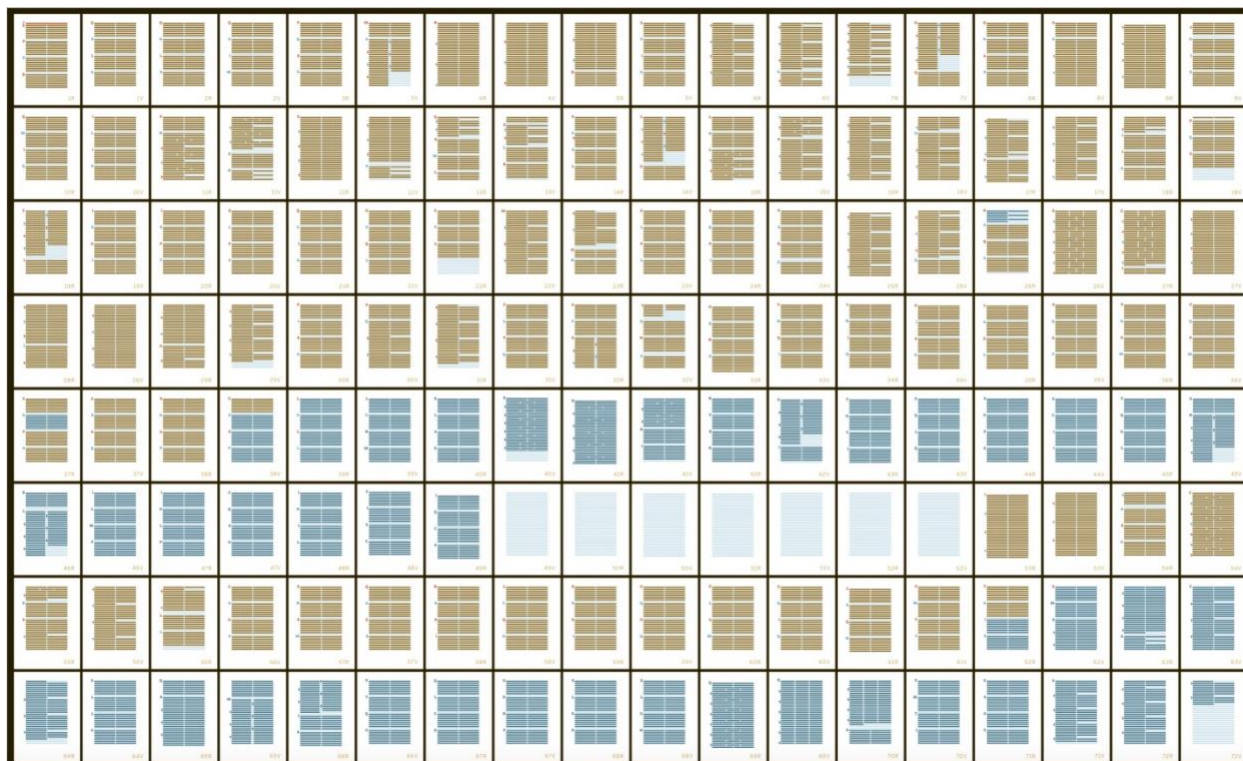


Figure 2. Petrarch's [visual index](#).

Through the multiple views of Petrarch's visual indexes, the user can experience graphic visualizations of the different genres recognizable without the need for reading textual transcriptions. It is easy to recognize, for example, all of the four sonnet *chartae* or the pairings sonnet-sestina clearly distinguishable by their respective characteristic transcriptional principles and the subsequent “blank” space signaling, for example, the line separating the consistent 7-line-sonnets or empty lines in the right column of sestina. The disposition of the genres on the manuscript façade in Petrarch's *Fragmenta* is, indeed, not accidental but it represents a carefully studied textual distribution on which the poet himself tirelessly worked for decades (Storey 1993, Brugnolo and Storey 2004). We possess a material proof of it in manuscript Vat.Lat.3196. An experimental workplace, Vat.Lat.3196 also contains drafts of poems with multiple authorial annotations and *marginalia*, revealing a constant process of revision, erasure and editing. For example, on c.07r the poet writes in the margin referring to sonnets *Per mirar Policleto* (Rvf77) and *Quando giunse a Simon* (Rvf78): “transcripti isti duo in ordine [...]”. The spatial references, defined by the expression *in ordine*, refer to the groupings of poems that Petrarch will later transcribe “in order” in the partial holograph 3195. In both physical places (3196 and 3195), poems included in a single *charta* are virtually linked by their physical position and by thematic or stylistic recurrences and progressions. The two sonnets dedicated to painter Martini, not only are copied “in ordine” but they also form a close grouping both for position and content. The materiality of texts and in particular the treatment of literary genres leads us to rethink about the graphic dynamics within documents and their intrinsic visual-cultural contexts.

The perception of literary genres changes throughout different historical times, also modifying the perception of their visual structures. If we think about the treatment of sonnets in the Middle Ages, including the *Fragmenta's* early manuscript tradition, we can immediately perceive the complex cultural connotations, especially if we compare them with the Renaissance treatment of the same genre. A dramatic symbol of the cultural transformation in the perception of literary genres in the transmission of Petrarch's *Fragmenta* is ms. Riccardiano 1108. Until c.26v, the manuscript reflects the conventional two-verses-horizontal reading for all genres, except the sestina. In the middle of c. 27r, in between the transcriptions of canzone *Perché la vita è breve* (Rvf71) and canzone *Gentil mia donna io veggio* (Rvf72), the copyist directly intervenes to signal his decision to switch to a more modern vertical reading transcription, as he signals in an annotation: "Non mi piace di piu seguire di scrivere nel modo che ò tenuto da quince a dietro, cioè di passare da l'uno colonnello all'altro; anzi intendo di seguire giu per lo cholonnello tanto che si compia la chançone o sonetto che sia." The copyist declares himself tired of following the Medieval traditional two-column-horizontal transcription – which he clearly feels far from his own cultural contexts - and emphatically announces the sudden change of direction with the shift to a vertical orientation of texts. The often-quoted episode emphatically establishes the cultural shift in the reading and transmission of the *Fragmenta*: a tendency which will be established in Renaissance copies and will prevail in the tradition of Petrarchan studies until nowadays.

In Petrarch's carefully and authorially planned textual and visual structures, the depth and role of genre and spatial distribution of the façade of each page can quickly be appreciated and further analyzed under a new digital light. The graphic "image" files are in fact XML text files in the Scalable Vector Graphics format (SVG), which contain the information necessary for the Web browser to reproduce the image.³ The digital SVG images created to represent the façade of the manuscript chartae in the digital reconstruction are simple and direct representations of Petrarch's material structures, with arrows signaling the directionality of the text distribution. On charta 3verso, for example, the user can easily distinguish the shift in directionality between the sonnet (horizontal) and the sestina (vertical):

³ Scalable Vector Graphics (SVG) is an XML-based vector image format used to create two-dimensional graphics with potential support for interactivity and animation. The SVG specification is an open standard developed by the [World Wide Web Consortium](http://www.w3.org/).

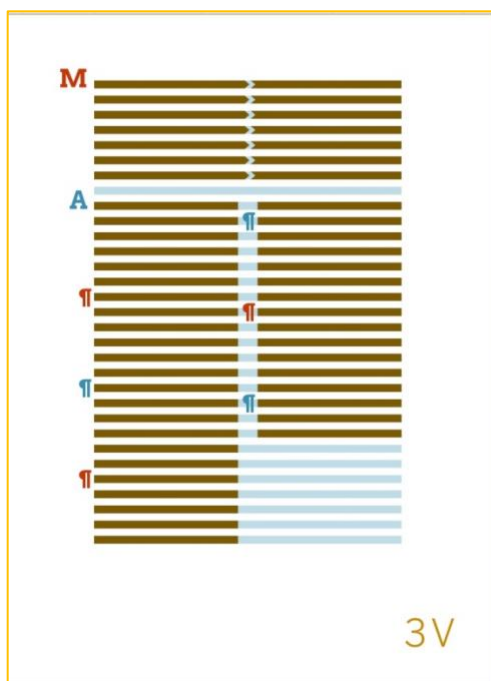
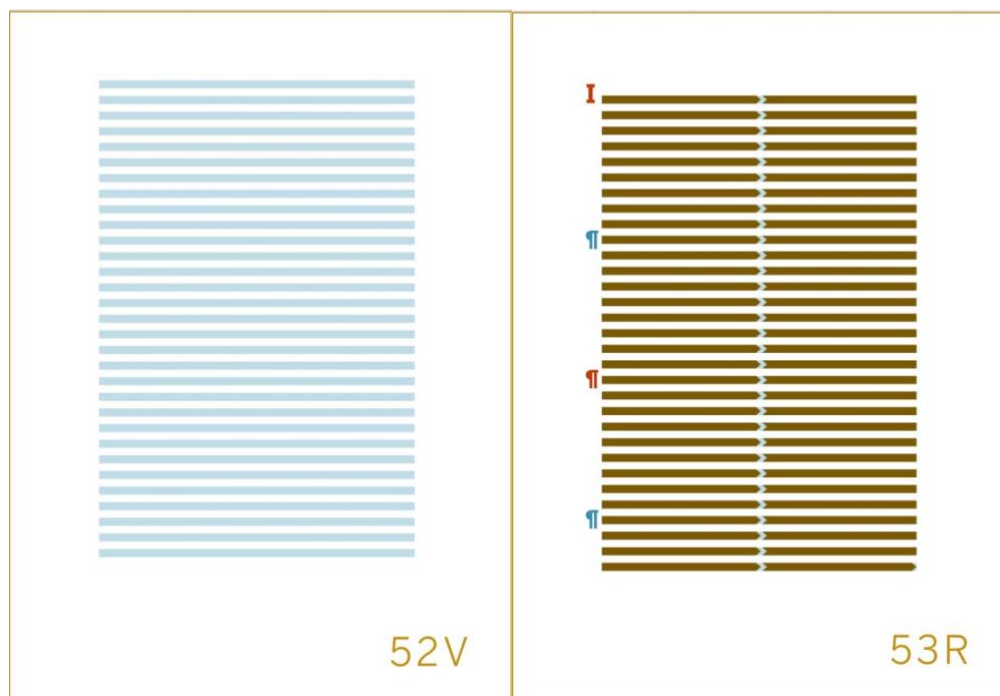


Figure 3. SVG image of c.3v (sonnet *Rvf* 21 *Mille fiata, o dolce mia guerriera* and sestina *Rvf* 22 *A qualunque animale alberga in terra*).

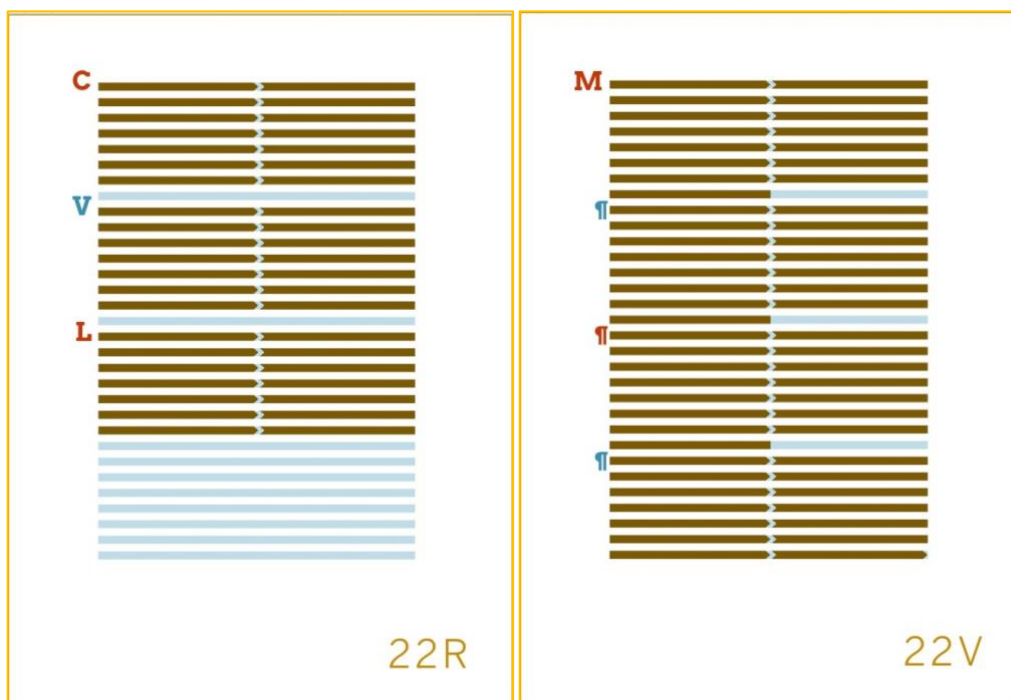
The visual index above (Fig.3) digitally reproduces fundamental features of the poetic systems of the page: alternating red and blue initials on the right of the text indentation signaling to the medieval reader (and now to the contemporary user) the beginning of new poems and functioning as a textual index; blank space serves as an additional punctuation device both in separating the two poems and in signaling the vertical reading strategy of the sestina with its partially blank right column (visible in light blue color in the graphic SVG images); and paragraph markers in the sestina offer additional visual indexicality indicating the vertical disposition of the text. The description of Petrarch's visual poetics embedded in the text encoding is therefore also represented in the *Petrarchive* visual indexes. Even from a brief look at the visual index of the entire songbook (see Fig.2 above), the nine pairings of sonnet-sestina present in the collection are immediately recognizable: once again, even before reading the textual content of the poems, the Medieval reader – and now the digital user – can collect a series of cultural information related to the genres and their material and visual treatments.

Petrarch's systematic use of space to create both division and unity in his collection has often been translated – especially in print editions, from the Renaissance on – into a new modernized reorganization of the texts and their collocation on the page. Given their potentials in terms of visualization and simultaneity, digital representations allow users to skip the print filter and to create a bridge between the culture that produced the work and the digital interface. The construction of the digital codex also forces editors to rethink and conceptualize the role of blank space in Petrarch's poetics. The poet's pivotal and often overlooked use of space is not a mere aesthetic issue, but at times it provides the very role and meaning of poems themselves. The most obvious and evident example is the unruled *charta* 52v, a “stop space” signaling a break between sonnet *Arbor victoriosa triumphale* (*Rvf* 263) and canzone *I' vo pensando* (*Rvf* 264).



Figures 4 and 5. SGV images of c.52v and 53r (canzone *I'vo pensando* -Rvf264).

While the ‘space’ for the initial “I” has been added outside the ‘text block’ in the left margin of the *charta*, the blank space in the previous façade (c.52v) signals a stop and a new beginning in the collection. While the previous *chartae* (cc. 49v-52r) are blank and ruled, therefore functioning as potential space maybe (but we are here in pure conjectural interpretation) for future additional (but actually never added) poems, c.52v remains unruled and therefore assumes a very different role: that of marking a “full stop” in the collection, a pause before the beginning of a new section. A further example of divisional stop space is represented by the eight blank transcriptional lines at the bottom of c.22r, in which Malpaghini leaves blank space between the sonnet *L'aspectata virtù* (Rvf104) and canzone *Mai non vo' più cantar com'io soleva* (Rvf105) to indicate a pause in the macro-text:



Figures 6 and 7. SGV images c.22r-v: stop-space announcing the beginning of *Rvf*105.

The stop space at the bottom of c.22r could have easily held the first 12 or even 14 verses of *Rvf*105. There are other instances in MS. Vat. lat. 3195, in fact, of a canzone's transcription beginning at the end of a *charta*, just as c. 24v's final lines which carry the first 12 verses of canzone *Una donna più bella assai che 'l sole* (*Rvf* 119), following three sonnets: *Pien di quella ineffabil dolcezza* (*Rvf*116), *Se 'l sasso* (*Rvf*117) and *Rimasi a dietro il sestodecimo anno* (*Rvf*118). The choice of leaving eight transcriptional lines blank, though, clearly signals a pause in the narrative and in the layout of the *charta*, a “full stop” transforming the following canzone into a poetic manifesto: the incipit and the content of *Mai non vo' più cantar com'io soleva* (Never again do I want to sing [poetry] as I used to) can only confirm that this is a crucial editorial shift in the poetics of the *Fragmenta*.

Blank space can also function as placeholder for postponed decisions. *Charta* 37r, for example, in which Malpaghini leaves a blank space and later Petrarch transcribes sonnet *Geri, quando talor meco s'adira* (*Rvf*179). It is not, therefore, space created by an erasure but a placeholder, which leaves the macrotext open for potential future additions while at the same time establishing material spatial limitations on the poem to be potentially added (a limitation determined by the number of transcriptional lines available). The very nature of the visual index provides a new digital “space” in which to investigate even further the spatial dynamics established by Petrarch in decades of interrupted work in composing, transcribing, editing erasing and calculating “ideal” forms and spaces of his songbook.

Visual indexes and digital representations also provide a new insight into the three temporal and spatial phases of preparation of Petrarch's unfinished partial holograph. The first project is revealed by the rubricated *chartae* transcribed by the copyist, set aside in 1367 when he abruptly left his service (see the visual index of Fig. 2 in brown: five quaternions [cc.1r-40v] in Part I and two

fascicles, one quaternion and one binion, in Part II [cc.53r-60v, cc.61r-62v and 71r-72v]). Next, we see Petrarch's continuation of the compilation process in an attempt of maintaining a fair copy (visual index in blue with colored initials: another quaternion [cc.41r-48v] in Part I and four more *chartae* [cc.59r-62v]) in Part II. Finally, the latest additions reveal what is by then a service and work copy (visual index in blue without colored initials: four *chartae* at the end of Part I [cc.49r-52v] and the last binion added [cc.69r-70v] with the transcription of canzone *Quel' antiquo mio dolce empio signore* [Rvf356 {revised360}]). The user can now clearly visualize these phases of Petrarch's assembling of the "book" and therefore further investigate an area of Petrarchan studies still very problematic: that of the genesis of the work. The late insertion of two binions within the last fascicle (cc.63r-66v and cc.67r-70v), for example, offers an occasion to rethink also the genesis of the text in terms of space and not only in terms of time. These insertions in the middle of the final quaternion entail the incorporation of additional poems before the concluding canzone *Vergine bella* (Rvf366), in a place where Petrarch was potentially still working around the time of his death, given the small numbers in the margin reordering the last 31 poems.

At the core of new digital methods is therefore a new orientation into Petrarch's material and visual poetics that he personally and consistently used to construct the layout of the entire work. Ironically, the digital code, through its interactive and simultaneous visualizations, seems to be the most suitable to display the essential dynamics of the *charta* and the material codex. The virtual representation on the web page of the different aspects of the *Fragmenta* - its textual and graphic, temporal and spatial components - allows scholars to rebuild the structural and visual principles implemented by Petrarch himself at the level of single *charta*, fascicles and macro-structures and therefore to repropose the poet's editorial choices, skipping the filter of print editions whose cultural mediations and interpretative variations have modified the way the text is visualized and therefore received and interpreted.

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