Metrical prodosy: A template-and CONSTRAINT approach to phonological phrasing in Italian. Based on the poetry of Giuseppe Ungaretti and Eugenio Montale
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3 Analysis of the Verse Data

3.0 Introduction

This chapter presents the analyses of the poetry of Montale and Ungaretti. The method of research outlined in the previous chapter will be applied now. The statistical analyses of the verse data provide us with a metrically defined norm for the phonological phrase on the one hand, and for the line of verse on the other. The chapter starts with the line typology characterizing the relevant poetry. Section 3.2, presents the analysis of the relationship between line type and prosodic parsing, and establishes the unmarked prosodic parsing for each line type on the basis of statistics. Section 3.3 discusses the differences between Nespor & Vogel's syntax-based prosodic parsings and perceptually determined prosodic parsings. Syntactic notions like branchingness, recursive side and head-complement sequence will be reconsidered in the light of perceptually determined prosodic parsings. Section 3.4 lists a series of phonological phenomena in favor of metrically-based prosodic phrasing. The final two sections, 3.5 and 3.6, deal with perceived parsings which appear to be prosodically marked, namely prosodic overparsing and prosodic underparsing. The phonological phrase as well as the line of verse may display prosodic overparsing/underparsing.

3.1 Line Typology

The corpus of analysis consists of well over 5000 lines of verse: specifically, 2744 lines of Montale, and 2565 lines of Ungaretti. On the basis of the syllable-count criteria set out in table 2.2 of the previous chapter, the line type of all the line instances has been established. The results of this syllable-count are presented in table 3.1. The absolute number of occurrences are given, as well as the corresponding percentages. The results pertaining to the poetry of Montale are presented in the rows on the left, and those of the poetry of Ungaretti on the right. The line typology ranges from the one-position line (\(\lambda=1\)) to the eighteen-positions line (\(\lambda=18\)). Lines longer than the \(\lambda=18\) do not occur in the corpus.
Histogram 1 and histogram 2 visualize the results of the syllable-count for Montale and Ungaretti, respectively. It needs to be noted that the numerical scales on the y-axis are not identical in the two histograms.

<table>
<thead>
<tr>
<th>Montale</th>
<th>number</th>
<th>%</th>
<th>Ungaretti</th>
<th>number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\lambda=1$</td>
<td>-</td>
<td>0</td>
<td>$\lambda=1$</td>
<td>8</td>
<td>0.3</td>
</tr>
<tr>
<td>$\lambda=2$</td>
<td>2</td>
<td>0.07</td>
<td>$\lambda=2$</td>
<td>50</td>
<td>1.9</td>
</tr>
<tr>
<td>$\lambda=3$</td>
<td>4</td>
<td>0.14</td>
<td>$\lambda=3$</td>
<td>181</td>
<td>7.0</td>
</tr>
<tr>
<td>$\lambda=4$</td>
<td>29</td>
<td>1.0</td>
<td>$\lambda=4$</td>
<td>152</td>
<td>5.9</td>
</tr>
<tr>
<td>$\lambda=5$</td>
<td>57</td>
<td>2.0</td>
<td>$\lambda=5$</td>
<td>254</td>
<td>9.9</td>
</tr>
<tr>
<td>$\lambda=6$</td>
<td>18</td>
<td>0.6</td>
<td>$\lambda=6$</td>
<td>150</td>
<td>5.8</td>
</tr>
<tr>
<td>$\lambda=7$</td>
<td>450</td>
<td>16.3</td>
<td>$\lambda=7$</td>
<td>559</td>
<td>21.7</td>
</tr>
<tr>
<td>$\lambda=8$</td>
<td>245</td>
<td>8.9</td>
<td>$\lambda=8$</td>
<td>94</td>
<td>3.6</td>
</tr>
<tr>
<td>$\lambda=9$</td>
<td>176</td>
<td>6.4</td>
<td>$\lambda=9$</td>
<td>299</td>
<td>11.6</td>
</tr>
<tr>
<td>$\lambda=10$</td>
<td>49</td>
<td>1.7</td>
<td>$\lambda=10$</td>
<td>37</td>
<td>1.4</td>
</tr>
<tr>
<td>$\lambda=11$</td>
<td>1438</td>
<td>52.4</td>
<td>$\lambda=11$</td>
<td>760</td>
<td>29.6</td>
</tr>
<tr>
<td>$\lambda=12$</td>
<td>90</td>
<td>3.2</td>
<td>$\lambda=12$</td>
<td>10</td>
<td>0.4</td>
</tr>
<tr>
<td>$\lambda=13$</td>
<td>55</td>
<td>2.0</td>
<td>$\lambda=13$</td>
<td>4</td>
<td>0.2</td>
</tr>
<tr>
<td>$\lambda=14$</td>
<td>61</td>
<td>2.2</td>
<td>$\lambda=14$</td>
<td>1</td>
<td>0.04</td>
</tr>
<tr>
<td>$\lambda=15$</td>
<td>45</td>
<td>1.6</td>
<td>$\lambda=15$</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>$\lambda=16$</td>
<td>14</td>
<td>0.5</td>
<td>$\lambda=16$</td>
<td>1</td>
<td>0.04</td>
</tr>
<tr>
<td>$\lambda=17$</td>
<td>9</td>
<td>0.2</td>
<td>$\lambda=17$</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>$\lambda=18$</td>
<td>3</td>
<td>0.1</td>
<td>$\lambda=18$</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>total</td>
<td>2744</td>
<td>100</td>
<td>total</td>
<td>2565</td>
<td>100</td>
</tr>
</tbody>
</table>

The histograms reveal some interesting correspondences as well as differences between the poetry of Montale on the one hand, and the poetry of Ungaretti on the other. One correspondence regards the hendecasyllable ($\lambda=11$) and septenarlium ($\lambda=7$): for both poets these canonical lines of the Italian poetic tradition are preferred over any other meter. The poets differ from each other regarding these meters insofar that the $\lambda=11$, percentage-wise, occurs twice as frequently in the poetry of Montale as in the poetry of Ungaretti. The picture that emerges when we compare the frequency
distribution of λ=11 on the one hand, and all the other line types on the other hand, shows the greater metrical variability employed by Ungaretti in contrast to Montale. In Montale, the number of λ=11 lines relates to the number of other lines as 1438:1307, while in Ungaretti, they relate as 760:1800. In addition, whereas Ungaretti demonstrates a preference for short and medial lines, i.e. from the λ=1 to the λ=11, Montale demonstrates a preference for medial and long lines, i.e. from the λ=7 to the λ=15.

The above line typology confirms the general observations concerning the poetics of Montale and Ungaretti. The poetry of Montale is said to be characterized by a meter that is *moderatamente libero* 'moderately free' (cf. Contini 1970), and the poetry of Ungaretti is said to be an example of *free verse* proper (cf. De Robertis 1945, Gargiulo 1958, Contini 1972, 1974, Beltrami 1991). In fact, a mixture of canonical and non-canonical line types is one of the criteria which Mengaldo (1989) argues should be used in deciding whether a poem is metrically bounded or free. The other two criteria are (a) absence ss. presence of structural rhyme schemes, and (b) absence ss. presence of dissimilar stanzas (Mengaldo 1989:562-3). Structural rhyme schemes are lacking in both corpora. Dissimilarity of stanzas, however, is much more pervasive in the poetry of Ungaretti than in the poetry of Montale.

However, the present thesis is not primarily aimed at a formal account of the versification principles employed by Montale and Ungaretti. These principles will be indirectly addressed when prosodic structures are related to specific line types. Especially the combination of relatively free verse forms with relatively bounded verse forms - a property of the selected poetry - is of interest where unmarked ss. marked prosodic phrasing is concerned.1 Obviously, the metrical variability of the poetry of Montale and Ungaretti, as shown by table 3.1 and histogram 1 and histogram 2, is reflected by specific linguistic structures. It is in the prosodic organization of these linguistic structures that we are interested.

### 3.2 Phonological Parsing of Verse Lines

As a next step, all verse lines have been parsed into phonological phrases by means of the Φ-formation algorithms proposed by Nespor & Vogel (1986).2 As mentioned in chapter 2, the output of Nespor & Vogel's Φ-restructuring algorithm, indicated by round brackets, is not statistically counted. Unrestructured Φ's are counted.3

The results of the syntax-based parsings on the one hand, and the perception-based parsings on the other, are confronted with the ideal metrical grid representation of the relevant line type. The analysis starts with the most frequently occurring line types, i.e. with the λ=11 and λ=7. Subsequently, phonological parsing of medial lines

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1 See chapter 9 for a formal account of these different verse forms.
2 The algorithms are given in section 2.1.1.
3 See section 2.4, in which I argued in favor of this counting.
(from $\lambda=8$ to $\lambda=10$), short lines (from $\lambda=1$ to $\lambda=6$) and long lines (from $\lambda=12$ to $\lambda=18$) is considered.

### 3.2.1 Default Parsing of $\lambda=11$ and $\lambda=7$ Lines

The $\lambda=11$ and the $\lambda=7$ are the most frequently occurring lines in the poetry of Montale and Ungaretti. As shown in table 3.1, 52.4% of all the lines in Montale, and 29.6% of all the lines in Ungaretti are $\lambda=11$ lines. The $\lambda=7$ occurs with a rate of 16.3% and 21.7% in Montale and Ungaretti, respectively. The histograms 3-6 depict the results of the NV-parsing with respect to both line types. They show that in both Montale and Ungaretti, the $\lambda=11$ is mainly parsed into 3-$\varphi$, and the $\lambda=7$ into 2-$\varphi$. Other parsings also occur: the $\lambda=11$ is minimally parsed into 1-$\varphi$ and maximally into 5-$\varphi$, and the $\lambda=7$ is minimally parsed into 0-$\varphi$ and maximally into 4-$\varphi$. These less frequently occurring NV-parsings will be discussed in the sections 3.5 and 3.6. At this point, I shall focus on the most frequently occurring, or unmarked parsings.

The parsings assigned by the listeners to the recorded subcorpus (PR-parsing) constitute an empirically based sample survey of the prosodic organization of the entire corpus of poetry. With respect to the $\lambda=11$, about 10% of the entire set of $\lambda=11$ lines were subjected to the perception task. As indicated by the shaded boxes in table 3.2 and table 3.3, most of the recorded $\lambda=11$ lines are perceived as containing...
three phrasal stresses. In other words, NV-parsing and PR-parsing coincide with respect to the unmarked parsing of the \( \lambda = 11 \). About 60% of the \( \lambda = 11 \) lines in Montale and Ungaretti contain three \( \varphi \)-stresses. In sum, the syntax-to-prosody mapping and the perception-based parsing give rise to the same unmarked phrasal prosodic output. They differ, however, with respect to the less unmarked parsings: the 2-\( \varphi \) parsing occurs more frequently in the PR-parsing than in the NV-parsing, and the 4-\( \varphi \) occurs less often in the PR-parsing than in the NV-parsing.

\begin{table}
\centering
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline
\( \lambda = 11 \) & 0-\( \varphi \) & 1-\( \varphi \) & 2-\( \varphi \) & 3-\( \varphi \) & 4-\( \varphi \) & 5-\( \varphi \) \\
\hline
\hline
NV & 1438 & 100 & - & - & 10 & 0.6 & 188 & 13.0 & 880 & 62.3 & 320 & 22.2 & 24 & 1.6 \\
PR & 168 & 11.7 & - & - & 2 & 1.1 & 46 & 27.3 & 114 & 67.8 & 6 & 3.5 & - & - \\
\hline
\end{tabular}
\caption{Number and proportion of NV/PR-parsings of \( \lambda = 11 \)}
\end{table}

\begin{table}
\centering
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline
\( \lambda = 11 \) & 0-\( \varphi \) & 1-\( \varphi \) & 2-\( \varphi \) & 3-\( \varphi \) & 4-\( \varphi \) & 5-\( \varphi \) \\
\hline
\hline
NV & 760 & 100 & - & - & 6 & 0.78 & 137 & 18.0 & 436 & 57.3 & 164 & 21.5 & 17 & 2.2 \\
\hline
\end{tabular}
\caption{Number and proportion of NV/PR-parsings of \( \lambda = 11 \)}
\end{table}

The unmarked parsing of \( \lambda = 11 \) lines is exemplified in (1) and (2), for Montale and Ungaretti, respectively. For the annotation conventions see Appendix B (or the inserted bookmark).

(1) a. NV: [alle dita]\( \varphi \) [non foglie]\( \varphi \) [mi si attorcono]\( \varphi \) M96:44
   PR: alle dita non foglie mi si attorcono
   on-the fingers not leaves me REFL "on my fingers, not leaves, [...] curls around me"

b. NV: [della mano]\( \varphi \) [additavi]\( \varphi \) [all'altra sponda]\( \varphi \) M125:5
   PR: della mano additavi all'altra sponda
   of-the hand pointed-2SG to-the other shore
   "of your hand tou pointed toward the [...] shore beyond"

c. NV: [Lo sai]\( \varphi \) [debbio riprenderli]\( \varphi \) [e non posso]\( \varphi \) M133:1
   PR: Lo sai: debbo riprenderli e non posso.
   It know-2SG: must-1SG lose-you and not can-1SG
   "You know: I must leave you again and I can't"

(2) a. NV: [Che spezza]\( \varphi \) [come nulla]\( \varphi \) [vecchie quercie]\( \varphi \) U172:8
   PR: Che spezza come nulla vecchie quercie,
   that cracks-3sg as nothing old oaks
   "That cracks old oaks as though they were nothing"

b. NV: [Come una fonte]\( \varphi \) [nell'ombra]\( \varphi \) [dormire]\( \varphi \) U172:16
   PR: Come una fonte nell'ombra, dormire
   as a fountain in-the shade sleep-INF
   "Like a fountain in the shade, to sleep!"
The φ-stresses in both the NV and PR representations in (1) and (2) correspond to lexical items which constitute heads of maximal projections: *dita, foglie, mano, sponda, nulla, quercie, fonte, ombra, mani and soffio* are heads of NP's, while *atarono, additavi, sai, riprendersi, poio, spezzò, dormire and fanno* are heads of VP's. The few lexical items that are not associated with a φ-stress, i.e. *altra in (1b), debbo in (1c) and vecchie in (2a)*, constitute, in Nespor & Vogel's terminology, modifiers which occur on the nonrecursive side of their head. As shown by the PR-parsings, these modifiers are indeed not perceived as being realized with phrasal stress. Furthermore, we observe that no grammatical item is associated with phrasal stress. That is, all grammatical items are prosodically dependent on the lexical item to their right. In sum, NV-parsing and PR-parsing give rise to the same prosodic output with respect to the above lines.

Turning to the λ=7, we find the same correspondences. Table 3.4 and table 3.5 illustrate that the λ=7 in both Montale and Ungaretti is mainly parsed into two φ's. That is, this line type is characterized by the presence of two NV/PR φ-stresses. About 70% of the NV-parsings, and well-over 60% of the PR-parsings show this pattern.

<table>
<thead>
<tr>
<th>M(λ=7)</th>
<th>0-φ</th>
<th>1-φ</th>
<th>2-φ</th>
<th>3-φ</th>
<th>4-φ</th>
<th>5-φ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>nr</td>
<td>%</td>
<td>nr</td>
<td>%</td>
<td>nr</td>
<td>%</td>
</tr>
<tr>
<td>NV</td>
<td>450</td>
<td>100</td>
<td>50</td>
<td>11.1</td>
<td>345</td>
<td>76.7</td>
</tr>
<tr>
<td>PR</td>
<td>30</td>
<td>67</td>
<td>9</td>
<td>30.0</td>
<td>19</td>
<td>63.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>U(λ=7)</th>
<th>0-φ</th>
<th>1-φ</th>
<th>2-φ</th>
<th>3-φ</th>
<th>4-φ</th>
<th>5-φ</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>nr</td>
<td>%</td>
<td>nr</td>
<td>%</td>
<td>nr</td>
<td>%</td>
</tr>
<tr>
<td>NV</td>
<td>559</td>
<td>100</td>
<td>2</td>
<td>0.35</td>
<td>110</td>
<td>19.6</td>
</tr>
<tr>
<td>PR</td>
<td>49</td>
<td>88</td>
<td>-</td>
<td>-</td>
<td>11</td>
<td>22.4</td>
</tr>
</tbody>
</table>

Consider the examples in (3) and (4) from Montale and Ungaretti, respectively.

(3) a. NV: [Le tue mani]φ [si fanno]φ [come un soffio]φ
PR: Le tue mani si fanno come un soffio
the your hands REFL make as a breath
'Your hands become a breath'
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3. NV: [(idei bambu)]ₚ [mormoranti]ₚ M96:27⁴
   PR: dei bambu] mormoranti.
       'of the bamboo whispering'

   PR: Le m ani] come foglie
       'hands like leaves'

b. NV: [E il dondolio]ₚ [dolcissimi]ₚ U185:11
   PR: E il dondolio], dolcissimi],
       'And the swaying, softest'

Again, lexical heads of maximal projections only constitute heads of ϕ's: grigia, bambi, manti, foglie and dondolio are heads of NP's, romper is the head of a VP, and mormoranti and dolcissimi are heads of AP's. All grammatical words are prosodically dependent on these ϕ-heads. In contrast to the λ=11 lines considered above, the λ=7 lines do not contain lexical items which function as modifiers. That is, in addition to the two ϕ-heads, there are no lexical items which do not surface with phrasal stress. Notice that (3b) exemplifies a prosodic sequence that falls within the scope of NV's ϕ-restructuring algorithm: mormoranti is the first, and non-branching complement of the noun bambi. The recorded reading gives rise to a non-restructured parsing, however. That is, both head and complement are perceived as being realized with phrasal stress.

In the next section, the unmarked NV/PR parsings of the λ=11 and the λ=7 will be compared with the metrical grid representations of these line types.

3.2.2 Metrical Line Grids of λ=11 and λ=7 Lines

Metrical prototypes of lines are based on the ideal setting of a strictly binary alternation. A binary alternation is the most compact form of a metrical grid representation (cf. Prince 1989). Prototype line grids should not be interpreted, however, as constituting the actual representation of the poetry of Montale and Ungaretti. Actual realization of the line types in these corpora may deviate considerably from a binary alternating pattern. Line grids only serve to establish how many stresses, and of what degree, will ideally arise in a string of metrical positions, assuming that binary alternation is pervasive. As argued in section 2.3.2, the line grids

⁴ In standard orthography, bambi is written with a diacritic to indicate that the final vowel is stressed. In order to avoid confusion between orthographic diacritics and prosodically assigned diacritics, the examples in the present work lack the orthographic ones. In case lexical distinction is at stake, as between a 'and' and 'and' ϕ, or da 'he gives', phonetic symbols are used and/or the context has to provide sufficient information.

⁵ In section 3.5, I present some λ=7 lines which contain three, instead of two lexical items.
of Italian meters are constructed from the final strong-weak sequence of the line to the left edge of the line. The line grids have as many levels as necessary in order to reflect throughout binary alternation.

The prototype line grids of the $\lambda=11$ and $\lambda=7$ are shown in (5).6

(5)  

a. Line Grid $\lambda=11$

```
  x x x x x x x x x x  1 2 3 4 5 6 7 8 9 10 11
```

b. Line Grid $\lambda=7$

```
  x x x x x  1 2 3 4 5 6 7
```

Thus, line grid $\lambda=11$ contains eleven level-1 positions, of them two with level-2, one with level-3, one with level-4 and one with level-5 stress. Line grid $\lambda=7$, by contrast, contains seven level-1 positions, of them one with level-2, one with level-3 and one with level-4 stress. In other words, the $\lambda=11$ requires one metrical grid level more than the $\lambda=7$ in order to reflect strictly binary alternation.

Assuming with Liberman & Prince (1977), Prince (1983), Selkirk (1984a), Hayes (1984), Nespor & Vogel (1989), and many others, that metrical grids represent the rhythmic organization of prosodic constituents, I shall now compare the above line grids with the results of the unmarked NV and PR parseings of the $\lambda=11$ and $\lambda=7$ lines. The unmarked parseings give rise to three $\phi$-stresses in the $\lambda=11$, and to two $\phi$-stresses in the $\lambda=7$. Level-3 in both line grid $\lambda=11$ and line grid $\lambda=7$ has exactly two grid marks, respectively. Henceforth, in the unmarked case, level-3 of the line grids coincides with the phonological phrase level of the prosodic hierarchy:

(6)  

a. Line Grid $\lambda=11$

```
  x x x x x x x x x x  1 2 3 4 5 6 7 8 9 10 11
```

6 Traditionally, the $\lambda=11$ is said to have either an a meno or an a meno pattern: in addition to the main position, either the sixth or the fourth position of the meter is strong (cf. Elwert 1973, Di Girolamo 1978, Beltrami 1990).
By analogy, the remaining grid positions can also be replaced by the head nodes of prosodic constituents. The lowest grid level coincides most uncontroversially with the prosodic constituent level of the syllable (cf. Nespor & Vogel 1989). Level-2 of the grid coincides then with the prosodic constituent level of either the foot or the prosodic word, and level-4 and level-5, with those of the intonational phrase and phonological utterance, respectively:

(7) a. \( \text{Line Grid } \lambda=11 \)

\[
\begin{array}{cccccccc}
\varnothing & \varnothing & \Sigma / \omega & \Sigma / \omega & \Sigma / \omega & \Sigma / \omega & \Sigma / \omega & \Sigma / \omega \\
\sigma & \sigma & \sigma & \sigma & \sigma & \sigma & \sigma & \sigma & \sigma & \sigma & \sigma
\end{array}
\]

1 2 3 4 5 6 7 8 9 10 11

b. \( \text{Line Grid } \lambda=7 \)

\[
\begin{array}{ccccccc}
\varnothing & \varnothing & \Sigma / \omega & \Sigma / \omega & \Sigma / \omega & \Sigma / \omega \\
\sigma & \sigma & \sigma & \sigma & \sigma & \sigma & \sigma
\end{array}
\]

1 2 3 4 5 6 7

In regard to level-3, three observations can be made in relation to \( \varnothing \)-stresses on the one hand, and line type on the other. Firstly, the line grids show that \( \varnothing \)-stresses are separated from each other by three level-1 positions. Hayes' (1984) Quadriryllabic Rule, formulated on the basis of the analysis of the rhythmic organization of English, precisely matches this pattern:

(8) Quadriryllabic Rule (Hayes 1984:46)

A grid is eurhythmic when it contains a row whose marks are spaced close to four syllables apart.

Secondly, by dividing the number of positions of a line type by the number of \( \varnothing \)-stresses we get the following measures: eleven positions divided by three amounts to three groups of which two contain four positions and one three positions; and seven

---

7 See section 2.3.1 for the assumed one-to-one correspondence between metrical position and syllable.
positions divided by two amounts to two groups of which one contains four positions and one three positions:

\[(9)\]
a. \[11/3: 3+4+4, 4+3+4, 4+4+3\]
b. \[7/2: 3+4, 4+3\]

Thirdly, the strong-weak sequence characterizing the right edge of the Italian line types favors a grouping of either three or four positions of which the penultimate position is realized with \(\varphi\)-stress:

\[(10)\]

\[
\begin{array}{c}
\varphi \\
x \\
X \\
x \\
X \\
X \\
x \\
X \\
X \\
x \\
\end{array}
\]

The combination penultimate strong on the one hand, and three weak positions between two strong positions on the other, strongly argues in favor of the four positions pattern in (10a) as being the most unmarked form of the \(\varphi\). Substituting the \(x\) positions by prosodic constituent nodes, we get the unmarked, or default \(\varphi\) form in (11).

\[(11)\] Default \(\varphi\) Form

\[
\begin{array}{c}
\varphi \\
\Sigma/\omega \\
\sigma \\
\sigma \\
\sigma \\
\end{array}
\]

In section 3.4, I return to the internal prosodic organization of the default \(\varphi\). For the time being, I refer to (10a), i.e., to a \(\varphi\) containing four metrical positions of which the first one bears level-2 stress and the third one level-3, or phrasal stress. This Default \(\varphi\) Form provides us with a metric to evaluate the prosodic parsings of line types other than \(\lambda=11\) and \(\lambda=7\).

3.2.3 Default Parsing of Medial Lines (from \(\lambda=8\) to \(\lambda=10\))

As indicated in table 3.1, the corpus of analysis contains about 17% of line types which range from \(\lambda=8\) to \(\lambda=10\). The distribution of these line types, to which I refer as medial line types, is almost identical in the two corpora. On the basis of the unmarked prosodic parsing of \(\lambda=7\) on the one hand, and \(\lambda=11\) on the other, we may

---

8 In fact, taking the three positions sequence in (10b) to be the most unmarked sequence, we expect the \(\lambda=11\) to be parsed into four \(\varphi\)'s instead of three \(\varphi\)'s. Eleven positions divided by as many three-position sequences as possible gives rise to four groups of which three with three positions and one with two positions: 2+3+3+3.
assume that the unmarked prosodic parsing from $\lambda=8$ up to $\lambda=10$ gradually increases from two $\Phi$-stresses to three $\Phi$-stresses. Consider the tables below.9

### Table 3.6. Number and proportion of NV/PR-parsings of $M/\lambda=8$

<table>
<thead>
<tr>
<th>$M(\lambda=8)$</th>
<th>0-$\Phi$</th>
<th>1-$\Phi$</th>
<th>2-$\Phi$</th>
<th>3-$\Phi$</th>
<th>4-$\Phi$</th>
<th>5-$\Phi$</th>
</tr>
</thead>
<tbody>
<tr>
<td>NV</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
</tr>
<tr>
<td>PR</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
</tr>
</tbody>
</table>

### Table 3.7. Number and proportion of NV/PR-parsings of $U/\lambda=8$

<table>
<thead>
<tr>
<th>$U(\lambda=8)$</th>
<th>0-$\Phi$</th>
<th>1-$\Phi$</th>
<th>2-$\Phi$</th>
<th>3-$\Phi$</th>
<th>4-$\Phi$</th>
<th>5-$\Phi$</th>
</tr>
</thead>
<tbody>
<tr>
<td>NV</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
</tr>
<tr>
<td>PR</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
</tr>
</tbody>
</table>

### Table 3.8. Number and proportion of NV/PR-parsings of $M/\lambda=9$

<table>
<thead>
<tr>
<th>$M(\lambda=9)$</th>
<th>0-$\Phi$</th>
<th>1-$\Phi$</th>
<th>2-$\Phi$</th>
<th>3-$\Phi$</th>
<th>4-$\Phi$</th>
<th>5-$\Phi$</th>
</tr>
</thead>
<tbody>
<tr>
<td>NV</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
</tr>
<tr>
<td>PR</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
</tr>
</tbody>
</table>

### Table 3.9. Number and proportion of NV/PR-parsings of $U/\lambda=9$

<table>
<thead>
<tr>
<th>$U(\lambda=9)$</th>
<th>0-$\Phi$</th>
<th>1-$\Phi$</th>
<th>2-$\Phi$</th>
<th>3-$\Phi$</th>
<th>4-$\Phi$</th>
<th>5-$\Phi$</th>
</tr>
</thead>
<tbody>
<tr>
<td>NV</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
</tr>
<tr>
<td>PR</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
</tr>
</tbody>
</table>

### Table 3.10. Number and proportion of NV/PR-parsings of $M/\lambda=10$

<table>
<thead>
<tr>
<th>$M(\lambda=10)$</th>
<th>0-$\Phi$</th>
<th>1-$\Phi$</th>
<th>2-$\Phi$</th>
<th>3-$\Phi$</th>
<th>4-$\Phi$</th>
<th>5-$\Phi$</th>
</tr>
</thead>
<tbody>
<tr>
<td>NV</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
</tr>
<tr>
<td>PR</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
</tr>
</tbody>
</table>

### Table 3.11. Number and proportion of NV/PR-parsings of $U/\lambda=10$

<table>
<thead>
<tr>
<th>$U(\lambda=10)$</th>
<th>0-$\Phi$</th>
<th>1-$\Phi$</th>
<th>2-$\Phi$</th>
<th>3-$\Phi$</th>
<th>4-$\Phi$</th>
<th>5-$\Phi$</th>
</tr>
</thead>
<tbody>
<tr>
<td>NV</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
</tr>
<tr>
<td>PR</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
<td>nr</td>
</tr>
</tbody>
</table>

Like $\lambda=7$, the unmarked parsing of $\lambda=8$ gives rise to two $\Phi$-stresses. Both the NV-parsing and PR-parsing coincide. In comparison with $\lambda=7$, a slight decrease in the occurrence of 2-$\Phi$ stresses can be observed, however: from 76.7% of two NV-$\Phi$'s in

---

9 Histograms illustrating NV-parsings of line types other than $\lambda=7$ and $\lambda=11$ are presented in Appendix C. The tables presenting number and proportions of NV/PR parsings of all line types are listed in Appendix D.
M/\lambda=7 to 59.5% in M/\lambda=8, and from 68.1% of two NV-\varphi's in U/\lambda=7 to 56.3% in U/\lambda=8. The PR-parsings confirm this decrease in the case of Montale (from 63.3% to 59.5%). In Ungaretti, by contrast, the reverse is observed, i.e. a slight increase of two \varphi-stresses in \lambda=8 with respect to \lambda=7: from 63.2% to 66.7%.

As for \lambda=9, it is striking that the most-occurring NV-parsing and most-occurring PR-parsings do not coincide. While the syntax-to-prosody mapping identifies the 3-\varphi as the unmarked parsing (55.1% in M/\lambda=9, and 47.4% in U/\lambda=9), the perception-based parsing identifies the 2-\varphi as the unmarked parsing (57.8% in M/\lambda=9, and 66.7% in U/\lambda=9).

Like the unmarked prosodic-parsing of \lambda=9, the NV-parsing and PR-parsing of \lambda=10 do not coincide: while NV-parsing gives rise to 3-\varphi, PR-parsing gives rise to 2-\varphi as well as 3-\varphi as the unmarked prosodic pattern.

Consider the examples in (12)-(14), which illustrate the unmarked parsings of \lambda=8, \lambda=9 and \lambda=10, respectively.

(12) a. NV: ([sul mio capo]\varphi [reclinato]\varphi)  
PR: sul mio capo reclinato  
\textquoteleft above my bent head\textquoteright
b. NV: (E mentre scoppiò]\varphi [di brama]\varphi.)  
PR: E] mentre scoppiò di brama,  
\textquoteleft and while burst-1SG of longing\textquoteright

(13) a. NV: [Meriggia]\varphi [pallido]\varphi [e assorto]\varphi  
PR: Meriggia| pallido e assorto  
\textquoteleft to laze-at-noon pale and thoughtful\textquoteright
b. NV: [Cogli occhi]\varphi [caduti]\varphi [in oblio]\varphi,  
PR: Cogli occhi| caduti in oblio,  
\textquoteleft with-the eyes fallen in oblivion\textquoteright

(14) a. NV: [ascolta re]\varphi [tra i pruni]\varphi [e gli sterpi]\varphi  
PR: ascoltare tra i pruni e gli sterpi  
\textquoteleft to listen, in brambles and brake\textquoteright
b. NV: [abbandonato]\varphi [in questa dolina]\varphi  
PR: abbandonato in questa dolina  
\textquoteleft left-alone in this ravine\textquoteright

The relevant ideal line grids are presented below.
ANALYSIS OF THE VERSE DATA

(15) a. Line Grid \( \lambda = 8 \)

\[
\begin{array}{ccccc}
     & x & & & \\
level-4 & x & & \\
level-3 & x & & \\
level-2 & x & x & x & x \\
level-1 & x & x & x & x & x \\
1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \\
\end{array}
\]

b. Line Grid \( \lambda = 9 \)

\[
\begin{array}{ccccc}
     & x & & & \\
level-4 & x & & \\
level-3 & x & & \\
level-2 & x & x & x & x \\
level-1 & x & x & x & x & x \\
1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 \\
\end{array}
\]

c. Line Grid \( \lambda = 10 \)

\[
\begin{array}{ccccc}
     & x & & & \\
level-5 & x & & \\
level-4 & x & & \\
level-3 & x & x & x & x \\
level-2 & x & x & x & x & x \\
level-1 & x & x & x & x & x & x \\
1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 & 9 & 10 \\
\end{array}
\]

On the basis of the previously observed correspondence between level-3 of line grids \( \lambda = 7 \) and \( \lambda = 11 \) on the one hand, and the level of the \( \phi \) on the other, I assume the same correspondence with respect to the medial line types. This correspondence amounts to an unequivocal confirmation of the unmarked parsing of \( \lambda = 8 \): level-3 of line grid \( \lambda = 8 \) contains exactly two grid marks. With respect to \( \lambda = 9 \), by contrast, the line grid favors the unmarked PR-parsing, and not the unmarked NV-parsing; while level-3 contains exactly two grid marks, in accordance with the two \( \phi \)-stresses in the PR-parsing, there is no grid level containing exactly three grid marks, as required by the three \( \phi \)-stresses in the NV-parsing. With respect to \( \lambda = 10 \), level-3 of the line grid contains three grid marks. As stated previously, the unmarked NV-parsing of \( \lambda = 10 \) indeed gives rise to three \( \phi \)-stresses. The PR-parsing fluctuates between two and three \( \phi \)-stresses.

Consequently, the unmarked \( \phi \)'s of the medial line types are shaped as follows:

(16) a. \( 8/2 \) (NV/PR): 4+4

b. \( 9/2 \) (PR): 5+4, 4+5

9/3 (NV): 3+3+3

c. 10/2 (PR): 5+5

10/3 (NV/PR): 3+3+3, 3+4+3, 4+3+3

In other words, the unmarked \( \phi \) form in the medial line types either equals or approximates the Default \( \phi \) Form. Of interest is the fact that the PR-parsing contains larger intervals between two \( \phi \)-stresses than the NV-parsing, with respect to \( \lambda = 9 \) and \( \lambda = 10 \).
Summarizing, medial line types are parsed according to expectations: the number of φ-stresses gradually increases from two φ-stresses in \( \lambda=8 \) to three φ-stresses in \( \lambda=10 \). In addition, the Default φ Form which is defined on the basis of the analysis of \( \lambda=7 \) and \( \lambda=11 \), also proves to be the default form in the medial line types. A slight asymmetry is observed between the NV-parsing and the PR-parsing: while the former gives rise to smaller stress intervals, the latter gives rise to larger stress intervals in case the number of positions making up a line type cannot be divided into integral sequences of four positions only. Furthermore, in the case of unmarked prosodic parsing, Nespor & Vogel's syntax-based approach to phonological phrasing is empirically confirmed by the perception-based parsings: (a) lexical heads of maximal projections surface as φ-heads, (b) specifiers as well as modifiers occurring on the nonrecursive side of heads of maximal projections are prosodically dependent on this φ-head.

### 3.2.4 Default Parsing of Short Line Types

By short line types I mean lines ranging from the \( \lambda=1 \) to the \( \lambda=6 \). As indicated in table 3.1, in Montale there are 90 instances of short lines, and in Ungaretti 795 instances. Regarding the overall distribution of line types in the two databases, about 4% of the lines in Montale and about 30% of the lines in Ungaretti are short lines. In other words, the metrical practices of the two poets differ remarkably in this respect.10

The unmarked prosodic parsing of short line types displays tendencies which align with the tendencies discussed above: the number of φ-stresses and number of metrical positions are proportionally related to one another. That is, a decrease in metrical positions amounts to a decrease in φ-stresses: from two φ-stresses in the \( \lambda=6 \), to one φ-stress in the \( \lambda=5 \), \( \lambda=4 \), \( \lambda=3 \) and \( \lambda=2 \), and to zero φ-stress in Ungaretti's \( \lambda=1 \). Consider tables 3.12-3.22, which present the results of the NV/PR-parsing. It should be noted that the recorded subcorpus of Montale contains an extremely low number of short line types. That is, PR-parsings are virtually absent.

#### Table 3.12. Number and proportion of NV/PR-parsings of M/\( \lambda=6 \)

<table>
<thead>
<tr>
<th>( \lambda=6 )</th>
<th>0φ</th>
<th>1φ</th>
<th>2φ</th>
<th>3φ</th>
<th>4φ</th>
<th>5φ</th>
</tr>
</thead>
<tbody>
<tr>
<td>( M )</td>
<td>nt</td>
<td>%</td>
<td>nt</td>
<td>%</td>
<td>nt</td>
<td>%</td>
</tr>
<tr>
<td>NV</td>
<td>18</td>
<td>100</td>
<td>6</td>
<td>33.3</td>
<td>12</td>
<td>66.6</td>
</tr>
<tr>
<td>PR</td>
<td>1</td>
<td>66</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

10 Regarding the analyzed œuvres of Montale, i.e. *Ossi di seppia* and *Le occasioni*, there are no notable differences where the distribution of short lines is involved. Regarding the analyzed œuvres of Ungaretti, in contrast, in particular Ungaretti's first work *L’Allégria* is characterized by the presence of these short lines. At this place, it is not my intention to present data in relation to distinct works, but see among others De Robertis (1945), Gargiulo (1958), Genot (1972), Ossola (1975), Cambon (1976), Contini (1972, 1974), Bärbeli Squarotti (1981) and Bo et al. (1981) for analyses in which the different periods of Ungaretti's poetics are taken into account. Short lines also occur in works successive to *L’Allégria*, however.
**Table 3.13. Number and proportion of NV/PR-varsiMS of U/\(\lambda=6\)**

<table>
<thead>
<tr>
<th>M((\lambda=6))</th>
<th>0-(\Phi)</th>
<th>1-(\Phi)</th>
<th>2-(\Phi)</th>
<th>3-(\Phi)</th>
<th>4-(\Phi)</th>
<th>5-(\Phi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NV</td>
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<td></td>
<td></td>
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<tr>
<td>PR</td>
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</tr>
</tbody>
</table>

**Table 3.14. Number and proportion of NV/PR-varsiMS of M/\(\lambda=5\)**

<table>
<thead>
<tr>
<th>M((\lambda=5))</th>
<th>0-(\Phi)</th>
<th>1-(\Phi)</th>
<th>2-(\Phi)</th>
<th>3-(\Phi)</th>
<th>4-(\Phi)</th>
<th>5-(\Phi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PR</td>
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</tr>
</tbody>
</table>

**Table 3.15. Number and proportion of NV/PR-varsiMS of M/\(\lambda=5\)**

<table>
<thead>
<tr>
<th>U((\lambda=5))</th>
<th>0-(\Phi)</th>
<th>1-(\Phi)</th>
<th>2-(\Phi)</th>
<th>3-(\Phi)</th>
<th>4-(\Phi)</th>
<th>5-(\Phi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NV</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>PR</td>
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</tbody>
</table>

**Table 3.16. Number and proportion of NV/PR-varsiMS of M/\(\lambda=4\)**

<table>
<thead>
<tr>
<th>M((\lambda=4))</th>
<th>0-(\Phi)</th>
<th>1-(\Phi)</th>
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<th>3-(\Phi)</th>
<th>4-(\Phi)</th>
<th>5-(\Phi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NV</td>
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<td></td>
<td></td>
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<tr>
<td>PR</td>
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</tbody>
</table>

**Table 3.17. Number and proportion of NV/PR-varsiMS of U/\(\lambda=4\)**

<table>
<thead>
<tr>
<th>U((\lambda=4))</th>
<th>0-(\Phi)</th>
<th>1-(\Phi)</th>
<th>2-(\Phi)</th>
<th>3-(\Phi)</th>
<th>4-(\Phi)</th>
<th>5-(\Phi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NV</td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>PR</td>
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</tr>
</tbody>
</table>

**Table 3.18. Number and proportion of NV/PR-varsiMS of M/\(\lambda=3\)**

<table>
<thead>
<tr>
<th>M((\lambda=3))</th>
<th>0-(\Phi)</th>
<th>1-(\Phi)</th>
<th>2-(\Phi)</th>
<th>3-(\Phi)</th>
<th>4-(\Phi)</th>
<th>5-(\Phi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PR</td>
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</tbody>
</table>

**Table 3.19. Number and proportion of NV/PR-varsiMS of U/\(\lambda=3\)**

<table>
<thead>
<tr>
<th>U((\lambda=3))</th>
<th>0-(\Phi)</th>
<th>1-(\Phi)</th>
<th>2-(\Phi)</th>
<th>3-(\Phi)</th>
<th>4-(\Phi)</th>
<th>5-(\Phi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NV</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>PR</td>
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**Table 3.20. Number and proportion of NV/PR-varsiMS of M/\(\lambda=2\)**

<table>
<thead>
<tr>
<th>M((\lambda=2))</th>
<th>0-(\Phi)</th>
<th>1-(\Phi)</th>
<th>2-(\Phi)</th>
<th>3-(\Phi)</th>
<th>4-(\Phi)</th>
<th>5-(\Phi)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PR</td>
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</tr>
</tbody>
</table>
Let me summarize the most important results. Line type $\lambda=6$ is generally parsed into two $\nu\varphi$-stresses. PR-parsing gives rise to two $\varphi$-stresses in Montale, and to one $\varphi$-stress in Ungaretti (cf. (17)). That is, the $\varphi$ in $\lambda=6$ lines contains either three or six metrical positions. As for the $\lambda=2$ to $\lambda=5$ line types, one $\varphi$-stress is dominant in $\nu\varphi$ as well as PR-parsing (if present, this latter), in both Montale and Ungaretti. The relevant $\varphi$'s contain either two, three, four or five metrical positions (cf. (18)-(21)). The $\lambda=1$, finally, is generally parsed into $0\varphi$ (cf. (22)). That is, the linguistic input of $\lambda=1$ lines consists either of a monosyllabic grammatical word or of a monosyllabic lexical word which is on the nonrecursive side of the head of a maximal projection Nespor & Vogel's $\varphi$-formation algorithms do not allow such inputs to surface as $\varphi$ head. The recordings are bare of $\lambda=1$ examples.

(17) a. NV: [ansieta] [d'Oriente],
PR: ansieta d'Oriente],
'oriental yearning'

b. NV: [sudici] [di guerra]
PR: sudici di guerra]
'war-filthy'

(18) a. NV: [sta per scoccare];
PR: sta per scoccare];
is to strike
'the striking [of the clock]' 

b. NV: [che non si vede]$_\varphi$
PR: che non si vede
'that not one sees'
'that is not seen'

(19) a. NV: [sulla strada]$_\varphi$
on-the road
'on this road'

b. NV: [così fredda]$_\varphi$
[così dura]$_\varphi$
$\lambda=4$
$\lambda=4$
ANALYSIS OF THE VERSE DATA

(20) a. NV: [Riviere]φ
'Seacoasts'
λ=3
M101:1
b. NV: [La morte]φ
[si sconta]φ
[vivendo]φ
λ=3
PR: La morte
si sconta
vivendo
the death / REFL discounts / living
'Death is / paid off / by living'

(21) a. NV: [cuore]φ
'heart'
λ=2
M11:17-8
b. NV: [Luce]φ
λ=2
PR: Luce.
U253:13

(22) NV: [del sonno]φ
'of the / sleep'
λ=1
U7:23-4

Consider now the line grids of short line types.

(23) a. Line Grid λ=1

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
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<td></td>
<td></td>
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<tr>
<td>1</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

b. Line Grid λ=2

<p>| | | | | |</p>
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<thead>
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c. Line Grid λ=3

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d. Line Grid λ=4

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e. Line Grid λ=5

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f. Line Grid λ=6

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The line grids relate as follows: λ=1 : λ=2/λ=3 : λ=4/λ=5 : λ=6. That is, line grid λ=1 requires one grid level, line grids λ=2 and λ=3 two grid levels, line grids λ=4
and $\lambda=5$ three grid levels, and line grid $\lambda=6$ four grid levels in order to represent binary alternation throughout. As for the relation between grid level-3 on the one hand, and the level of $\varphi$-stresses on the other, we expect $\lambda=1$, $\lambda=2$ and $\lambda=3$ not to contain $\varphi$-stresses: these line grids lack level-3 marks. However, the parsing facts presented in the tables above show that $\lambda=2$ and $\lambda=3$ generally contain one $\varphi$-stress. I suggest that a principle of versification is at play, which I formulate as follows:

(24) Versification Principle 1
A line of verse minimally contains one $\varphi$-stress.

Consequently, the unmarked parsing of $\lambda=2$ and $\lambda=3$ lines gives rise to a $\varphi$ containing fewer metrical positions than the Default $\varphi$ Form.

As will be shown in the next section, a similar kind of interaction between versification and prosody is found in long lines.

3.2.5 Default Parsing of Long Line Types

A long line type is a line ranging from $\lambda=12$ to $\lambda=18$. As indicated in table 3.1, long lines are also unequally distributed over the analyzed corpora of the two poets. While short lines dominate in the poetry of Ungaretti, long lines dominate in the poetry of Montale. To be more precise, long lines lead to a proportion of 9.9% in Montale, and to 0.7% in Ungaretti.

Tables 3.23-3.33 present the number and percentages of NV/PR $\varphi$-stresses in long line types. Notice that the $\lambda=15$, $\lambda=17$ and $\lambda=18$ lines occur only in the poetry of Montale. The recordings of Ungaretti lack any long line realizations, i.e., there are no PR-parsings of long lines.

| Table 3.23. Number and proportion of NV/PR-parsings of $M/\lambda=12$ |
|-----------------|---|---|---|---|---|---|---|
| $\lambda$ | 1-\varphi | 2-\varphi | 3-\varphi | 4-\varphi | 5-\varphi | 6-\varphi |
| NV | 90 | 100 | 0 | 0 | 0 | 0 |
| PR | 17 | 18.8 | 3 | 17.6 | 11 | 64.7 |

| Table 3.24. Number and proportion of NV/PR-parsings of $U/\lambda=12$ |
|-----------------|---|---|---|---|---|---|---|
| $\lambda$ | 1-\varphi | 2-\varphi | 3-\varphi | 4-\varphi | 5-\varphi | 6-\varphi |
| NV | 10 | 100 | 2 | 20 | 4 | 40 |
| PR | 0 | - | - | - | - | - |

| Table 3.25. Number and proportion of NV/PR-parsings of $M/\lambda=13$ |
|-----------------|---|---|---|---|---|---|---|
| $\lambda$ | 1-\varphi | 2-\varphi | 3-\varphi | 4-\varphi | 5-\varphi | 6-\varphi |
| NV | 55 | 100 | 3 | 54 | 19 | 34.5 |
| PR | 8 | 14.5 | - | - | - | - |
### Table 3.26. Number and proportion of NV/PR-parsings of U/λ=13

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### Table 3.27. Number and proportion of NV/PR-parsings of M/λ=14

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### Table 3.28. Number and proportion of NV/PR-parsings of U/λ=14

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### Table 3.29. Number and proportion of NV/PR-parsings of M/λ=15

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### Table 3.30. Number and proportion of NV/PR-parsings of U/λ=16

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### Table 3.31. Number and proportion of NV/PR-parsings of U/λ=16

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### Table 3.32. Number and proportion of NV/PR-parsings of M/λ=17

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### Table 3.33. Number and proportion of NV/PR-parsings of M/λ=18

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The unmarked NV-parsings in Montale display a gradual increase of ϕ-stresses which is directly proportional to the length of the line: from three ϕ-stresses in λ=12 to five ϕ-stresses in λ=17. The three λ=18 instances are all parsed differently, i.e. with four, five and six ϕ-stresses, respectively. The unmarked PR-parsings in Montale, involving line types λ=12 to λ=16, all maintain three ϕ-stresses. As for the unmarked NV-parsings in Ungaretti, it is striking that the long lines contain maximally four ϕ-stresses. Consider some examples.

PR: Cresceva tra rare cape e uno sterneto
'Among a scattering of reeds and brush
[the human plant] leaved'

'rustle-INF to-the olives from a moment to-the other
'in the olive trees, the rustling [...] at any instant'

PR: Quando piu sordo o meno il ribollito dell'acque
'Louder, then muffled, the sound of seething breathers'

'and filters the his benediction frozen
'and filters his frozen benediction'

PR: Tad~vano gli spari nel grembo solitario
'past-over-in-silent-3PL the shots in-the lap lonely
'The barage stopped, in the lonely vale'

'the azure dark of the deeps REFL is broken
'The dark azure of the deeps shatters'

PR: Poi come s'uno schermo, s'accomperanno di gittto
'then as on-a screen REFL-will-reassemble-3pl of throw
'Then, as on a screen, [...] will suddenly reassemble'

PR: aidia, rivogendenomi, vedro compirsi il miracolo:
dry turning-me shall-see-1SG accomplish-REFL the miracle
'dry [...], I'll turn and see the miracle occur'

'veawe-3PL the things a vast monotony of absences
'Things weave a vast monotony of absences'

if from the your face REFL-expresses freely a soul simple
'whether your face freely reveals a simple soul'
In section 3.3, I shall deal with the various parsing outputs that are assigned to the above lines. First let me present the prototype metrical grids of long line types. On the right of the line grids I indicate the grid level that best coincides with the unmarked number of the NV/PR φ-stresses per line type. In (31b), for instance, the NV-parsing is associated with level-3 which contains three grid positions, although the parsing results require four positions. Level-2 of the grid, however, contains six positions.

(31)  

a. Line Grid λ=12

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b. Line Grid λ=13

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c. Line Grid λ=14

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d. Line Grid λ=15

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<tr>
<td>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15</td>
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</table>

e. Line Grid λ=16

<p>| | | | | | | | | | | | | | |</p>
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<td>x</td>
<td>x</td>
</tr>
<tr>
<td>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16</td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>
The tendency is that NV-φ stresses are located one grid level lower than PR φ-stresses: the NV-parsing corresponds to level-3, and the PR-parsing to level-4 of the line grids. Two hypotheses can be formulated. The first hypothesis is that a principle is at play involving long line types on the one hand, and phrasal-stress intervals on the other. The principle specifies that phrasal stresses in long line types are placed from each other as far apart as possible:

(32) Verification Principle 2
The space between two phrasal stresses in long line types is as large as possible.

This principle is reminiscent of Hayes' (1984) Phrasal Rule, formulated on the basis of the rhythmic behavior of phrasal structures in English.

(33) Phrasal Rule (Hayes 1984:52)
A grid is more eurhythmic if its second highest level bears two marks, spaced as far apart as possible.

Verification Principle 2 may also be formulated in terms of a condition on the maximal number of phrasal stresses that are allowed to occur in long lines. On the basis of the PR-parsings in Montale, we may conclude that three φ-stresses constitutes the maximum:

(34) Verification Principle 3
A line of verse maximally contains three φ-stresses.

In comparison with the Default φ Form, containing four metrical positions, φ forms that arise from parsing of long line types are thus expected to be more complex.
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From the \( \lambda = 13 \) upwards, either one, two or three \( \varphi \) outputs per line will enclose more than four metrical positions.

3.2.6 Summary

Nespor & Vogel’s relation-based parsings on the one hand, and the perception-based parsings on the other, show that Montale’s and Ungaretti’s verse lines are governed by a set of recurring prosodic properties. The most frequently occurring line types, i.e. \( \lambda = 7 \) and \( \lambda = 11 \), are generally realized with two and three \( \varphi \)-stresses, respectively. Heads of \( \varphi \)-stresses are syllables of lexical items which surface as heads of maximal projections. Specifiers, or heads of functional projections, are not realized with \( \varphi \)-stress. Neither are lexical items occurring on the nonrecursive side of heads of maximal projections. These properties are observed in all the line types.

The Default \( \varphi \) Form, deduced from the unmarked parsings of both \( \lambda = 7 \) and \( \lambda = 11 \), has the following properties: (a) it contains four metrical positions, (b) it has a hierarchical structure of three levels, and (c) the \( \varphi \)-stress falls on the third, or penultimate position. On the basis of the assumption that the metrical position and the syllable are in one-to-one correspondence, and that in between the syllable and the phonological phrase, foot and prosodic word properties occur, I defined the Default \( \varphi \) Form as in (35).

\[
\text{(35) Default } \varphi \text{ Form} \\
\varphi \\
\Sigma / \omega \\
\sigma \sigma \sigma \sigma
\]

Since line types often do not allow a division into groups of only four metrical positions, unmarked parsing may also give rise to \( \varphi \) forms containing three or five metrical positions. The extremely short \( \lambda = 2 \) line even selects a \( \varphi \) containing two metrical positions. My suggestion is that this selection is made under pressure of Versification Principle 1, which states that a line of verse minimally contains one \( \varphi \)-stress. The reverse is found in long lines: \( \varphi \)'s containing five or six metrical positions constitute the unmarked \( \varphi \) form of these line types. Versification Principle 3 accounts for this observation: a line of verse maximally contains three \( \varphi \)-stresses.

In table 3.34, the unmarked NV/PR parsings are listed for all the line types found in the poetry of Montale and Ungaretti. Unmarked NV/PR parsings of line types on the one hand, and Default \( \varphi \) Form on the other, are two metrics which enable us to evaluate (a) line parsings which deviate from the unmarked one, and (b) \( \varphi \) forms which deviate from the Default \( \varphi \) Form.
Table 3.34. Unmarked NV/PR parsings of line types.

<table>
<thead>
<tr>
<th>Montale</th>
<th>NV</th>
<th>PR</th>
<th>Ungaretti</th>
<th>NV</th>
<th>PR</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\lambda=1$</td>
<td>-</td>
<td>-</td>
<td>$\lambda=1$</td>
<td>0-$\varphi$</td>
<td>-</td>
</tr>
<tr>
<td>$\lambda=2$</td>
<td>1-$\varphi$</td>
<td>-</td>
<td>$\lambda=2$</td>
<td>1-$\varphi$</td>
<td>1-$\varphi$</td>
</tr>
<tr>
<td>$\lambda=3$</td>
<td>1-$\varphi$</td>
<td>-</td>
<td>$\lambda=3$</td>
<td>1-$\varphi$</td>
<td>1-$\varphi$</td>
</tr>
<tr>
<td>$\lambda=4$</td>
<td>1-$\varphi$</td>
<td>-</td>
<td>$\lambda=4$</td>
<td>1-$\varphi$</td>
<td>1-$\varphi$</td>
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<tr>
<td>$\lambda=5$</td>
<td>1-$\varphi$</td>
<td>1-$\varphi$</td>
<td>$\lambda=5$</td>
<td>1-$\varphi$</td>
<td>1-$\varphi$</td>
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<tr>
<td>$\lambda=6$</td>
<td>2-$\varphi$</td>
<td>2-$\varphi$</td>
<td>$\lambda=6$</td>
<td>2-$\varphi$</td>
<td>1-$\varphi$</td>
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<tr>
<td>$\lambda=7$</td>
<td>2-$\varphi$</td>
<td>2-$\varphi$</td>
<td>$\lambda=7$</td>
<td>2-$\varphi$</td>
<td>2-$\varphi$</td>
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<td>$\lambda=8$</td>
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<td>$\lambda=8$</td>
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<td>2-$\varphi$</td>
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<td>$\lambda=9$</td>
<td>3-$\varphi$</td>
<td>2-$\varphi$</td>
<td>$\lambda=9$</td>
<td>3-$\varphi$</td>
<td>2-$\varphi$</td>
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<tr>
<td>$\lambda=10$</td>
<td>3-$\varphi$</td>
<td>2/3-$\varphi$</td>
<td>$\lambda=10$</td>
<td>3-$\varphi$</td>
<td>2/3-$\varphi$</td>
</tr>
<tr>
<td>$\lambda=11$</td>
<td>3-$\varphi$</td>
<td>3-$\varphi$</td>
<td>$\lambda=11$</td>
<td>3-$\varphi$</td>
<td>3-$\varphi$</td>
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<tr>
<td>$\lambda=12$</td>
<td>3-$\varphi$</td>
<td>3-$\varphi$</td>
<td>$\lambda=12$</td>
<td>3/4-$\varphi$</td>
<td>-</td>
</tr>
<tr>
<td>$\lambda=13$</td>
<td>4-$\varphi$</td>
<td>2-$\varphi$</td>
<td>$\lambda=13$</td>
<td>3/4-$\varphi$</td>
<td>-</td>
</tr>
<tr>
<td>$\lambda=14$</td>
<td>4-$\varphi$</td>
<td>3-$\varphi$</td>
<td>$\lambda=14$</td>
<td>4-$\varphi$</td>
<td>-</td>
</tr>
<tr>
<td>$\lambda=15$</td>
<td>4-$\varphi$</td>
<td>3-$\varphi$</td>
<td>$\lambda=15$</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>$\lambda=16$</td>
<td>4-$\varphi$</td>
<td>3/4-$\varphi$</td>
<td>$\lambda=16$</td>
<td>4-$\varphi$</td>
<td>-</td>
</tr>
<tr>
<td>$\lambda=17$</td>
<td>5-$\varphi$</td>
<td>-</td>
<td>$\lambda=17$</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>$\lambda=18$</td>
<td>4/5/6-$\varphi$</td>
<td>-</td>
<td>$\lambda=18$</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

The next sections are dedicated to these deviations: section 3.3 considers deviations between NV-parsings and PR-parsings, and the sections 3.5 and 3.6 consider deviations between marked and unmarked PR-parsings.

### 3.3 Syntax-based Prosodic Parsing Reconsidered

Lines of verse appear to be prosodically parsed on the basis of very regular recurring patterns. As indicated by the shaded boxes in the line parsing tables presented in the previous section, the syntax-to-prosody mapping as well as the perceived prominences lead to the same most frequently occurring phrasal output. Two questions arise in this context. Firstly, how do we account for the prosodic parsings of the line instances which do not match this regular pattern? And secondly, how do we account for the fact that the syntax-to-prosody mapping and the perception of prominences do not always produce the same prosodic output?

In relation to the first question, the NV/PR-parsing tables of line types (see also Appendix D), suggest that NV-parsing often gives rise to more prosodic variability than PR-parsing. More concretely, while PR-parsing provides a specific line type with two or three different parsings, NV-parsing provides the same line type with four or five different parsings. Let me illustrate the point by taking Ungaretti's $\lambda=7$ and Montale's $\lambda=12$. Regarding $U/\lambda=7$, the NV-parsing leads to five outputs ranging from 0-$\varphi$ to 4-$\varphi$, while the PR-parsing leads to three outputs ranging from 1-$\varphi$ to 3-$\varphi$. Regarding $M/\lambda=12$, the NV-parsing leads to five outputs ranging from 2-$\varphi$ to 6-$\varphi$ while the PR-parsing leads to three outputs ranging from 2-$\varphi$ to 4-$\varphi$. In other words...
The NV-parsing often allows a line type to be parsed by more as well as fewer $\phi$-stresses than the PR-parsing. The two parsing modes differ thus on the margins. The second question directly relates to the first one. Not only with respect to marginal parsings but also with respect to core parsings, may the NV-parsing and PR-parsing give rise to dissimilar outputs. That is, although the number of $\phi$-stresses in the two parsing modes may be identical, it is not necessarily the case that these stresses will be associated with the same syllables. By taking into consideration the syntactic notions on the basis of which the NV-parsing is applied, we may account for at least a part of these dissimilarities. The following sections are dedicated to Nespor & Vogel's claims concerning (a) the optionality of $\phi$-restructuring, (b) syntactic branchingness and $\phi$-restructuring, (c) the prosodic parsing of nonrecursive idioms of syntactic heads, and (d) the prosodic parsing of relatively unrelated syntactic heads.

3.3.1 Prosodic Parsing of Head-Complement Sequences

According to Nespor & Vogel (1986), the possibility in Italian of restructuring two phonological phrases into one is conditioned by syntactic structure: the first complement immediately following the head must be non-branching in order to undergo restructuring with the $\phi$ of its syntactic head. Even if these conditions are met, $\phi$-restructuring does not necessarily apply. That is, $\phi$-restructuring is claimed to be an optional process (cf. Nespor & Vogel 1986:173).

In what follows, I shall compare the NV-parsings with PR-parsings of head-complement sequences which fall within the scope of Nespor & Vogel's $\phi$-restructuring algorithm. PR-parsing gives rise to either one $\phi$-stress or two $\phi$-stresses. By virtue of the Default $\phi$ Form we are able to account for these parsings.

Another set of non-corresponding NV/PR outputs is rooted in the non-branchingness restriction that is imposed on $\phi$-restructuring. In contrast to Nespor & Vogel's claim that only non-branching complements may undergo $\phi$-restructuring, PR-parsing shows that head plus branching complement sequences may also form a single $\phi$ domain! Again, the Default $\phi$ Form enables us to account for these prosodic outputs.

3.3.1.1 $\phi$-Restructuring Optional? Restructure!

The lines in (36) contain head plus non-branching complement sequences the recorded realizations of which are perceived as containing a single $\phi$-stress. In NV-verbs, $\phi$-restructuring has applied. The round brackets in the NV-parsings delimit the domain of $\phi$-restructuring. The PR-parsings show that only the second bold-faced row is perceived as being realized with $\phi$-stress. The exemplified lines constitute either $\lambda=7$, $\lambda=9$ or $\lambda=11$ instances. Similar structures can be found in other line types as well, however.
In comparison with the Default $\phi$ Form, both restructured and non-restructured parsings give rise to deviating $\phi$ outputs. Generalizing, restructured parsings give rise to larger $\phi$ outputs, and non-restructured parsings give rise to smaller $\phi$ outputs. In table 3.35, the $\phi$ outputs are presented in terms of the number of metrical positions. Considering the fact that the PR-parsings are empirically attested, I assume that $\phi$-restructuring constitutes the unmarked realization of the relevant head-complement sequences. Output $\phi$'s larger than the default form are preferred over output $\phi$'s smaller than the default form.

Table 3.35. Sizes of (non-)restructured $\phi$'s in (36).

<table>
<thead>
<tr>
<th>Non-restructured $\phi$'s</th>
<th>Restructured $\phi$'s</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. 3 + 2</td>
<td>5</td>
</tr>
<tr>
<td>b. 3 + 2</td>
<td>5</td>
</tr>
<tr>
<td>c. 3 + 2</td>
<td>5</td>
</tr>
<tr>
<td>d. 2 + 4</td>
<td>6</td>
</tr>
<tr>
<td>e. 4 + 2</td>
<td>6</td>
</tr>
</tbody>
</table>

The parsings in (36d) and (36e) lead us to formulate a more specific hypothesis, however. In fact, the non-restructured $\phi$'s in these examples contain a proper default $\phi$, i.e. a $\phi$ containing four metrical positions. Nonetheless, restructuring is observed in these cases. The underlying trigger for $\phi$-restructuring seems to be the avoidance of a $\phi$ that contains two metrical positions. This avoidance is formulated by means of the Minimal $\phi$ Hypothesis.
ANALYSIS OF THE VERSE DATA

(37) Minimal $\varphi$ Hypothesis
$\varphi$ minimally contains three metrical positions.

Recall from section 3.2.4 that only the $\lambda=2$ is basically parsed into two-position $\varphi$'s.

3.3.1.2 $\varphi$-Restructuring Optional? Don't Restructure!

Recall that the recorded data contain head plus first, non-branching complement sequences which sometimes are realized with one $\varphi$-stress, and sometimes with two $\varphi$-stresses. The former parsing is accounted for by the Minimal $\varphi$ Hypothesis. In what follows, I shall present a series of line instances in which this minimal $\varphi$ condition is vacuously satisfied. Consider the examples in (38). As previously, the round brackets delimit the domain of $\varphi$-restructuring. The PR-parsings show that both boldfaced vowels are perceived as being realized with $\varphi$-stress. In NV-terms, $\varphi$-restructuring did not apply.

(38) a. NV: $[(freciate)\varphi (biancazzurre)\varphi, (due ghiandaie)\varphi]$ $\lambda=11$
   PR: freciate biancazzurre, due ghiandaie
   arrows white-blue two jays
   'of blue-white arrows, two jays'

   b. NV: $[(\text{Come un tiro})\varphi [aggiustato]\varphi [mi sommuove]\varphi]$ $\lambda=11$
   PR: Come un tiro aggiustato mi sommuove
   as a shot adjusted me excites
   'like a well-targeted shot [...] unsettles me'

   c. NV: $[(\text{dei bambu})\varphi [mormoranti]\varphi]$ $\lambda=7$
   PR: dei bambu mormoranti.
   'of whispering bamboo'

   d. NV: $[(\text{Che pari})\varphi [alla tortora]\varphi [lamentosa]\varphi]$ $\lambda=11$
   PR: Che pari alla tortora lamentosa
   that like to-the turtledove grieving
   'That like the grieving turtledove'

   e. NV: $[(\text{Gli occhi})\varphi [mi tornerebbero]\varphi [innocenti]\varphi]$ $\lambda=11$
   PR: Gli occhi mi tornerebbero innocenti
   the eyes me will-turn innocent
   'My eyes would then turn innocent'

   f. NV: $[(\text{Da un'onda})\varphi [riposata]\varphi]$ $\lambda=7$
   PR: Da un'onda riposata.
   by a wave rested
   'By a rested wave'

The sizes of the relevant $\varphi$'s in (38) under restructuring/non-restructuring are presented in table 3.36.
Table 3.36. Sizes of (non-)restructured φ's in (38).

<table>
<thead>
<tr>
<th></th>
<th>Non-restructured φ's</th>
<th>Restructured φ's</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>3 + 4</td>
<td>7</td>
</tr>
<tr>
<td>b.</td>
<td>4 + 4</td>
<td>7^1</td>
</tr>
<tr>
<td>c.</td>
<td>3 + 4</td>
<td>7</td>
</tr>
<tr>
<td>d.</td>
<td>5 + 4</td>
<td>9</td>
</tr>
<tr>
<td>e.</td>
<td>6 + 4</td>
<td>9</td>
</tr>
<tr>
<td>f.</td>
<td>3 + 4</td>
<td>7</td>
</tr>
</tbody>
</table>

Notice that the non-restructured φ outputs are much closer to the Default φ Form than the restructured φ outputs. Since the non-restructured outputs are empirically attested on the basis of the readings of Montale and Ungaretti, I consider these outputs to constitute the unmarked realization. A Maximal φ Hypothesis can now be formulated:

(39)  Maximal φ Hypothesis
A φ maximally contains six metrical positions.

To summarize, whereas Nespor & Vogel's syntax-based approach to phonological phrasing does not cope with the question whether a head plus non-branching complement sequence forms a single phonological phrase or not, the Minimal φ Hypothesis and Maximal φ Hypothesis do. That is, instead of considering φ-restructuring as an optional process, I consider φ-restructuring to be conditioned by the avoidance of either too short φ's (φ ≥ 3 mp's) or too long φ's (φ ≥ 6 mp's).

3.3.1.3 Branching Complements

Nespor & Vogel's (1986) definition of φ-restructuring excludes a syntactically branching complement from forming a single phonological phrase with its immediately preceding head. On the basis of the empirically attested PR parsings of a number of line instances, this exclusion must be rejected as being too strong. Consider the lines in (40). In contrast to the head-complement sequences discussed in the previous sections, the delimited sequences in (40) fall outside the scope of φ-restructuring (curly brackets are used for this). The PR-parsings indicate that the relevant sequences are perceived as constituting a single phrase domain, i.e., the head vowel of the complement alone is perceived as being realized with phrasal stress.

PR: tutto d'accanto ti sciaborda, sbattono  M1:41
   'everything from-aside you stirs slam-3pl.
   'everything around you spills over, [...] flap'

---

11 Adjacent vowels within the same φ domain are counted as constituting a single position; across a φ boundary, they are separately counted.
12 See section 2.1.1 for the exact formulation of Nespor & Vogel's φ-restructuring definition.
13 Hayes' (1989a) definition of φ-restructuring for English, in contrast, allows a branching complement which prosodically consists of one clitic group to undergo restructuring.
The Minimal Hypothesis, formulated in section 3.3.1.1.1, can be again invoked. In order to avoid surfacing of phonological phrases that contain fewer than three metrical positions, the head plus branching-complement sequences are parsed into one \( \varphi \) domain. In fact, if the sequences are parsed into two \( \varphi \)’s, outputs arise which contain fewer than three metrical positions.

| Table 3.37. Sizes of (non-restructured) \( \varphi \)’s in (40). |
|---------------------|---------------------|---------------------|
| Table 3.37. Sizes of (non-restructured) \( \varphi \)’s in (40). |
| a. 2+3 | 5 |
| b. 2+3 | 5 |
| c. 2+3/2+3 | 5/5 |
| d. 3+2 | 5 |
| e. 2+3 | 5 |
| f. 1+3 | 4 |

Notice now: that the introduction of the Maximal Hypothesis allows us to do away with the need to establish the degree up to which sequences may branch. That is, instead of arguing that the \([V+[PP+PP]]\) sequence in (41) may not form a single \( \varphi \) because of branching complexity, \( \varphi \) maximality explains why restructuring is disfavored, if not excluded.

(41) NV: \([\text{Forse}_\varphi \ [\text{un mattino}]_\varphi \ [\text{andando}]_\varphi \ [(\text{in un'aria})_\varphi \ [\text{di vetro}]_\varphi])\), \( \lambda=13 \)
PR: Forse un mattino andando in un'aria di vetro,
maybe a morning going in an air of glass
‘Maybe one morning, walking in air of [dry] glass’
In sum, the prosodic parsings considered until now lead to the following conclusions: (a) \( \varphi \)-restructuring is not an optional process, but it either applies or not, (b) the application of \( \varphi \)-restructuring is conditioned by the Minimal \( \varphi \) Hypothesis on the one hand, and the Maximal \( \varphi \) Hypothesis on the other, and (c) \( \varphi \)-restructuring does not only involve non-branching complements but also branching complements.

### 3.3.2 Non-Recursive Sides

Nespor & Vogel’s basic \( \varphi \)-formation algorithm incorporates all the elements on the nonrecursive side of the lexical head of a maximal projection into the \( \varphi \) of the head. With the Maximal \( \varphi \) Hypothesis still fresh in mind, we expect this algorithm to be potentially troublesome. In fact, the PR-parsing shows that nonrecursive-side elements are sometimes perceived as being realized with \( \varphi \)-stress. Consider the examples in (42). Except for (42d), the relevant strings consist of adjective-noun sequences. In (42d), the verbal head *perdonato* is preceded by an auxiliary, a pronominal clitic and a complementizer. As for (42c) and (42d), it appears that material preceding or following the relevant strings is also prosodically involved in the parsing. The curly brackets enclose the relevant strings.

```
(42) a. NV: [che schiude]\( \varphi \) ([la divina Indifferenza]\( \varphi \)) λ=11
   PR: che schiude [la divina] {Indifferenza} M33/6
   that discloses the divine Indifference 'disclosed by the divine Indifference'

b. NV: [mi credo]\( \varphi \) ([del solenne ammonimento]\( \varphi \)) λ=11
   PR: mi credo [del solenne] {ammonimento} M52:11
   me belief-1SG of-the grave admonition 'I think myself [...] the grave admonition'

c. NV: ([presso un rovente muro]\( \varphi \)) [d'orto]\( \varphi \), λ=9
   PR: [presso un rovente] {muro d'orto} M28:2
   nearby a blazing wall of-garden 'by a blazing garden wall'

d. NV: [E solo]\( \varphi \) ([quando m'avrà perdonato]\( \varphi \)), λ=11
   PR: {E solo quando} {m'avrà perdonato}, U158:12
   and only when me will-have-3SG forgiven 'And only when he has forgiven me'

e. NV: ([D'inviolabili lontananze]\( \varphi \)), λ=9
   PR: [D'inviolabili] {lontananze} U185:8
   'Of inviolable distances'
```

The Minimal \( \varphi \) Hypothesis and Maximal \( \varphi \) Hypothesis account for the empirically attested PR-parsings, but not for the NV-parsings. Table 3.38 presents the sizes of the relevant \( \varphi \)'s, in terms of the number of metrical positions.
n sum, the automatic mapping of syntactic structure into prosodic constituency may give rise to prosodically marked results. In the verse data at hand, the phonological phrase strongly tends to surface as a domain that contains about four metrical positions. When the phrase exceeds the maximal limit of six metrical positions, it will be split up into two more or less equally balanced domains, regardless of its syntactic configuration. Prosody may still be considered to be ordered after syntax: prosodic filters (= Minimal φ, Maximal ψ) readjust the prosodic constituents which are constructed on the basis of the syntactic surface structure.

### 3.3.3 Prosodic Parsing of Head-Head Sequences

In the above sections we saw that Nespor & Vogel's definitions of φ-formation and ρ-restructuring are too restrictive in either of the two following senses: (a) they do not allow complex φ's to be split up into two φ's, and (b) they do not allow simple ρ's to be joined together into one φ. In both cases the relevant φ's correspond to well-defined syntactic constituents, namely to lexical heads of maximal projections, complements and pre-head modifiers. In the present section, attention is given to phonological phrases the input of which consists of two lexical items, both heads of maximal projections, which are neither in a head-complement nor in a modifier-head relation. In other words, the NV-parsing unconditionally assigns two φ constituents to these inputs. The PR-parsing, by contrast, indicates that only the rightmost item is perceived as being realized with phrasal stress. Consider the examples in (43). The curly brackets in the NV representations delimit the relevant strings.

<table>
<thead>
<tr>
<th>(43)</th>
<th>NV: &amp; PR:</th>
<th>λ =</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>{{Ora} φ [e finito]φ [il cerulo marezzo]φ} ora e finito il cerulo marezzo.</td>
<td>11</td>
<td>7:22</td>
</tr>
<tr>
<td>b.</td>
<td>{Meriggia}φ {pallido}φ [e assorto]φ</td>
<td>9</td>
<td>28:1</td>
</tr>
<tr>
<td>c.</td>
<td>{{Il sole}φ [in alto]φ, — [e un secco greto]φ} Il sole, in alto, — e un secco greto.</td>
<td>9</td>
<td>37:5</td>
</tr>
</tbody>
</table>
d. NV: [Sul tardi] \(\phi\) \{corneggia\}_\psi \{la luna\}_\psi.  
PR: \(\lambda=9\)  
Sul tardi corneggia la luna.  
'Later on the moon lifts her horns.'  
M72:39

e. NV: [I prati] \{hanno\}_\psi \{una tale\} \{tenezz\}_\psi.  
PR: \(\lambda=11\)  
I prati hanno una tale tenezza,  
'the meadows have a such tenderness'  
U195:5

f. NV: [...], \{d'irruenti \(\phi\) \{acque\}_\psi \{sontuoso\}_\psi\}, [...].  
PR: [...], \{d'irruenti \(\phi\) \{acque\}_\psi \{sontuoso\}_\psi\}, [...].  
of raging waters 'rich'  
U171:5-6

The syntactic configurations delimited by the curly brackets are the following: \{AdvP+VP\} in (43a), \{AP+AP\} in (43b), \{NP+CP\} in (43c), \{VP+NP\} in (43d), \{V+A\} in (43e), and \{NP+AP\} in (43f). Most interesting in the light of other syntax-based proposals to phonological phrasing are the examples (43acf). Ghini (1993), in line with Selkirk's (1986) end-based approach, argues that \(\phi\)-formation in Italian crucially involves the right boundary of maximal phrases \(\lambda\text{Xmax}\). More concretely, the right boundary of an \(\lambda\text{Xmax}\) blocks continuous prosodic parsing. Such right-edge \(\lambda\text{Xmax}\) boundaries occur, however, between the sentence adverb ora and the verb phrase \(\text{i finito}\) in (43a), between the subject NP \(\text{il sole}\) and the nonrestrictive relative clause \(\text{in alto}\) in (43c), and between the preposed complement \(d'irruenti\ \text{acque}\) and the adjectival head \(\text{sontuoso}\) in (43f). In addition, the string \(\text{hanno una tale}\) in (43e) is problematic for the \(\lambda\text{Xmax}\) approach insofar that the head word of the phrase, tale, is not immediately followed by an \(\lambda\text{Xmax}\) boundary. On the basis of \(\lambda\text{Xmax}, \text{right}\) it is predicted that the entire string \(\text{hanno una tale tenezza}\) forms a single phonological phrase.  

Again, the \textit{Default \(\phi\) Form} and the \textit{Minimal \(\phi\) Hypothesis} straightforwardly account for the empirically attested PR-parsings. In table 3.39, the sizes of the NV-\(\phi\)'s and PR-\(\phi\)'s are presented. Notice that both parsings in (43bcd) contradict neither the \textit{Minimal \(\phi\) Hypothesis} nor the \textit{Maximal \(\phi\) Hypothesis}. That is, although the NV-parsings are not empirically attested, we expect them to be equally well-formed as the PR-parsings. On the basis of the PR-parsing of (43e), I hypothesize that the intervening line-break introduces a \(\phi\) boundary between \(d'irruenti\) and \(\text{acque}\) in the NV-parsing as well. The NV-\(\phi\)'s refer then to \(\text{acque}\) and \(\text{sontuoso}\), respectively.

To summarize this section, PR-parsings indicate that single phonological phrases may contain two relatively unrelated lexical heads of maximal projections. That is, these heads are not in a modifier-head or head-complement relation. Ghini's adaption

---

14 \(\phi\)-Domain Formation: The domain of \(\phi\)-formation is delimited by right-edge \(\lambda\text{Xmax}\) boundaries (Ghini 1993:68).

15 Additional \(\phi\)-formation principles allow Ghini (1993:68) to arrive at outputs like (42e). These principles refer to (a) uniformity and average weight, (b) symmetry and (c) increasing units.
of Selkirk's end-based approach to Italian is not adequate: phonological phrasing across right-edge boundaries of $X_{\text{max}}$ is also found.

Table 3.39. Sizes of NV/PR $\psi$'s in (43).

<table>
<thead>
<tr>
<th></th>
<th>NV $\psi$'s</th>
<th>PR $\psi$'s</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>2 + 4</td>
<td>5</td>
</tr>
<tr>
<td>b.</td>
<td>3 + 3</td>
<td>5</td>
</tr>
<tr>
<td>c.</td>
<td>3 + 3</td>
<td>5</td>
</tr>
<tr>
<td>d.</td>
<td>3 + 3</td>
<td>6</td>
</tr>
<tr>
<td>e.</td>
<td>2 + 8</td>
<td>5 + 4</td>
</tr>
<tr>
<td>f.</td>
<td>2 + 3</td>
<td>5</td>
</tr>
</tbody>
</table>

3.3.4 Summary

Phonological parsings of line types that deviate from the unmarked parsing can only be partially explained on the basis of Nespor & Vogel's $\psi$-formation algorithms. More precisely, deviating NV-parsings fall into parsings consisting of either fewer $\psi$'s per line than the unmarked parsing, or more $\psi$'s per line than the unmarked parsing. Both deviations result from the fact that the NV-parsing is blind to metrical complexity. Either too short or too long phonological phrases are generated. Too short phrases surface by virtue of the claim that (a) branching complements are not allowed to undergo restructuring with the phrase of its head, and (b) lexical heads of relatively unrelated maximal projections are not allowed to form a single phonological phrase. Too long phrases surface by virtue of the claim that (a) nonbranching complements are allowed to constitute a single $\psi$ with their immediately preceding heads, and (b) all elements on the nonrecursive side of the head of a maximal projection are incorporated into the phonological phrase of the head.

I formulated two hypotheses which account for the metrical well-formedness of the phonological phrase: the Minimal $\psi$ Hypothesis and the Maximal $\psi$ Hypothesis. A phonological phrase contains minimally three metrical positions and maximally six metrical positions. By virtue of these hypotheses, the supposed optionality of $\psi$-restructuring can be straightforwardly accounted for: (a) in order to avoid surfacing of too short $\psi$'s, two $\psi$'s will be restructured into one $\psi$, and (b) in order to avoid surfacing of too long $\psi$'s, two $\psi$'s will not be restructured into one $\psi$.

The Minimal $\psi$ Hypothesis and the Maximal $\psi$ Hypothesis can be argued to constitute prosodic filters that are placed at the output of the syntax-to-prosody mapping. In fact, empirically attested phrasal parsings often coincide with well-defined syntactic constituents. However, we also find phrasal parsings which do not coincide with such well-defined syntactic constituents. That is, two lexical maximal projections which are not in a head-complement relation may also form a single phonological phrase. It thus seems that the metrical well-formedness hypotheses do not function as prosodic filters, but rather as structure-building conditions on prosodic phrasing.
3.4 Phonological Properties of the φ

This section addresses the issue of the presumed correspondences between the lowest levels of line grids on the one hand, and the smallest constituents of the prosodic hierarchy on the other. I will begin with an analysis of grid level-2, which I assume to correspond to either the foot constituent or the prosodic word constituent. The Default φ Form will be enriched with a Complex φ Form. On the basis of these forms a number of stress deletion and stress addition phenomena can be properly understood. Afterwards, I discuss the alleged correspondence between grid level-1 and the syllable constituent. Special attention is drawn to the behavior of adjacent vowels across word boundaries.

3.4.1 The Default φ Form

Consider again the Default φ Form as deduced from the analysis of the unmarked prosodic parsing of λ=7 and λ=11:

(44) Default φ Form

```
φ
Σ/ω   Σ/ω
σ   σ   σ   σ
```

Until now I have referred to the default φ as a domain containing four metrical positions. In fact, the tables representing the NV/PR parsings of the various line types enclose information about these two entities alone, i.e. about the number of φ's distributed over a specific number of metrical positions. As suggested by the binary alternating metrical grid representations of most of the line types, between the lowest grid level, representing metrical positions/syllables, and the third grid level, representing φ-stresses, there is an intermediate level which either represents foot stresses or prosodic word stresses. In the present section, I shall present data which indicate that the second level of the Default φ Form is realized by a foot stress followed by a prosodic word stress:16

(45) Default φ Form

```
φ
Σ   φ
σ   σ   σ   σ
```

16 Chapter 4 provides arguments in favor of a representation in which the foot stress and the word stress are placed on separate levels.
The main argument in favor of this internal $\phi$ organization derives from a statistical analysis of the perception of non-phrasal stresses in the recordings. As already mentioned in section 2.4.1, the informants applied a four-degree distinction of stress: (a) zero stress, (b) main word stress, (c) phrasal stress, and (c) sentence stress. The first two degrees are crucial in the light of the internal organization of the $\phi$.

Consider the following numbers and percentages. The recorded corpora of Montale and Ungaretti contain a total of 767 and 415 phonological phrases, respectively. Of these phrases, 316 in Montale and 139 in Ungaretti are default $\phi$'s of the type exemplified in (44). Of these default phrases, 285 (in Montale) and 125 (in Ungaretti) contain a phrasal stress plus a foot stress, and 31 and 14, a phrasal stress plus a word stress. The former I call Default $\phi$ I, and the latter Default $\phi$ II.

<table>
<thead>
<tr>
<th>Table 3.40. Number and percentages of PR-$\phi$'s.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montale</td>
</tr>
<tr>
<td>nr</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Total of PR-$\phi$'s</td>
</tr>
<tr>
<td>Default $\phi$ I+II</td>
</tr>
<tr>
<td>Default $\phi$ I</td>
</tr>
<tr>
<td>Default $\phi$ II</td>
</tr>
</tbody>
</table>

That is, of the two Default $\phi$ types, Default $\phi$ I constitutes the unmarked, and Default $\phi$ II the marked one. The two are in the rough proportion 10:1. From now on, Default $\phi$ I is considered to constitute the Default $\phi$ Form, and Default $\phi$ II, a marked variant.

Phrases typically realized with a phrasal stress plus a foot stress are illustrated in (46). The relevant strings are delimited by curly brackets.

(46) a. vedi] {che si trasforma} {questo lembo} M5:8
    ‘look how this strip [...] has been transformed’

b. il tuono] {con un fremere} {di lamiera} M81:26
    ‘thunder, like sheet metal [clanging]’

c. riarsa], {èra il cavallo} {stramazzato}] M33:4
    ‘parched, was-3SG the horse knocked-down’
    ‘parched [leaf], the fallen horse, dying’

d. {Colla mente}] murata, U117:24
    ‘with the mind walled’
    ‘With mind walled-in’

e. {E l'equivoco}] {della luna} U185:10
    ‘and the ambiguity of-the moon’
    ‘And the moon's ambiguity’
Later on in this chapter, I shall deal with default q's that are characterized by a phrasal stress plus main word stress. First, I shall focus on the Default q Form as presented in (45).

As argued in chapter 2, foot stress is assigned on the basis of the universally-attested principles of rhythmic alternation as well as on the basis of native speaker intuitions about secondary stress location. The relevant strings in (46) thus surface with a foot stress plus a phrasal stress (the syllable with foot stress is marked by the diacritic ‘’):

\[(47)\]
\[
\begin{align*}
\text{a. } & \text{chè si trasforma} / \hat{}\text{questo lembo} \\
\text{b. } & \text{con un fremer} / \hat{}\text{di lamiera} \\
\text{c. } & \text{èra il cavallo} / \hat{}\text{stramizzato} \\
\text{d. } & \text{Colla mente} \\
\text{e. } & \text{è l'equívoco} / \hat{}\text{della luna}
\end{align*}
\]

Irrespective of whether secondary stress can be argued to be a lexical property of the relevant item or not, rhythmic alternation ensures that positions are properly organized into weak-strong patterns. Notice now that the foot stress and the phrasal stress may also be separated from one another by two intervening positions: che si trasforma and era il cavallo. In fact, although I adopt the strictly binary alternating grid as an evaluation metric for determining the rhythmic organization of the verse data, rhythmically well-formed structures are generally defined as either binary or ternary organized: a strong position may be flanked by one or two weak positions (i.e. clashes and lapses are avoided).17

Besides the foot stress, the above examples also share another property, which is essentially morphological in nature. That is, the syllable with foot stress is characterized by either one of the following three properties: (a) the syllable constitutes a monosyllabic grammatical word, (b) the syllable is part of a disyllabic grammatical word, or (c) the syllable is part of a polysyllabic lexical word. In (48), the elements involved are listed on the basis of these three properties.

\[(48)\]
\[
\begin{align*}
\text{Monosyllabic grammatical word: } & \text{che (45a), con, di (45b), e (45e)} \\
\text{Disyllabic grammatical word: } & \text{questo (45a), era (45c), colla (45d), della (45e)} \\
\text{Polysyllabic lexical word: } & \text{stramazzato (45c)}
\end{align*}
\]

By contrast, the syllable with phrasal stress is the stress-bearing syllable of a lexical word. At this point, there are two reasons to assume that the second level of the Default q Form is characterized by a foot mark (\(\hat{}\)) followed by a prosodic word mark (\(\hat{}\)): (a) morphologically, the input is characterized by a lexical word, possibly preceded by a grammatical word, and (b) phonologically, the input is characterized by a single main word stress.

---

17 Cf. the Principle of Rhythmic Alternation in section 2.2.1.
3.4.2 The Complex \( p \) Form

As stated previously, the informants of the perception test distinguished a main word stress from a phrasal stress. In default \( p \) s this distinction does not arise, however: the main stress of a lexical item is realized as phrasal stress. In the present section, I consider phonological phrases in which both a main word stress and a phrasal stress occur. I will call these complex \( p \) forms. Let me begin with some statistics. I mentioned in section 3.4 that about 4% of all PR-\( p \) s in Ungaretti and Montale surface as marked default \( p \) s, i.e. as \( p \) s with a main word stress plus a phrasal stress. This result can be compared with all the phrases that are perceived as being realized with a main word stress plus a phrasal stress. Five types of phrasal domains can be distinguished. In addition to marked default \( p \) s, there are four complex \( p \) s which differ in turn in complexity. Consider the representations:

(49)  a.  Default \( p \) Form (marked):

+ \( p \) +
+ \( \sigma \) \( \sigma \) \( \sigma \) \( \sigma \) \( \sigma \)

b.  Complex \( p \) Form I:

+ \( p \) +
+ \( \sigma \) \( \sigma \) \( \sigma \) \( \sigma \) \( \sigma \) \( \sigma \)

c.  Complex \( p \) Form II:

+ \( p \) +
+ \( \sigma \) \( \sigma \) \( \sigma \) \( \sigma \) \( \sigma \) \( \sigma \) \( \sigma \)

b.  Complex \( p \) Form III:

+ \( p \) +
+ \( \sigma \) \( \sigma \) \( \sigma \) \( \sigma \) \( \sigma \) \( \sigma \) \( \sigma \) \( \sigma \)

d.  Complex \( p \) Form IV:

+ \( p \) +
+ \( \sigma \) \( \sigma \) \( \sigma \) \( \sigma \) \( \sigma \) \( \sigma \) \( \sigma \) \( \sigma \) \( \sigma \)

Thus, complex \( p \) s contain one to four positions more than the default \( p \). Notice that in Complex \( p \) Form II, III, IV \( o \)-stress and \( \Sigma \)-stress alternate with one another. These \( p \) s contain thus a phrasal stress, a word stress and a foot stress. Complex \( p \) Form IV even contains two foot stresses.

By taking into consideration the distributional properties of these \( p \) forms, we arrive at some striking differences regarding their prosodic markedness. Firstly, complex \( p \) s (marked defaults excluded) relate to the totality of PR-\( p \) s as 168:767 in Montale, and as 106:415 in Ungaretti. This amounts to 21.9% of complex \( p \) s in Montale, and to 25.5% in Ungaretti, against 41.2% and 33.5% of default \( p \) s. Secondly, there are important distributional differences between one complex \( p \) and another. Table 3.41 presents the number and percentages of the \( o+p \)-stress domains. The percentages are determined on the basis of all the \( o+p \)-stress domains alone, i.e. of the total of 199 phrases in Montale, and the total of 120 phrases in Ungaretti.
Table 3.41. Number and percentages of $\omega+\varphi$-stress domains.

<table>
<thead>
<tr>
<th></th>
<th>Default $\varphi$</th>
<th>Complex $\varphi$</th>
<th>Complex $\varphi$</th>
<th>Complex $\varphi$</th>
<th>Complex $\varphi$</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Form II (marked)</td>
<td>Form II</td>
<td>Form III</td>
<td>Form IV</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td>nr</td>
<td>%</td>
<td>nr</td>
<td>%</td>
<td>nr</td>
</tr>
<tr>
<td>31</td>
<td>15.6</td>
<td>55</td>
<td>27.6</td>
<td>81</td>
<td>40.7</td>
</tr>
<tr>
<td>L</td>
<td>14</td>
<td>11.7</td>
<td>28</td>
<td>23.3</td>
<td>54</td>
</tr>
</tbody>
</table>

The rates indicate that $\omega+\varphi$-stress domains typically involve Complex $\varphi$ Form II, i.e. a $\varphi$ in which the phrasal stress is preceded by a foot stress and a word stress. The second most frequently occurring $\omega+\varphi$-stress domain is Complex $\varphi$ Form I. Smaller and larger $\varphi$'s than these are definitely more marked, statistically.

Consider some examples of complex $\varphi$'s. The relevant strings are placed between curly brackets.

(50) a. Va], {per te 'lho pregàto}], - ora la se te
go-IMP-2SG for you it have-1SG prayed now the thirst
'Go, I have prayed for your escape - now my thirst'

b. Meriggia], {pàlido è assorro}]
to-laze-at-noon pale and thoughtful
'To laze at noon, pale and thoughtful'

c. Tornato], {à doràre la terrà}]
'Returned to gild the earth'

d. Alzera italian tremanente], {le vecchie braccia}
raise-2SG-FUT trembling the old arms
'Tremblingly you will raise your old arms'

Returning to the line parsing tables in section 3.2, we expect line parsings which are marked due to containing fewer $\varphi$-stresses than the unmarked line parsing, to contain a relatively high number of complex $\varphi$'s. To illustrate this, consider the tables representing the prosodic parsing of $\lambda=7$ (cf. table 3.4 and table 3.5). In both Montale and Ungaretti, PR-parsing of $\lambda=7$ may give rise to $1-\varphi$ outputs. I call these outputs underparsed since they contain fewer $\varphi$-stresses than the unmarked parsing. The underparsed $\lambda=7$ lines in (51) indeed constitute complex $\varphi$'s.

(51) a. (lacrimeva nell'aria)],
cried-3SG in-the air
'wailed [faintly] through the air'

b. {A limit d'inganici}],
at limits of illusions
'At the limits of illusion'

The same correlation between line underparsing and complex $\varphi$ forms is found for other line types. In the remaining part of this chapter, more examples of the kind will be presented.
In the following sections, two issues will be addressed which also involve complex "q"s. The first issue concerns pitch accent, and the second, morphological properties of complex "q" inputs.

3.4.2.1 Complex "q" Form and the Obligatory Contour Principle

Complex "q"s are typically realized with two pitch accents. One accent is associated with the syllable with phrasal stress, and one with the syllable with main word stress. On the basis of a mere auditive analysis of the verse data, it appears that these two pitch accents differ remarkably in their target F0 value: either the first is low and the second high, or the first is high and the second low. I hypothesize therefore that Italian "q" structures are subject to the Obligatory Contour Principle (cf. Leben 1973). That is, only the pitch accent sequences in (52c) and (52d) may occur in a single "q" domain.

\[ \text{(52) OCP and Pitch Accents in Complex "q" Forms} \]

| a. \* (H* H*)\(\_q\) | c. (H* L*)\(\_q\) |
| b. \* (L* L*)\(\_q\) | d. (L* H*)\(\_q\) |

In (53) some examples are presented.

\[ \text{(53) a. L'uguale} \{\text{mi farai del sogno}\} \] 
\[ \text{H* L*} \] 
\[ \text{the equal me make-2SG.FUT of-the dream} \] 
\[ \text{you will make me dream's equal'} \] 

| b. \{le inutili macerie\} \{del tuo abisso. \] 
\[ \text{L* H*} \] 
\[ \text{the waste of-the your abyss} \] 
\[ \text{'all the waste of your abyss'} \] 

| c. \{la tua cara minaccia\} \{la consuma. \] 
\[ \text{H* L*} \] 
\[ \text{the your beloved menace it consumes} \] 
\[ \text{your beloved menace consumes it'} \] 

Notice that one and the same syntactic structure, such as the modifier-head sequences in (53b) and (53c), can be realized with a H* L* sequence as well as a L* H* sequence. Here, however, I shall not deal with the linking of pitch accents to specific syntactic and/or semantic configurations. By virtue of the identification of pitch accent sequences we are simply provided with a means to locate phonological heads.

\[ ^{18} \text{Obligatory Contour Principle (Durand 1990:248):} \]
\[ \text{For any pair of adjacent autosegments } a \text{ and } b, a \neq b. \]
3.4.2.2 Morphological Properties of Complex φ Forms

In section 3.4.1, I showed that the Default φ Form realizations typically consist of one lexical word, possibly preceded by one or more grammatical words. Complex φ's, by contrast, typically consist of two lexical words, possibly accompanied by one or more grammatical words. In fact, all complex φ's presented in the previous sections contain two lexical words. The relevant strings are repeated below.

(54) a. From (50):
   per té l'ho pregato > N(stressed pronoun)+V
   pallido e assorbot > A+A
   a dorare la terz > V+M
   le vecchie braccia > A+N

   b. From (51):
   lacrimava nell'aria > V+M
   A limiti d'inganni, > N+M

   c. From (53):
   mi farai del sogno > V+M
   le inutili macerie > A+N
   la tua cara minaccia > A+N

In what follows, we shall see that φ domains containing two lexical words are not always realized with a main word stress plus a phrasal stress. That is, destressing takes place in order to create eu rhythmic patterns.

3.4.3 Stress Deletion and Stress Addition

This section considers perceived parsings in which (a) lexical words are not always realized with main word stress or phrasal stress, and (b) grammatical words are not always realized with no stress or secondary stress. The findings confirm the structural properties of the previously introduced Default φ Form and Complex φ Forms.

3.4.3.1 Stress Deletion and Default φ Form

The Default φ Form corresponds to a phrasal prosodic structure in which the syllables with phrasal stress is preceded by two or three syllables of which the leftmost one bears secondary stress. The lexical input of these phrases is characterized by the presence of a single lexical word possibly preceded by one or more grammatical words. The examples in (55) show that phrasal inputs characterized by a sequence of two lexical words may also correspond to the structural properties of the Default Form.
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That is, *muro, vivo, poche* and *tale* are lexical words which are not perceived as being realized with main word stress. Only the syllable with phrasal stress has a clearly audible pitch accent. In other words, the relevant words have undergone word-stress deletion.

### 3.4.3.2 Stress Addition and Complex $\phi$ Form

The mirror image of stress deletion is found in certain complex $\phi$ domains. As noted earlier, *Complex $\phi$ Forms* typically contain a $\omega+\phi$-stress. In general, the input consists of two lexical words. The examples in (56) show, however, that an input consisting of one lexical word (plus one or more grammatical words) may also give rise to complex $\phi$ outputs. In other words, a main word stress is added to a syllable which is not the head-syllable of a lexical word.

#### (56)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>
| a. | **Béne non seppi,** {fuori del prodigio} | **M33:5**
|   | good non knew-1SG except for-the omen | 'Of good I found little more than the omen'
| b. | **La casa** {delle mie estati} lontane | **M52:5**
|   | the house of-the my summers distant | 'The house where I spent my summers long ago'
| c. | *e ardere* {d'inconsapevolezza} | **U43:55**
|   | and burn-INF of unconsciousness | 'burning with unknowing'
| d. | *inafferrabile* {come le idee}, | **U185:9**
|   | unseizable as the ideas | 'unseizable as thoughts'
| e. | *{Dalla crocifissione}* di **Masaccio** | **U226:30**
|   | 'From the Crucifixion of Masaccio,' |
That is, *fuori del* in (56a) is an inflected complex preposition, *delle* in (56b) is a simple inflected preposition, and *le* in (56d) is the feminine plural of the definite article. In (56c) and (56e), the main word stress is not realized by a grammatical word but by a prefix and a first member of a compound, respectively. The relevant strings contain two pitch accents:

\[(57)\]
\[
\begin{array}{ll}
   a. & \text{fuori del prodigio} \\
       & \text{H*} \\
   b. & \text{delle mie estati} \\
       & \text{H*} \\
   c. & \text{d'incònsapevolezza} \\
       & \text{L*} \\
   d. & \text{come le idee} \\
       & \text{H* L*} \\
   e. & \text{dalla crocefissione} \\
       & \text{L*} \\
\end{array}
\]

In sum, either grammatical words or non-head syllables of lexical words may surface with a main word stress (cf. Helsloot 1993). On the basis of the observation that such elements are often not realized with main word stress, I make the claim that the relevant syllables have undergone word-stress addition.

### 3.4.3.3 Stress Addition and Default ϕ Form

In the above two sections, I considered marked prosodic realizations of lexical words and grammatical words. In contrast to what is generally observed, lexical words may lack a main word stress, while grammatical words may bear a main word stress. In the present and following section, the focus of attention is not on the input words, but on the structural properties of the ϕ forms. That is, lexical words and grammatical words behave as expected. As mentioned earlier, marked default ϕ's are characterized by the fact that the Σ-stress is realized as ω-stress:

\[(58)\]
\[
\begin{array}{cc}
   \phi & \phi \\
   \Sigma & \omega > \omega \\
   \sigma & \sigma \sigma \sigma \sigma \sigma
\end{array}
\]

Consider the examples in (59).

\[(59)\]
\[
\begin{array}{ll}
   a. & \text{si compongono \{qui le storie\}, gli atti} \\
       & \text{REFL compose-3PL here the tales, the deeds} \\
       & \text{M5:13} \\
   b. & \text{\{chiòcchi di meli\}, \{frùsci di serpi\}.} \\
       & \text{cracks of blackbirds rustles of snakes} \\
       & \text{M28:4}
\end{array}
\]

20 See section 3.6.1.2 for a more detailed discussion of the prosodic behavior of complex prepositions like *fuori del*. 
c. {Bene non seppi}, fuori del prodigio
   good non knew-1SG except for-the omen
   'Of good I found little more than the omen'
   M33:5

  d. {Toccano l'anima}.
   touch-3PL the soul
   'Touch the soul'
   U185:13

c. Convertita (giù in roccia) ammutoliva,
   transformed below in rock fell-still-3SG
   'Transformed, below, to stone, fell still'
   U226:33

These ω+φ-stress sequences call for an explanation. The sequences are not only statistically marked, but also from a rhythmic point of view: ω-stress and φ-stress are placed rather close together. In chapter 8, I shall account for these marked phrases by making reference to focus.

### 3.4.3.4 Stress Deletion and Complex φ Form

In 3.4.2, I distinguished four Complex φ Forms. Something more needs to be said about Complex φ Form I, however. In addition to the structure in (60a), we also find φ's that are structured as in (60b).

\[(60)\] Complex φ Form I

\[
\begin{array}{cccccc}
\varphi & \omega & \omega & \Sigma & \omega \\
\hline
a. & \sigma & \sigma & \sigma & \sigma & \sigma \\
b. & \sigma & \sigma & \sigma & \sigma & \sigma
\end{array}
\]

That is, (60b) is called complex because the second stress in the φ domain is preceded by a weak syllable, or upbeat. On the other hand, the structure resembles the default φ insofar that the φ-stress is preceded by a Σ-stress. Table 3.42 presents the number and percentages of phrasal outputs in Montale and Ungaretti, matching (60a) on the one hand, and (60b) on the other. The rates indicate that both outputs are more or less equally distributed over the recorded corpus of poetry.

<table>
<thead>
<tr>
<th></th>
<th>σ+ω+φ</th>
<th></th>
<th>σ+Σ+φ</th>
</tr>
</thead>
<tbody>
<tr>
<td>nr</td>
<td>%</td>
<td>nr</td>
<td>%</td>
</tr>
<tr>
<td>Montale</td>
<td>55</td>
<td>46.2</td>
<td>64</td>
</tr>
<tr>
<td>Ungaretti</td>
<td>28</td>
<td>51.9</td>
<td>25</td>
</tr>
</tbody>
</table>

In other words, there are no statistical grounds on the basis of which we should consider either σ+ω+φ or σ+Σ+φ to be marked. There is no evidence so far that we are faced with either Beat Deletion or Beat Addition. In (61) and (62), examples are
given of $\sigma+\omega+\varphi$ stress and $\sigma+\Sigma+\varphi$ stress, respectively. The $\Sigma$-stress is marked by ‘’vecchie, and the $\omega$-stress by ‘‘. 

(61) a. (spiàr le file) [di rosè formèiche]
   ‘to spy the red ants filing past’
   M28:6
   b. Alerai tremante [le vècchie braccia]
   ‘Tremblingly you will raise your old arms’
   U158:9

(62) a. (su quèsta proda) che ha sorpèsà l’ònda
   ‘here on this shore surprised by the [sluggish] tide’
   M96:35
   b. [Appiè del botro], d’irrènti
   ‘Along the foot of the ravine, with raging’
   U117:5
   c. [E] mentre sco ppio di brama,
   ‘And while I burst with longing’
   U172:13

Again, the distinction lexical word $\nu$, grammatical word appears to be crucially involved. In (61), the bearers of $\omega$-stress are lexical words: spiar is a verb and rosse and vecchie are adjectives. In (62), the bearers of $\Sigma$-stress are grammatical words: quèsta is a demonstrative pronoun, appiè del is an inflected complex preposition, and mentre is a temporal conjunction.

To summarize, in the above sections I considered a number of stress deletion and stress addition phenomena. Prosodic properties of lexical inputs on the one hand, and structural properties of $\varphi$ forms on the other, may sometimes not coincide: a lexical word may lose its main word stress while a grammatical word may receive a main word stress under pressure of structural properties of $\varphi$ forms, and, vice versa, structural properties of $\varphi$ forms may be changed under pressure of the prosodic properties of lexical inputs. A more specific form of tension, i.e. stress clash, is addressed in the next section.

3.4.4 Word Final Stress and Clash Resolution

Stress clash is a classic phenomenon on the basis of which prosodic parsing has been diagnosed. In Italian, various degrees of stress clash may arise when a stress-final word is immediately followed by a stress-initial word within the same phonological utterance. This stress adjacency violates the principles of rhythmic well-formedness: weak and strong positions must alternate. The degree of phonological juncture between the two words determines how the stress clash will be resolved (cf. Nespor 1988, Helsloot 1988/1992, Nespor & Vogel 1989, Peperkamp 1992).

At this place, I restrict the analysis to resolution of stress clashes within the phonological phrase. Stress Deletion, Stress Retraction, Raddoppiamento Sintattico and Pitch Jumping are the four phenomena to be discussed. Whenever this is relevant, I shall...
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refer to Nespor & Vogel's (1986) $\eta$-formation algorithms in order to emphasize the criticisms I made earlier of this approach. Afterwards, I shall account for the phonological properties of word-final stresses occurring on the edge of the phonological phrase. I adopt Vowel Doubling as a generic term for all the phenomena that can be observed in this edge position.

Chapter 8 accounts for the presence of the above phenomena by making reference to the foot: in order to create well-formed disyllabic feet, either lexical stress or lexically specified segments may be modified in the output.

3.4.4.1 Stress Deletion

In a sequence of two adjacent lexical stresses either the first or the second may disappear in order to avoid a stress clash. Consider the examples in (63). As before, the representations are based on the results of the perception test. Stress Deletion is diagnosed if the main word stress of a lexical word is not perceived as being realized with stress. The subject pronoun tu 'you' in (63b), and the wh-word chi in (63d) are both considered to be lexically specified by main word stress. I refer to chapter 4 for arguments in favor of this assumption.

(63) a. {Quando piú sôrdo o meno} il ribollio dell'acque
   when more deaf or less the agitation of-the waters
   Louder, then muffled, the sound of seething breakers'
   < piú
   M5:19
   b. {tu forse} nel fantasma che ti salva
   you maybe in-the phantasm that you saves-3SG
   'you may [...] the phantasm who might save you'
   < tu
   M5:12
   c. {Non avrò piú pensieri} ne bonta.
   not have-1SG:FUT more thoughts nor kindness
   'I shall have no more thoughts or kindness'
   < avrò
   U17:23
   d. Chi teme piú, chi giudica?
   who fears more who judges
   'Who still would fear, who judge?'
   < chi
   U195:9

Three types of deletion can be distinguished. The first one involves word stress immediately followed by phrasal stress. As shown by tu forse in (63b) and chi giudica in (63d), the stress on the left is deleted. The second and third types involve two word stresses none of which surfaces as phrasal stress. Here, either the first or the second stress is not realized. The former type is exemplified by piú sôrdo in (63a), and the latter by avrò piú in (63c) and by chi teme in (63d).

3.4.4.2 Stress Retraction

The phenomenon of Stress Retraction differs from Stress Deletion insofar as the deletion of a stress is accompanied by the addition of a stress to a preceding syllable. The
'retracted' stress has a lower prominence degree than the original stress, i.e., it surfaces as secondary stress and not as main word stress (cf. Nespor & Vogel 1989). In fact, the 'retracted' stresses were not perceived by the listeners.

(64) a. {mi sara lieve}, meno acre la rugine... 'will be slaked, my rancor less bitter...' > sará M5:18
   b. l'acetilene] - (finché goccia) trepido 'the acetylene until drops-3SG shivering' > finché M81:39
   c. {Cosi spesso]) tra i vizi e le snaie 'so lost between the withes and the mats' M81:45
   d. Un'anima] {si fa senza piu peso}], a soul REFL makes-3SG without more weight U195:4

Recall from chapter 2, section 2.1.3, that Nespor & Vogel (1986) argue that phenomena like stress deletion and stress retraction are bounded to apply within the domain of the phonological phrase. This $\varphi$ domain is defined on the basis of the syntactic surface structure. Considering now example (64d), we observe that the string *si fa senza piu peso* behaves as a single phrase domain: the noun *peso* bears phrasal stress, the preposition *senza* main word stress, and the verb *fa* is unstressed. Since the verbal complement is syntactically branching, NV-parsing predicts a $\varphi$-boundary to occur between *fa* and *senza* [si fa]$\varphi$ [senza piu peso]$\varphi$. Notice that under this account, Stress Retraction should not apply in the involved context.

### 3.4.4.3 Raddoppiamento Sintattico

*Raddoppiamento Sintattico* has been presented as a phenomenon that can be invoked in order to create 'sufficient phonological distance' between two adjacent stresses within the same phonological phrase domain (cf. Nespor & Vogel 1979, 1986). In (65), some examples from the recorded corpus are presented in which RS is observed.

(65) a. {ma piu [f]oce} di umani atti consumati, but more sluice of human acts consumed M96:12
   b. {cosi [f]redda}] {cosi [d]um]}' 'so cold / so hard' U41:3-4

---

21 This instance of RS is the sole example found in the recordings of Montale. In fact, it is generally observed that in northern varieties of Standard Italian, like in Montale's Ligurian, *Raddoppiamento Sintattico* does not exist.
3.4.4.4 Pitch Jumping

As argued in 3.4.2.1, complex \(\phi\) domains are realized with two non-identical pitch accents. If the two syllables with pitch accents are immediately adjacent to one another, the target Fo values of the two pitches appear to differ more perspicuously. The phenomenon, to which I refer as Pitch Jumping, can be considered to be one of the mechanisms available of resolving a stress clash.\(^\text{23}\) The jump is either rising or falling.

\[(66)\]
\[
\begin{align*}
\text{a. } & \{\text{come t\'\ u fai}\} \text{ che sbatti sulle sponde} \\
& \begin{array}{c}
H^*\ L^* \\
\end{array} \\
& \text{as you do-2SG that hurls-2SG on-the beaches} \\
& \text{`You showed me how, hurling onto the beaches`} \\
\text{b. } & \text{il frullo} \{\text{che t\'\ u senti}\} \text{ non \( e \) un volo,} \\
& \begin{array}{c}
L^*\ H^* \\
\end{array} \\
& \text{the surge that you hear not is a flight} \\
& \text{`That surge you hear is no whir of wings`} \\
\text{c. } & \text{Chi teme piu\?, \{chi giudica\}?} \\
& \begin{array}{c}
H^*\ L^* \\
\end{array} \\
& \text{`Who still would fear, who judges?`} \\
\end{align*}
\]

Notice that in (66c), the wh-word with which \(H^*\) is associated is not perceived by the informants as being realized with stress. Nonetheless, the jump is clearly audible in the recorded realization. Like Stress Retraction (\(=\) Stress Deletion) and Raddoppiamento Sintattico, Stress Deletion and Pitch Jumping may also co-occur.

\(^\text{22}\) See section 2.1.2.2 for criticisms on Nespor \& Vogel's claim that Stress Retraction and RS mutually exclude each other.

\(^\text{23}\) Camilli (1965) refers to the phenomenon as to a melodic change, which is in complementary distribution with Raddoppiamento Sintattico. See chapter 8 for a more detailed discussion.
3.4.4.5 Vowel Doubling

I adopt *Vowel Doubling* as a generic term for phenomena typically involving word-final stressed vowels at the edge of a φ domain. These vowels may be re-articulated, lengthened, or accompanied by a glottal stop. Both Ungaretti and Montale evince these phenomena. In the examples, re-articulation is indicated by -V, lengthening by a double-stop, and the glottal stop by ^.

(67) a. {dei bambu-u} mormoranti.
   of-the bamboo whispering
   'of whispering bamboo'
   M96:27
b. {della cira:}; lúcida di fuliggine,
   of-the city, shining of soot
   'the city's [inner harbor], shining with soot'
   M125:8
c. {d'avorio}; [e cosi^*^] esistì,
   of ivory; and so persist-2SG
   'of ivory. And so you persist.'
   M125:28
d. {Di volont*^a*:}, bruciani
   'of will - [...] burned'
   U226:22
e. {Ricordera-i} d'avermi atteso tanto
   remember-2SG-FUT to have-me waited so-much
   'you will remember how much you waited for me'
   U158:14

Phrase-internally, *Vowel Doubling* can also be observed, as illustrated in (68). Here, it occurs in combination with Pitch Jumping.

(68) or piovorno] ora acceso], {in cui pa:r} scatti)
   now raining now illuminated in what seems bursts-3SG
   'of alternating sun and rain, [...] by what seems a [...] burst
   M81:8

Let me briefly summarize the previous sections dedicated to the resolution of stress clashes on the one hand, and the realization of word-final stressed syllables on the other. Stress Deletion, Stress Retraction, *Raddoppiamento Sintattico* and Pitch Jumping are the four phenomena that are found in stress-clashing contexts. Some of the examples presented challenge the syntax-based approach to φ formation: clash resolving phenomena occur in syntactic environments which are excluded to form a single φ. Chapter 8 argues in favor of an account of the above phenomena in terms of foot well-formedness.

Finally, if a stress-final word occurs on the right edge of the phonological phrase, Vowel Doubling phenomena are observed. That is, the vowel is either re-articulated, lengthened or followed by a glottal stop.

---

24 I refer to chapter 8 for relevant literature about these phenomena in Italian.
3.4.5 Vowel Adjacency

Let me now turn to the lowest level of the phonological phrase, i.e. to the metrical position or syllable level. As stated previously, a one-to-one correspondence between metrical positions and syllables may be hampered if the linguistic input contains two adjacent vowels. The traditional syllable-count criteria, adopted in the present work, associate across-word adjacent vowels with one metrical position, unless the first vowel is stressed. As often reported in the literature on poetic meter, syllable-count and phonetic realization cannot be equated. A gradual scale is recognized, with deletion of one of the vowels on the one hand, and full realization of both vowels on the other (cf. Kuhlman 1991). In what follows, I shall present examples which demonstrate that a strictly binary alternation crucially determines the phonetic realization of the vowels.

3.4.5.1 Adjacency of Unstressed Vowels

Unstressed adjacent vowels within a are generally realized as one syllable. The vowel on the left is either deleted or reduced to a glide, while the vowel on the right is fully realized. Some examples are given below. The underscoring indicates that the two vowels are realized as one syllable.

(69) a. qui (dove fondi) un morto
   here where sinks a dead
   'here, where dead memories mesh and founder'

b. accanto a lunghe secoche mi raggiunge
   besides long shoals me reaches
   'by a long line of shoals reaches my ear'

c. Mi darai (il cuore immobile)
   me give-2SG.FUT the heart immobile
   'you will give me the immobile heart'

Although occurring in the same a, unstressed vowels are sometimes fully realized, as indicated by the dotted underscore:

(70) a. {al mare} la in fondo fa velo
   and near-the sea there in below makes veil
   'Far below, the sea is hidden'

b. una bracciata (di, amari)
   an armful of bitter
   'an armful of your bitter'

c. {Da un'onda} riposata
   by a wave rested
   'by a rested wave'
CHAPTER 3

General, unstressed vowels separated by a \( \phi \) boundary are both fully realized (the y brackets enclose the two involved \( \phi \) domains):

a. \( \text{qui} \{\text{dove affonda, un morro}\}\)  
M5:3

b. \( \{\text{E quando, t l'ora}\} \text{ molto buia} \)
U172:10

and when is the hour very dark
‘And when the very dark hour falls’

t not always:

a. \( \text{esplo} \{\text{dine, una caccia}\}\)  
M72:26

b. \( \{\text{...}, \text{ in manz al brulichio} / / \{\text{...}\}\} \)
M96:52

onwards to-the swarming
‘against the teeming tide’

c. \( \text{Allora fu} \{\text{che, \text{entrato in San Clemente}}\),\)
U226:29

then was-3SG that entered in San Clemente
‘It was then that, on my entering San Clemente’

d. \( \text{Convertita} \{\text{giù in rocchia ammutoliva}\}, \)
U226:33

‘Transformed, below, to stone, fell still’

The rhythmic outputs of the above instances share two fundamental properties: (a) a strictly binary alternation of strong and weak syllables is realized, and (b) this rhythmic alternation preferably involves three levels. To rephrase, the outputs confirm the Default \( \phi \) Form. Consider the representations below, where \( X \) stands for syllables with phrasal stress, \( x \) for syllables with main word stress, \( x \) for syllables with foot stress, and \( x \) for stressless syllables. The row on the left represents the rhythmic outputs with full realization of the two vowels, and the row on the right those with reduced realization. The italicized representations are the ones that are realized.

<table>
<thead>
<tr>
<th></th>
<th>full realization</th>
<th>reduced realization</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>{dove affonda}</td>
<td>xxx Xx</td>
</tr>
<tr>
<td>b.</td>
<td>{accanto a lunghe secche}</td>
<td>xxx Xx Xx</td>
</tr>
<tr>
<td>c.</td>
<td>{il cuore immobile}</td>
<td>xX xX xXx</td>
</tr>
<tr>
<td>d.</td>
<td>{innanz al brulichio}</td>
<td>xX xX xXx</td>
</tr>
<tr>
<td>e.</td>
<td>{entrato in San Clemente}</td>
<td>xX xX xXx</td>
</tr>
<tr>
<td>f.</td>
<td>{giù in rocchia ammutoliva}</td>
<td>Xx Xx xXx</td>
</tr>
<tr>
<td>g.</td>
<td>{il mare}</td>
<td>xxXx</td>
</tr>
<tr>
<td>h.</td>
<td>{di mare}</td>
<td>xxXx</td>
</tr>
<tr>
<td>i.</td>
<td>{Dà un'onda}</td>
<td>xxXx</td>
</tr>
<tr>
<td>j.</td>
<td>{...} affonda un morto}</td>
<td>[x] xx Xx Xx Xx</td>
</tr>
<tr>
<td>k.</td>
<td>{E quando, t l'ora}</td>
<td>xx Xx Xx</td>
</tr>
</tbody>
</table>

The sole two instances in which two stressless adjacent vowels are fully realized are (j) and (k). These two cases show that rhythmic alternation does not involve just two
levels of alternation: the phrasal stresses have to be separated by a foot stress. I suggest that the two vowels are fully realized in order to approximate this requirement, i.e., in order to create sufficient phonological distance. Likewise, the full realizations of the vowels in (g-i) confirm the three-level alternation: a phrasal stress is preferably preceded by a foot stress. The realizations in (d)-(f) indicate that binary alternation is not bounded to the domain of the φ: adjacent vowels occurring on both edges of a φ domain may be realized as one syllable.

3.4.5.2 Adjacency of Stressed/Unstressed Vowels

The same rhythmic properties as discussed above appear to underlie the full vs. reduced realization of adjacent vowels if one of the two is stressed. In (74), examples are presented in which the vowel on the left is stressed. The degree of stress tells us whether the two vowels are part of the same φ domain or not: phrasal stress implies vowel adjacency across a φ boundary; foot or word stress implies vowel adjacency within the same φ. Full realization of the two vowels is observed in both contexts:

(74) a. d'avorio; {è così, ]esi sì]}!
of ivory; and so persist-2SG ‘of ivory. And so you persist.’
b. {Mà e scritta gia, ]in quègli sguardi}!
but is written already in those stares ‘But it’s written already in the stares’
c. {che fùn' alba} infinita e senza strade],
which was a dawn infinit and without roads ‘which was a dawn that never ended, with no roads’
d. Convertita (giù in roccia) ammutoliva,
‘Transformed, below, to stone, fell still’

Within the same φ domain, examples are found in which the unstressed vowel is reduced. That is, the stressed and unstressed vowel are realized as one syllable.

(75) a. Forse {tiavò un aspetto}]: nella luce
maybe re-have-1SGFUT a face: in-the light
‘I may regain a face: in the glancing’
b. D'un iddio, {sarò innocente},
‘Of a god, I shall be innocent’

If the vowel on the right is stressed we also find either full or reduced realization. (76) illustrates full realization. The stress degree is either phrasal (76a-d), word-like (76e) or foot-like (76f).

(76) a. {verso le strepanti, acque}]
‘to the boisterous waves’
Reduced realizations only occur within the φ domain, as illustrated in (77). The involved stress degree is phrasal in (77a), and foot-like in (77b).

(77)  
a.  {Hai chiuso gli occhi}  
   'You have closed your eyes'  

b.  Trascinante {la nuvola insolubile},  
   'Trailing a cloud that cannot be dissolved'  

The same annotation conventions as above are adopted in representing the rhythmic outputs of the just considered instances.

(78)  
a.  {è cosi`esi}  

b.  {{... gia`n quelli sguardi}  

c.  {che fu un`alba}  

d.  {gi`a in roccia}  

e.  {{... str`epaneant`acque}  

f.  {`m`en`a`cque}  

g.  {Morte`riido fiume}  

h.  {{... chi`e`ran t`utte ...{  

i.  {Gli occhi}  

j.  {da iombre}  

k.  {riav`o un aspetto}  

l.  {sarà innocente}  

m.  {Hai chiuso gli occhi}  

d.  {la n`u`vola insolubile}  

If the adjacent vowels were realized as one syllable, a stress clash would arise in (a–b). Although avoidance of clash is not at stake in (i) and (j), both vowels are also realized here. Full realization approximates the default rhythmic pattern of the φ, although not by a foot stress, the phrasal stress is preceded by a stressless syllable.
Reduced realization in \((k-n)\) follows the observed tendency: create strictly binary alternating patterns.

In sum, the dichotomy between syllable-count, or better, metrical-position count on the one hand, and phonetic realization of adjacent vowels on the other, is not grounded in the rhythmic pattern: line grids as well as phonetic realization manifest strictly binary alternation. Nonetheless, the former generally distinguishes fewer positions in a line than the latter syllables. The difference seems to lie in the number of rhythmic levels that is involved: while metrical-position count distinguishes two levels of stress, phonetic realization of rhythmic alternation distinguishes four levels of stress. Approximately, the former is only capable of recognizing vowels with phrasal stress, while the latter recognizes phrasal stress, main word stress and foot stress. With respect to metrical-position count, recall from chapter 2, section 2.4.1, that word-final stressed vowels unconditionally require the following vowel to be counted separately. This line-internal strong-weak alternation is reminiscent of the line-final strong-weak tail of Italian meters.

3.4.6 Summary

Section 3.4 has been dedicated to the internal structure of the phonological phrase. The \(\varphi\) has a syllable-level, foot-level and phrase-level, and possibly an additional word-level. By making reference to the metrical organization of these \(\varphi\)-internal constituents, we are able to account for the presence of phonological phenomena involving stress deletion and stress addition. A rough distinction between lexical words and grammatical words allows us to unfold some basic properties of the relation between linguistic input on the one hand, and prosodic output on the other.

In the next two sections, I shall focus on non-phonological properties of phrasal prosodic parsings. That is, a variety of linguistic factors can be distinguished which prove to be (partially) responsible for the fact that not all phonological phrase outputs correspond to the Default \(\varphi\) Form.

3.5 Prosodic Overparsing

The notion \textit{prosodic overparsing} encompasses the following properties:

(79) Prosodic Overparsing:

\begin{enumerate}
\item [a)] phonological phrases are overparsed if
\begin{enumerate}
\item they contain fewer metrical positions than the Default \(\varphi\)
\item they surface as marked default \(\varphi\)'s (i.e., with \(\omega+\varphi\)-stress).
\end{enumerate}
\item [b)] lines are overparsed if they contain more \(\varphi\)-stresses than the unmarked parsing of a specific line type
\end{enumerate}
The tables in section 3.2.3 illustrate how many as well as which lines are overparsed: all lines referred to by the boxes on the right of the shaded ones. Highly overparsed \( \phi \)'s are those realizations that are formally represented as in (80).

(80) \[ \begin{array}{ll}
\text{Simple } \phi \text{ Form I:} & \text{Simple } \phi \text{ Form II:} \\
\phi & \phi \\
\omega & \omega \\
a. \sigma & b. \sigma \sigma
\end{array} \]

Although less severely, the two representations in (81) are also overparsed in comparison with the \textit{Default }\phi \textit{ Form}.

(81) \[ \begin{array}{ll}
\text{Simple } \phi \text{ Form III:} & \text{Default } \phi \text{ (marked):} \\
\phi & \phi \\
\omega & \omega \\
a. \sigma \sigma \sigma & b. \sigma \sigma \sigma \sigma
\end{array} \]

There clearly is a metrical implication between line overparsing and phrase overparsing.

As shown in section 3.3, Nespor & Vogel's syntax-based algorithms of \( \phi \)-formation may lead to outputs that deviate more or less severely from the unmarked parsing of a line type on the one hand, and from the metrical properties of the \textit{Default }\phi \textit{ Form} on the other. NV-based prosodic overparsing derive from the fact that (a) branching complements are not allowed to undergo restructuring with the phrase of its head, and (b) lexical heads of relatively unrelated maximal projections are not allowed to form a single phonological phrase.

In what follows, I shall refer exclusively to PR-parsings. Indeed, prosodic overparsing is empirically attested. Statistical facts concerning the distribution of simple \( \phi \)'s in the PR-corpora provide insights into their prosodic markedness. All instances that correspond to \textit{Simple }\phi \textit{ Form I, II or III relate to the total of phrases in Montale as 219:767, and in Ungaretti as 144:415. In percentages, these relations amount to 28.5\% of simple phrases in Montale, and 34.7\% of simple phrases in Ungaretti. Of the three \textit{Simple }\phi \textit{ Forms, III occurs much more often than I or II. This is shown in table 3.43. The percentages refer to the set of simple phrases only.}

<table>
<thead>
<tr>
<th></th>
<th>Simple ( \phi ) Form I</th>
<th>Simple ( \phi ) Form II</th>
<th>Simple ( \phi ) Form III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montale</td>
<td>nr 3.2 59 27</td>
<td>nr 153 69.8</td>
<td></td>
</tr>
<tr>
<td>Ungaretti</td>
<td>nr 2.1 34 23.6</td>
<td>nr 107 74.3</td>
<td></td>
</tr>
</tbody>
</table>
Triggers of prosodic overparsing have a heterogeneous origin, i.e., they can be morphological, syntactic, semantic, pragmatic or versificational in nature. Although the set of interactions to be treated here seems to enclose a substantial part of all the possible interactions, it should be stressed that the set is not meant to be exhaustive.

3.5.1 Morphological Triggers of Prosodic Overparsing

The two morphological triggers of prosodic overparsing are (a) monosyllabic lexical words, and (b) Adjective/Adverb alternation.

3.5.1.1 Monosyllabic Lexical Items

Under the assumption that lexical words (N, V, Adj, Adv) are lexically characterized by main word stress, and that lexical words normally surface with either main word stress or phrasal stress in a phrasal context, one expects monosyllabic lexical words to conflict easily with principles of rhythmic alternation. That is, their surfacing requires the presence of adjacent unstressed syllables in order to avoid clash configurations. A monosyllabic lexical word cannot exhaustively realize a phonological phrase without creating an overparsed \( \varphi \). As seen earlier in this chapter, lexical stresses may undergo Stress Deletion, avoiding a clash between two stresses. But Stress Deletion cannot take place unconditionally. For instance, the context must provide sufficient information in order to retrieve the intended item, or the semantic structure of a sentence must permit a lexical item to be realized with reduced stress. The examples in (82) contain one or more monosyllabic lexical words. Line overparsing as well as \( \varphi \) overparsing is observed. The bracketed words are lexical monosyllables.

\( (82) \)

\begin{align*}
\text{a. } & \{Va\}, \text{ per } \{\text{te}\} \text{ l'ho pregato}, \text{ - ora la } \text{ sete} \quad \lambda=11 \\
& \text{Go, I have prayed for your escape - now my thirst} \quad M5:17 \\
\text{b. } & \{\text{Poi}\} \text{ scendesti dai monti } \text{ a riportami} \quad \lambda=11 \\
& \text{Then you came down from the hills, you brought me back} \quad M134:3 \\
\text{c. } & \text{dal giorno sparsa } \{\text{gi'a}\}, \text{ Prima per } \{\text{me}\} \quad \lambda=11 \\
& \text{from the day dispersed already pray-IMP-2SG for me} \quad M96:49 \\
\text{d. } & \{\text{Mai}\} \text{ non vedro} \text{ nella notte del sangue} \quad \lambda=11 \\
& \text{ever not see-1SG.FUT in the night of the blood} \quad U172:21 \\
& \text{Shall I never see in the night of the blood?}
\end{align*}

I just indicate the \( \varphi \)'s that are highly overparsed: \( \varphi \) in (82a), \( \varphi \) in (82b) and \( \varphi \) in (82d).

The entire set of monosyllabic lexical words in Italian is small. Leaving aside the set of non-cliticized pronouns, there are just a few adverbs, nouns and verbal forms
which are monosyllabic. By contrast, the closed class of grammatical words is relatively rich in monosyllables. This is not only a property of Italian, but of many languages. In chapter 4, I shall put forward a theoretical proposal concerning the lexical representation of monosyllabic lexical words vs. monosyllabic grammatical words.

### 3.5.1.2 Adjective/Adverb Alternation

Adverbs that are derived from adjectives by means of suffixation of *-mente* sometimes surface as if they were adjectives, i.e., they surface without *-mente*. The sentence position the adjectival form occupies with respect to the verbal head and nominal head leads us to the adverbial interpretation. Leaving aside the morphological and syntactic peculiarities of this alternation, from a metrical point of view, the forms are quite different: the fully derived *-mente* form encloses two more syllables than the bare adjectival form. Henceforth, it is predicted that the adjectival form, rather than the *-mente* form, may induce prosodic overparsing. Consider some lines and their relevant domains.

(83) a. Un fréddo cala... {Duro} il cólo svetta.  
   ‘A chill falls-down hard the blow slices’

b. viaggia una nebbia, { alta} filette un’illa  
   ‘floats a cloud, tilting skywards a [..] wing’

c. [..] montagne // {Sbocciate lievi} da leggere nuvole  
   ‘on maintains // Unfolded lightly from faint clouds’

*Duro/ duramente, alta/ altamente, and lievi/ lievemente, are the alternating pairs involved. If the disyllabic forms were replaced by the four-syllabic *-mente* forms, Default φ Form outputs would arise. In addition, phrasal stresses and main word stresses would not be placed as close together as they are now. In short, Adjective/Adverb alternation crucially impinges upon the metrical markedness of the output string. Later on, I shall argue that the fully derived form may lead to prosodic underparsing.*

### 3.5.2 Semantic/Pragmatic Triggers of Prosodic Overparsing

The presence of monosyllabic or disyllabic lexical words is not a sufficient condition, however, to encounter overparsed lines or overparsed phrases. Either by Stress Deletion or by incorporation in a complex phonological phrase, lexical monosyllables may give rise to properly parsed metrical outputs. In fact, the examples considered in the previous sections are also characterized by other highly specific non-phonological
properties. Some of these properties, like the presence of imperative constructions and deictic elements, I consider to be semantic and/or pragmatic in nature.

### 3.5.2.1 Imperatives

Imperative verb forms constitute potential triggers of prosodic overparsing. Assuming that imperatives are intrinsically emphasized, I hypothesize that they are protected against Stress Deletion. At the surface, an imperative is always realized with a relatively high degree of stress, with either phrasal stress or main word stress. The bracketed imperatives in (84) exemplify these stress properties.

\[(84)\]
\[\begin{align*}
\text{a. } & \text{[Godi]} \text{ se il vento ch'}entra nel pomario} \quad \text{M5:1} \\
& \text{rejoice-IMP if the wind that enters in-the orchard} \\
& \text{Rejoice when the breeze that enters the orchard} \\
\text{b. } & \text{che ci stringe], tu \{balza\} fuori], \{fuggi\}]} \quad \text{M5:16} \\
& \text{that us tightens-3SG you leap-IMP out flee-IMP-2SG} \\
& \text{that tightens around us, leap out, flee!} \\
\text{c. } & \text{[Va]}], \text{ per te l'ho pregato], - ora la sete} \quad \text{M5:17} \\
& \text{"Go, I have prayed for your escape - now my thirst"} \\
\text{d. } & \text{dal giorno sparsa gia].} \text{ (Prego) per me} \quad \text{M96:49} \\
& \text{"dispersed now [...] of day. Pray for me"}
\end{align*}\]

The highly overparsed φ's are the following: Godi in (84a), fuggi in (84b) and Va in (84b). That is, the phrasal stresses are not preceded by a foot stress, and they are not, or only partially flanked by unstressed syllables.

### 3.5.2.2 Enumeration

Enumeration of syntactic phrases may also trigger prosodic overparsing. The hypothesis advanced with respect to imperatives also seems to hold for enumeration: items or phrases that are part of an enumeration are intrinsically emphasized. As such, they are protected against Stress Deletion. Consider the bracketed domains:

\[(85)\]
\[\begin{align*}
\text{a. } & \text{tutto che ti riprende}, \text{[strada] \{portico\}} \quad \lambda=11 \\
& \text{[mura] \{specchi\}] \text{ ti figge in una sola} \quad \lambda=11 \\
& \text{everything that you retakes-3SG street arcade} \\
& \text{walls mirrors you fixes-3SG in a single} \\
& \text{"all things seize you, street, arcades,} \\
& \text{mirrors, walls, fixing you in a single"}
\end{align*}\]
The examples illustrate lists of NPs that are phonetically realized by either bare nouns (85ac) or nouns with modifiers (85bc). Notice that in (85a) two enumerated nouns form a single prosodic phrasal domain: *mtira specchi.* (85b) and (85c) show that the non-final element of the enumerated modified noun phrase may be subject to either Stress Deletion or Stress Addition: *mani scarne > mani scarne et rintolo di foreste > rintolo di foreste,* respectively.

The sing-sang pattern typically manifested by the enumeration of bare-noun sequences, as in (85a) and (85c), emerges by virtue of the absence of foot stress. Regarding line overparsing, notice the two φ-stresses in the λ=5 line in (85c). The unmarked parsing of λ=5 is one φ-stress.

### 3.5.2.3 Vocatives

Vocatives too are potential triggers of prosodic overparsing.25 Again, I claim the intrinsic prominence of the construction to be the cause of the prosodically marked outputs.

\[(86)\]

<table>
<thead>
<tr>
<th>a.</th>
<th>La tua leggenda], {Dora}]</th>
<th>your legend, Dora!</th>
</tr>
</thead>
<tbody>
<tr>
<td>b.</td>
<td>{Morte}], {arido fiume} //</td>
<td>Death, dry river</td>
</tr>
<tr>
<td>c.</td>
<td>Saresri accolta], {anima}]</td>
<td>would-be-2SG welcomed soul</td>
</tr>
</tbody>
</table>

---

25 I assume vocatives to include apostrophes, i.e., vocative addresses to inanimate objects or qualities. Apostrophes typically occur at the openings of poems (cf. Wales 1989).
ANALYSIS OF THE VERSE DATA

"Dura, Morte (2x) and anima, are highly overparsed $\omega$s; the phrasal stress is preceded by neither a foot stress nor an unstressed syllable.

3.5.2.4 Deixis

Prosodic overparsing may also be caused by the presence of deictic elements. Just as imperatives, vocatives and enumeration phrases, I consider deictic elements to be intrinsically emphasized. Especially in poetry, deictic elements are highly attention demanding when they refer to a world that lies outside the closed domain of the poem itself. Consider the examples in (87).

(87) a. (qui) dove affonda\[ un morto] $\lambda$=7
here where sinks a dead M5:3
'here, where dead [memories] mesh and founder'
b. Il frullo che (tù) senti non è un volo, $\lambda$=11
L* H*
'That surge you hear is no whir of wings'
c. {Questi} sòno i miei fiumi
$\lambda$=7
'These are my rivers'

The locative adverb qui, the second personal pronoun tu, and the demonstrative pronoun questi are all three realized with a relatively high degree of prominence. It should be noted that questi in (87b) can also be interpreted as being anaphoric, i.e. as referring to the 'rivers' mentioned in the text.27 In comparison with the Default $\phi$ Form, the involved outputs give rise to various degrees of prosodic overparsing.

3.5.2.5 Slow Speech

Slow speech may trigger prosodic overparsing. In particular Ungaretti often recites his poems with such an extremely low speech rate that almost all the syllables seem to be stressed. As shown in (88), the informants perceived all lexical words in these $\lambda$=7 lines to be realized with phrasal stress. In addition, the words are perceived as being separated from each other by weak phonation breaks.

(88) a. Quando eri\[ ancora] in vita. $\lambda$=7
when was-2SG still in life U158:8
'When you were still alive.'
b. Piena\[ di finte] buche, $\lambda$=7
'Full of false hollows'
U185:3

26 See Gargiulo (1958) and Sanguineti (1977) for an analysis of the use of deictic elements in Ungaretti’s I Fiumi (143); and de Rooy (1994) for the non-lyrical or narrative function of deictic elements in Ungaretti’s L’Allegria.

27 See Cinque (1976) for deixis in Italian.
The result is line overparsing and phrase overparsing.

3.5.3 Syntactic Triggers of Prosodic Overparsing

Ellipsis and Fronting are two syntactic phenomena which actively contribute to the surfacing of prosodically overparsed outputs. Just as the above presented semantic/pragmatic triggers, syntactic triggers do not necessarily give rise to prosodic overparsing. But the prosodically overparsed outputs can be explained with reference to relevant syntax-prosody interactions. Notice that these interactions are much more specific than the interaction between syntax and prosody that is assumed to exist by standard theories of prosodic constituency.

3.5.3.1 Ellipsis

Ellipsis allows certain linguistic elements to be omitted from the surface string under the condition that the context provides sufficient information to recover the omitted element. Especially the poetry of Ungaretti is characterized by non-overt realization of a variety of functional constituents. Auxiliaries, relative pronouns and conjuncts are typically involved. Consider the examples in (89). Between round brackets I present the elements which can be argued of omitting.

(89) a. [...] il getto tremulo
dei violini[, {spento}] quando rotola
the spurt tremolo // of-the violins quenched when rolls
'the tremolo spurt // of violins, quenched by the rolling [thunder]'  
M81:24-5 (che è 'which is')

b. Amore[, [...]}
{Tornato]} a doràre la terra],
'Love, [...]' // Returned to gild the earth'  
U117:1-2 (che è/sei 'which is/you are')

c. Colla mente] murata,
{cogi occhi]} cadùi in oblio],
'With mind walled-in, // Eyes fallen to oblivion'
(U17:24-5 (c 'and')

d. Da pôchi passi] {apparsi}
I passanti] [...] // pendevano
of few passes appeared-PART
the passers [...] lost
'Appearing near to me // the passers [...] lost'
(U226:14-5 (che sono 'who [appeared]')
With the functional constituents overtly realized, the strings would rather surface as proper default φ's. Omission of grammatical words implies a lack of metrically weak elements. The metrical result of ellipsis is compactness, or prosodic overparsing.

3.5.3.2 Fronting

by Fronting I mean shiftings of syntactic constituents from their normal post-verbal position to the beginning of the sentence. Fronting provides constituents with emphasis. Their relatively high degree of prominence makes fronted constituents potential triggers of prosodic overparsing:

90) a. (Bene) non seppi, fuori del prodigio
   'Of good I found little more than the omen'
   λ=11
   M33:5

b. Un freddo cala... (Duro) il colpo svetta.
   'A chill strikes ... The harsh blow slices.'
   λ=11
   M150:5

c. (L'uguale) mi farai del sogno
   'you will make me dream's equal'
   λ=9
   U117:17

d. (Mai) non vedro nella notte del sangue?
   'Shall I never see in the night of the blood?'
   λ=11
   U172:21

e. La speranza immutabile
   (In me) che fiocco nuovamente scova
   'The hope, immutable
   In me, that flame dislodges newly'
   λ=11
   U253:8-9

Hypothetically, in their original, non sentence-initial position the constituents in question would form a φ domain with the preceding material. Possible metrical outputs are the constructs in (91).

(91) a. (non seppi (il) bene)φ
b. (svetta duro)φ
c. (mi farai l'uguale)φ
d. (non vedro mai)φ
e. (scova in me)φ

Obviously, fronting of constituents, and thus, creation of overparsed phrases is given priority at the expense of default φ outputs.

3.5.4 Versificational Triggers of Prosodic Overparsing

In the following sections phenomena of prosodic overparsing will be considered which interact with principles of versification. The first phenomenon relates to the versificational figure of enjambment, the second to the opening and closing lines of poems and the third to the relation between short lines and edge positions.
3.5.4.1 Enjambment

Prosodic overparsing of line types may be caused by enjambment. Enjambment is the phenomenon in which phrasal strings are broken up by a line boundary. Generally, the linguistic string at the end of the first line is the dependent part of the phrase, and the linguistic string at the beginning of the second line is the head part of the phrase.\(^{29}\) As a consequence of this dependent-head partition, the second line is particularly susceptible to prosodic overparsing. That is, the second line contains a phrasal stress that is not, or only partially, preceded by dependent material on the same line. The broken phrases are placed between curly brackets, and the overparsed lines are indicated by an arrow.

\begin{center}
\begin{tabular}{ll}
\hline
\text{a.} & \text{dal finire il tuo viaggio], anello \{d'una} \\
& \text{catena}], immòto andare], oh troppo nòto} \\
& \text{chain unmoving go-INF oh too familiar} \\
& \text{‘chain, unmoving motion, ah, that too familiar’} \\
\hline
\text{b.} & \text{percossa]; la tempesta è dolce} \{\text{quando}} \\
& \text{sgòrga bianca}]; \text{la stella di Canicola} \\
& \text{beaten-PAST.PART. the storm is sweet when} \\
& \text{spouts-3SG white the star of Canicola} \\
& \text{‘clanging; the storm is sweet} \\
& \text{when the Dog Star shows, white’} \\
\hline
\text{c.} & \text{le ténede mollì], un frásico immenso \{rìde} \\
& \text{la term]}, già s'affoscìano strìdendo} \\
& \text{flap-3pl. the curtains soft a flurry huge rases-3SG} \\
& \text{the earth down REFL-weak-3pl. screeching} \\
& \text{‘the drooping awnings flap, a huge flurry brushes} \\
& \text{the earth; hissing [...] fall soggy [...]’} \\
\end{tabular}
\end{center}

Like *Fronting*, *Enjambment* gives emphasis to constituents that occur at the beginning of a larger domain. In the actual case, the beginning does not refer to the sentence but to the line of verse. That is, the elements on the second line of the enjambed line pair are highlighted by virtue of the line break. Again, this kind of focalization appears to have priority over default φ formation.

3.5.4.2 Opening and Closing Lines of Poems

The opening and closing lines of poems typically surface as prosodically overparsed. The poets often read these lines with a lower rate of speech than poem-internal lines. Consider some examples. Opening lines are given in (93), and closing lines in (94).

\(^{29}\) Enjambment is generally accounted for with reference to syntactic head-dependent relations (cf. Leij 1971, Di Girolamo 1976), but see Helgloot (1988/1992) for an account in terms of prosodic as well as metrical head-dependent relations.
Many of the φ's in (93) and (94) are overparsed: phrasal stresses are not preceded by unstressed syllables and/or foot stresses.

3.5.4.3 Short Lines and Edge Position

Short lines in the poetry of Montale and Ungaretti are typically characterized by prosodic overparsing. In section 3.2.4, I introduced *Versification Principle 1* which states that a line of verse must be minimally realized by one φ-stress. This principle seems to have more weight than the *Default φ Form*. However, a property of short lines, especially manifested in Montale, is that they often occur in edge position, i.e. in poem-final, stanza-final or sentence-final position. I illustrate the phenomenon with λ=2 lines. In (95a) and (95c), the lines are poem-final, and in (95b), the line contains the final word of a sentence.

(95) a. scordato strumento, [M11:17-8]
'discordant instrument'

b. O rabido ventare di scirocco [M68:2-3]
'O rabid blow-INF. of scirocco'
CHAPTER 3

'O scirocco, rabid gale
that parches
the cracked green-yellow ground;'

c. Talmente amati] che immortali parvero,

In other words, deliberately created overparsed lines seem to have a highly specific function, namely to attract attention. Like *Fronting* and *Enjambment*, the combination *Short Line-Edge Position* emphasizes the linguistic input. Again, priority is given to this emphasis, not to the realization of default \( \varphi \)'s.

3.5.5 Summary

In the above sections I presented a series of non-phonological linguistic phenomena which display a potential to create prosodically overparsed phrases and lines. Lexica monosyllables, metrically simple adverbial forms, imperatives, enumeration, vocatives deictic elements, slow speech, ellipsis, fronting, enjambment, opening and closing lines, and short lines in edge position are the phenomena in question. In contrast to default phonological phrases, overparsed phrases do not manifest a three-leveled rhythmic alternation. They often surface as di- or trisyllables of which one syllable has phrasal stress and the other(s) have no particular stress degree. A fundamental correlation between prosodic overparsing on the one hand, and the involved non-phonological phenomena on the other, is that they both contribute to the focalization of the input.

3.6 Prosodic Underparsing

*Prosodic underparsing* is the reverse of overparsing, and is characterized by the following properties:

(96) Prosodic Underparsing:

(a) phonological phrases are underparsed if they contain more metrical positions than the *Default* \( \varphi 

(b) lines are underparsed if they contain fewer \( \varphi \)-stresses than the unmarked parsing of a specific line type

The degree of underparsing may vary. In what follows, I shall mainly deal with strongly underparsed phrases, i.e. with phrases which formally allow separation into two properly structured \( \varphi \)'s (at righthand side in (97)):
(97) Underparsed $\varphi$'s (strong):

\[
\begin{array}{cccc}
\varphi & \varphi & \varphi \\
\Sigma & \omega & \Sigma & \omega \\
a. \quad \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \\
\varphi & \varphi & \varphi \\
\omega & \Sigma & \omega & \omega & \Sigma & \omega \\
b. \quad \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \\
\varphi & \varphi & \varphi \\
\Sigma & \omega & \omega & \omega & \Sigma & \omega & \omega \\
c. \quad \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \sigma \\
\end{array}
\]

These strongly underparsed $\varphi$'s call for an explanation.

As shown in section 3.3, Nespor & Vogel's syntax-based algorithms to $\varphi$-formation may lead to underparsed outputs. In what follows, I shall exclusively refer to PR-based underparsing. Triggers of underparsing are either morphological, syntactic, semantic, pragmatic or versificational in nature. Often these triggers overlap in the sense that they display a combination of properties. Like triggers of prosodic overparsing, triggers of underparsing are just potential triggers, i.e., they do not necessarily give rise to prosodic underparsing, but their presence favors its emergence.

3.6.1 Morphological and Syntactic Triggers of Prosodic Underparsing

Polymorphemic words may easily give rise to surfacing of underparsed $\varphi$'s. And so do complex prepositional constructions and possessive constructions.

3.6.1.1 Polymorphemic Lexical Words

Polymorphemic lexical words favor the emergence of underparsed phrases and/or lines. Polymorphemic words are morphologically complex in the sense that one or more affixes are added to the root. As a consequence of this complex word structure, the phonological structure often also emerges as complex. That is, the more affixes attached to a root, the more syllables the output word will have. Although it is well-known that morphological structure and phonological structure are not in one-to-one correspondence, there is a tendency in such a direction. The generalization holds that polymorphemic words preceded by one or more grammatical words easily give rise to prosodic underparsing. Consider some examples. Notice in (98a) the bracketed vowel of the preposition $di$; although the written version does not contain this vowel, Montale realizes both this vowel and the adjacent identical one.30

---
30 Two informants added this /i/ in their written copy of the poem.
Phrasal underparsing and lexical integrity appear to be closely related: morphological words display a resistance to being separated into two phonological phrases. In fact, phonological phenomena typically characterizing the edges of a \( \phi \) domain, like lengthening or boundary tones, may be observed at the edge of a morphological word but not somewhere in the middle. As for the functional elements in (98b), like affixes, they are hardly capable of forming a \( \phi \) on their own: the determiner \( \text{La} \) and the possessive pronoun \( \text{tua} \) require a lexical word to attach to prosodically.31

Regarding polymorphemic words, let me return to the Adjective/Adverb alternation discussed before. As argued in 3.5.1.2, the alternation crucially impinges upon metrical markedness. Bare adjectival forms may give rise to prosodic overparsing, and adverbs formed by suffixation of -mente may give rise to prosodic underparsing. The recorded corpus contains a single example of this derivation:

\[(99) \text{In me che fuoco nuovamente scova}}\]

'In me, that flame dislodges newly'

The prosodic output gives rise to a weakly underparsed \( \phi \).

3.6.1.2 Complex-Preposition Constructions

A second potential morphological or morpho-syntactic trigger of prosodic underparsing is the complex-preposition construction. Generically, I take a complex preposition to be any polymorphemic construction whose function is prepositional. Some examples are: sequences of two prepositions like \( \text{accanto a} \) 'beside', \( \text{vicino a} \) 'close to' and \( \text{fuori di} \) 'outside', or sequences of the type preposition+noun+preposition like \( \text{in mezzo a} \) 'in the midst of', \( \text{per via di} \) 'owing to' or \( \text{in base a} \) 'on the ground of'. In chapter 4, I shall follow Rizzi (1988) in considering these constructions to be lexicalized items.32

Prosodically, these prepositional constructions are also complex, i.e., they consist of at least three syllables. In comparison with simple monosyllabic prepositions,}

31 Within short, we will see that possessive pronouns display a variety of prosodic properties. That is, they are not always prosodically dependent, as illustrated here.

32 Rizzi (1988) presents a number of lexico-semantic and morpho-syntactic arguments in favor of the lexicalization of these prepositional constructions.
complex prepositions favor therefore the emergence of prosodically underparsed phrases.

\[(100)\]

\begin{itemize}
\item a. Un rovello [e di quà dall’èrto muro]
  \textit{a rage is of here from-the steep wall}
  \(\lambda=11\)
  M5:10
\item b. \{accanto a lànghe secche\} mi raggiunge
  \textit{‘by a long line of shoals reaches my ear’}
  \(\lambda=11\)
  M51:11
\item c. Sarai una statua\{ davanti ill’Eterno\},
  \textit{‘you will be statue in-front of the Eternity’}
  \(\lambda=11\)
  U158:6
\end{itemize}

Notice that the \(\lambda=11\) lines contain just two \(\varphi\)-stresses, and not three, as displayed by the unmarked parsing. The phonological phrases are also underparsed: phrasal stresses do not follow each other at a distance of about four metrical positions, but at a distance of about six or seven positions. The unmarked syntactic position of prepositions as well as their functional interpretation with respect to nominal heads favors their prosodic dependency.

Nevertheless, we also come across prosodic parsings in which complex prepositions are associated with phrasal stress:

\[(101)\]

\begin{itemize}
\item a. \{a sommo di minúscule biche\}
  \textit{‘at the tips of the tiny sheaves’}
  \(\lambda=10\)
  M28:8
\item b. \{vicino allà matita delle labbra\},
  \textit{‘close to-the pencil of-the lips’}
  \(\lambda=11\)
  M125:26
\end{itemize}

In other words, complex prepositions are potential triggers of prosodic underparsing, but they do not necessarily give rise to prosodically underparsed outputs.

### 3.6.1.3 Possessive Constructions

Another potential trigger of prosodic underparsing is the possessive construction in Italian. The basic word order of possessive pronouns in Italian is possessive pronoun \(>\) noun. Leaving exceptions aside, prenominal possessives in Italian must be preceded by a determiner: DET-POSS-NOUN. If this possessive-noun string is also enriched with elements like prepositions, verbs or non-possessive adjectives, complex prosodic phrases easily emerge:

\[(102)\]

\begin{itemize}
\item a. La casa [délle mie estati] lontane
  \textit{‘The house where I spent my summers long ago’}
  \(\lambda=11\)
  M52:5
\item b. \{là tua legge risciusa\}: esser vasto e diverso
  \textit{‘the your law perilous: be-INF vast and various’}
  \(\lambda=14\)
  M52:16
\end{itemize}

\[^{13}\text{See Cordà (1988) for a detailed presentation of possessive constructions in Italian.}\]
c. Questi {sòno
i miei fiumi}
'These are // my rivers'

As the examples show, the possessive itself can be realized with no stress (102b), foot stress (102a) or main word stress (102c). In contrast to plain adjectives, pre-nominal possessives disfavor phrasal stress. In other words, pre-nominal possessives differ from other pre-nominal adjectives with respect to this stress property: the latter are intrinsically stress-bearing, the former not. One counter-example occurs in the recorded subcorpus. Notice however that the phrasal stress on nostri may be triggered by the immediately following line break.

(103) Ritornavamo {dai nostri}
    vagabondari infruttuosì}.  M72:40-1
    came-back-1.pl. from-the our // wanderings useless
    'This was when we came back home from our // useless wanderings'

By virtue of being intrinsically unstressed or weakly stressed, pre-nominal possessives may give rise to underparsed phrases:

(104) a. {La tua irrequietudine} mi fa pensare
    'Your restlessness reminds me'
    \lambda=13  M125:16
b. Questa {è la mia nostalgia}
    'This is my nostalgia'
    \lambda=8  U43:63

In the next section, I shall continue examining the prosodic behavior of possessives. A syntactically marked word order is considered in the light of prosodic well-formedness.

3.6.1.4 Possessive Inversion

The lines in (105) contain what I call inverted possessive constructions. It should be said that the lines rather surface as prosodically overparsed than as prosodically underparsed. That is, the \lambda=8 is generally realized with two instead of three \pi-stresses, and the \lambda=11 is generally realized with exactly three \pi-stresses (i.e. with no additional word stress). Regardless of these line-parsing deviations, the lines are characterized by the presence of a highly marked syntactic configuration: the normal word order DET-POSS-ADJ-NOUN surfaces as DET-ADJ-POSS-NOUN. Prosodically, these possessive strings are parsed into two phonological phrases:

(105) a. una bracciata {di amara tua scorza}], istante; discosta
    of bitter your bark
    \lambda=8  M72:24-5
    'O Instant, an armful of your bitter bark, [...] the distance'

34 See section 3.3.2 for examples of pre-nominal modifiers realized with phrasal stress.
ANALYSIS OF THE VERSE DATA

b. malcerto] {il certo tuo fuoco}. 
uncertain the certain your fire 
‘your certain fire [...] uncertainty’ 
\( \lambda = 8 \) 
M107:4

c. non far] {del grande suo viso} in ascolto 
not make-IMP of-the great her face into listening 
‘Don’t change her great listening look’ 
\( \lambda = 11 \) 
M150:3

Without the inversion the strings easily lead to underparsed φ’s, as illustrated by the constructs below:

\( (106) \)

a. di tua amara scorza / di tua amara scorza
b. il tuo certo fuoco / il tuo certo fuoco
c. del suo grande viso / del suo grande viso

Under the assumption that possessives are grammatical words rather than lexical words, possessive inversion leads to binary alternation expressed by sequences of grammatical words and lexical words, i.e., to alternation of prosodically weak and strong elements (F=grammatical word, L=lexical word):

\( (107) \)

Possessive Inversion:

\[
\text{DET-POS-ADJ-NOUN} > \text{DET-ADJ-POS-NOUN} \\
\text{F-F-L-L} > \text{F-L-F-L}
\]

Prosodic pattern:

\[
\text{weak-weak-strong-strong} > \text{weak-strong-weak-strong}
\]

FLLL rather than FLLL patterns may fulfill the requirements of the Default φ Form. Syntactically weak and strong elements alternate, like metrically weak and strong elements. That is, possessive inversion actively contributes to the realization of metrically well-formed prosodic outputs.

3.6.2 Narrativity and Prosodic Underparsing

Especially with respect to the poetry of Montale, the emergence of underparsed φ’s receives an explanation when placed in the light of narrativity. As convincingly demonstrated by De Rooy (1994), the Italian lyric poetry of the first half of this century—which includes the poetry of Montale and Ungaretti—is rich in elements that are generally associated with narrative genres. Finite verb forms, the past tense and temporal adverbs support the fundamental narrative property of telling a story in time. The presence of personal pronouns which allow for an unequivocal identification of the agents and/or the participants in the story enforces the narrativity of the text. As argued by De Rooy, these text-internal narrative aspects favor a narrativizing attitude on the part of the reader.

Regarding the prosodically underparsed lines and/or phrases, the presence of narrativizing aspects is striking. That is, there seems to be a correlation between...
narrativity on the one hand, and prosodic underparsing on the other. Consider the bracketed strings in (108).

(108) a. {Poi seguimmo il canale} fino alla darsena
then followed-1PL the canal until to-the inner-harbor
'Then we followed the canal back to the [...] inner harbor'

b. {Come allora oggi} in tua presenza impietro,
then followed-1PL the canal until to-the inner-harbor

\[\begin{align*}
\text{Tu mi hai detto primo} & \quad \lambda = 12 \\
\text{ch\'e il piccino fermento} & \quad \lambda = 7 \\
\text{del mio cuore} & \quad \lambda = 11 \\
\text{del tuo}; \quad \lambda = 7 \\
\text{[la tua legge rischiosa]}; \quad \lambda = 14 \\
\text{e insieme fisso;} & \quad \lambda = 5 \\
\text{O sea,} & \\
\text{petrified by your presence then as now,} & \\
\text{I think myself not worth the grave admonition} & \\
of your breath. You told me as a child & \\
the petty ferment & \\
of my heart was merely a moment & \\
of yours; that your perilous law & \\
lay deep within me: to be vast and various, & \\
but unchanging too'
\end{align*}\]

In (108a), the temporal adverb, past tense and first person plural contribute to the narrativizing or prosaic reading of the line. In (108b), the second person singular which the poet addresses is the mare, the Mediterraneo. The fragment, from Antico, son sbiaccato dalla voce, contains a relatively large number of underparsed prosodic phrases. In other words, the prosody of the fragment enforces the observation that Montale's Mediterraneo poems are highly narrative in nature.35

3.6.3 Versificational Triggers of Prosodic Underparsing

In the following subsections two phenomena of prosodic underparsing are examined which have in common their interaction with principles of versification. The first phenomenon relates to the versificational figure of enjambment, the second to the presence of long lines.

3.6.3.1 Enjambment

As shown in 3.5.4.1, the correlation between enjambment and prosodic underparsing generally involves the second line of the enjambed line pair. The inverse correlation

---

i.e. between enjambment and prosodic underparsing, involves rather the first line. Consider in this regard the λ=11 lines in (109ab) and the λ=7 line in (109c) which surface with fewer than three and two φ-stresses, respectively. The relevant first lines contain two/three unstressed or weakly stressed syllables which are dependent on the φ-head occurring on the next line.

(109) a. con se trasclina], viscide], {non mai svelte}], tèmi di vita e ti protendi
with him drags-3SG slimy not ever
1.=11
torned-up quiverings of life and REFL lean out-2SG ‘dragging [...], all slime, never
torn up, quivering with life, you lean out’

1.=11

b. nell’ora che si scioglie], il cenno {d’una vita strozzata]} per te sorta], e il vento
in-the hour that REFL dissolves the sign of-a life strangled for you emerged and the wind
1.=11
’in the hour dissolving, this is the call of some strangled life that emerged on your behalf, and the wind’

1.=11

c. E, per sempre], {[aprile Trascinante]} la nuvola insolubile],
‘And, for ever, April
1.=7
‘Trailing a cloud that cannot be dissolved’

1.=11

M81:47-8

More interesting with respect to the correlation between prosodic underparsing and enjambment is the following: phrasal prosodic parsing across a line boundary often gives rise to underparsed phrases. More peculiarly, it appears that across-λ parsing rather involves complex or underparsed phrases than default phrases. Some statistics to illustrate the point: Ungaretti’s recordings evince five instances and Montale’s recordings 39 instances of φ-formation across a λ boundary. The five across-λ φ’s in Ungaretti all give rise to underparsed φ’s. In Montale, there are 17 underparsed φ’s against 22 default φ’s. Given the percentages of the unmarked parsings presented in section 3.2, the high amount of across-λ phrases that are underparsed is thus highly significant. Let me present some examples:

(110) a. nell’aria persa], innanzi al {brulichio dei vivi}; [...] M96:52

1. ‘in the violet air, against the teeming tide // of the living’

b. strazia] com’unghia ai vetri], {Cerco il segno smarrito], [...] M133:10-1

1. ‘screeches like a fingernail on glass. I look for the lost // sign’

c. balestrucci {dal palo del telegrafo} al mare M139:2-3

1. ‘martins [flying] from the telegraph // poleeward’
CHAPTER 3

d. Come] [di sigheri
di retti] calate nell'acqua].
‘As of corks // Of nets lowered into the water.’

e. E, per sempre], [l'aprile
Trascinante] la nuvola insolubile],
‘And, for ever, April
Trailing a cloud that cannot be dissolved’

How can we explain these underparsing? A first not very impressive observation is that the elements on both sides of the line boundary are part of the same sentence (i.e., there are no across sentence-boundary underparsed φ’s). Of more interest is the fact that the head of the φ, occurring on the second line, is indeed syntactically related to the dependent material on the first line, but not as strongly as might be expected. By means of the syntactic notions to which Nespor & Vogel (1986) refer in their φ-formation definitions, only (110b) can be accounted for. That is, il regno and smarrito might form a single φ, since smarrito is the first and non-branching complement of il regno. NV-parsing cannot account for the other examples, however: the complements in (110acd) are all branching. In addition, Trascinante in (110e) introduces a nonrestrictive relative clause which, according to Nespor & Vogel (1986:188), should be prosodically separated from its head by an intonational phrase boundary. In actual case, the head l'aprile and the gerund form one φ domain.

In sum, the underparsed φ’s in (110) fly in the face of the law: they challenge the generally observed pattern that line boundaries and φ boundaries coincide, and they challenge the structural principles of the Default φ Form.

3.6.3.2 Long Lines

As mentioned in section 3.2.5, long lines are characterized by the fact that they contain relatively many phrases that are larger than the Default φ Form. I also mentioned some differences between NV-parsing on the one hand, and PR-parsing on the other, where long lines are concerned: syntax-based parsing assigns more phonological phrases to long lines than are attested in the recorded readings. Consider again section 3.2.5, for relevant examples.

3.6.5 Summary

In the above sections I presented a series of non-phonological linguistic phenomena which display the potential for creating prosodically underparsed phrases and lines. The phenomena include: polymorphemic words, complex prepositions, possessive constructions, narrativity, enjambment and long lines. I also discussed the syntactically marked phenomenon of possessive inversion the prosodic output of
which better fits the rhythmic requirements of the default φ. Generalizing, in contrast to the three-leveled rhythmic alternation of the default φ, underparsed phrases reflect four levels of alternation: no stress, foot stress, main word stress and phrasal stress. Where prosodic overparsing implies focalization, prosodic underparsing rather implies flatness or continuance.

3.7 Conclusions

In this chapter, I presented a set of phonological phrase structures which emerged on the basis of a threefold analysis of the poetry of Ungaretti and Montale. Hypothetic syntax-to-prosody parsings, perception-based parsings, and strictly binary alternating line grids, gave rise to phonological phrases which are metrically structured into syllables, feet and prosodic words. These phonological phrase structures are listed in (111).

\[
\begin{align*}
\text{a. Simple φ Form I:} & \quad \phi \\
\text{b. Simple φ Form II:} & \quad \phi \\
\text{c. Simple φ Form III:} & \quad \phi \\
\text{d. Default φ Form:} & \quad \phi \\
\text{e. Default φ Form (marked):} & \quad \phi \\
\text{f. Complex φ Form Ia:} & \quad \phi \\
\text{g. Complex φ Form Ib:} & \quad \phi \\
\text{h. Complex φ Form Iib:} & \quad \phi \\
\text{i. Complex φ Form Ic:} & \quad \phi \\
\text{j. Complex φ Form IV:} & \quad \phi
\end{align*}
\]

Table 3.44 presents the number and percentages with which these different φ forms occur in the recorded corpora. The row on the righthand side gives the (sub)sections in which the φ forms were discussed.
Table 3.44. Number and percentages of PR φ Forms.

<table>
<thead>
<tr>
<th></th>
<th>Montale</th>
<th></th>
<th>Ungaretti</th>
<th></th>
<th>section</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>nr</td>
<td>%</td>
<td>nr</td>
<td>%</td>
<td></td>
</tr>
<tr>
<td>Simple φ Form I</td>
<td>7</td>
<td>0.9</td>
<td>3</td>
<td>0.7</td>
<td>3.5</td>
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<tr>
<td>Simple φ Form II</td>
<td>59</td>
<td>7.7</td>
<td>34</td>
<td>8.2</td>
<td></td>
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<tr>
<td>Simple φ Form III</td>
<td>153</td>
<td>20</td>
<td>107</td>
<td>25.8</td>
<td></td>
</tr>
<tr>
<td>Default φ Form</td>
<td>285</td>
<td>37.2</td>
<td>125</td>
<td>30.1</td>
<td>3.2/3.4</td>
</tr>
<tr>
<td>Default φ Form (marked)</td>
<td>31</td>
<td>4</td>
<td>14</td>
<td>3.4</td>
<td>3.4,3.3</td>
</tr>
<tr>
<td>Complex φ Form Ia</td>
<td>119</td>
<td>15.5</td>
<td>54</td>
<td>13</td>
<td>3.4</td>
</tr>
<tr>
<td>Complex φ Form II</td>
<td>81</td>
<td>10.5</td>
<td>54</td>
<td>13</td>
<td>/3.6</td>
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<tr>
<td>Complex φ Form III</td>
<td>27</td>
<td>3.5</td>
<td>20</td>
<td>4.8</td>
<td></td>
</tr>
<tr>
<td>Complex φ Form IV</td>
<td>5</td>
<td>0.7</td>
<td>4</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>767</td>
<td>100</td>
<td>415</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

In both Montale and Ungaretti, the Default φ Form occupies the top position, followed by Simple φ Form III. The third position is occupied by the Complex φ Form Ia in both Montale and Ungaretti, and by Complex φ Form II in Ungaretti. In Montale, the latter occupies the fourth position. In terms of metrical positions, the order of phrases from most frequent to less frequent is as follows: 4-3-5-6-2-7-1/8.

On the basis of a comparison between NV-parsings and PR-parsings, I formulated two hypotheses, the Minimal φ Hypothesis and the Maximal φ Hypothesis. A phonological phrase consists minimally three and maximally six metrical positions. Thus, phrases containing one or two positions are subminimal, and phrases containing seven or eight positions are supramaximal. Subminimal as well as supramaximal phrases typically occur under pressure of non-phonological structures involving focus and continuance, respectively.

Syntactic notions like branchingness, non-recursive side and head-complement fail to accurately predict how lexical words and grammatical words are parsed in the output. On the basis of all the PR-parsed outputs (see Appendix E), it results that NV-parsing and PR-parsing coincide in 68.3% in Montale, and in 74.4% in Ungaretti. Obviously, this correspondence derives from the fact that lexical words in both parsings provide the head syllable of the phonological phrase. The other 31.6% and 25.5% of the PR-parsings provide crucial evidence in favor of a prosodic account of phonological phrasing based on metrical well-formedness. In the following chapters, this account will be formalized in a theory of metrical phrasing. Chapter 4 is dedicated to the prosodic input representations of words on the one hand, and to the prosodic properties of metrical templates on the other. Chapter 5 illustrates how these two input specifications are matched up in the output. The chapters 6 and 7 deal with prosodic overparsing and prosodic underparsing, respectively.