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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6 Phonological Phrase Minimality

6.0 Introduction

The present chapter is dedicated to phonological phrase outputs that are smaller than the default $\phi$. In chapter 3, I distinguished three Simple $\phi$ Forms which were found in the poetry of Ungaretti and Montale. These forms are repeated in (1).

(1) a. Simple $\phi$ Form I:    b. Simple $\phi$ Form II:    c. Simple $\phi$ Form III:

<table>
<thead>
<tr>
<th>$\phi$</th>
<th>$\phi$</th>
<th>$\phi$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$\omega$</td>
<td>$\omega$</td>
<td>$\omega$</td>
</tr>
<tr>
<td>$\Sigma$</td>
<td>$\Sigma$</td>
<td>$\Sigma$</td>
</tr>
<tr>
<td>$\sigma$</td>
<td>$\sigma$</td>
<td>$\sigma$</td>
</tr>
</tbody>
</table>

In the recorded corpus of poetry, the proportions of occurrence of these $\phi$ forms evince a rapid decrease from Simple $\phi$ Form III to Simple $\phi$ Form I. On the basis of a comparison between syntax-based NV-parsings and perception-based PR-parsings, in section 3.3 I formulated the hypothesis that the phonological phrase has a minimal size. This Minimal $\phi$ Hypothesis was defined in terms of the number of metrical positions a $\phi$ should minimally contain, namely three. I now reformulate this hypothesis in terms of prosodic constituency:

(2) Minimal $\phi$ Hypothesis (revised)

A $\phi$ minimally contains a loose minimal word (LMinw).

That is, Simple $\phi$ Form III constitutes the Minimal $\phi$ template. Its prosodic word is loosely binary:

(3) Minimal template:

\[
\begin{array}{c|c|c|c|c}
1_{\phi} & 1_{\omega} & 1_{\Sigma} & 1_{\sigma} & 1_o \\
\end{array}
\]

\[1\]
Parts of this chapter were presented at ConSole III, Venice, November 1994 (cf. Helsloot, to appear), and at the LAGB meeting in Newcastle, April 1995.

\[2\]
The actual proportions in Montale are 20%, 7.7% and 0.9%, and in Ungaretti 25.8%, 8.2% and 0.7% for Simple $\phi$ Form III, II and I, respectively.

\[3\]
See section 4.1 for a presentation of the structural properties of the $\phi$ templates.
CHAPTER 6

Both Simple $\Phi$ Form I and Simple $\Phi$ Form II are thus phrasal outputs instead of input templates. The former violates the constraint FILL-$\Sigma$ (cf. section 5.1.2) as well as the constraint that ensures proper filling of the Min$\Phi$ template, the latter just violates this FILL-Min$\Phi$ constraint:

(4) \text{FILL-Min$\Phi$: the Min$\Phi$ template must be filled}

In this chapter, I shall present a formal account of the observations made in chapter 3 concerning the inappropriateness of the claim that the syntactic surface structure constitutes the input from which prosodic constituency is constructed. Crucial to this account is the constraint FILL-Min$\Phi$. In section 6.1, I shall briefly consider the textual inputs giving rise to minimal and subminimal phrase outputs, as well as indicate which subphrasal PARSE and FILL constraints are involved. In section 6.2, the autonomy of \text{cp} formation with respect to syntax is considered. A number of different syntactic structures will be distinguished including head-complement sequences, branching sitemodes and coordination. The prosodic parsing of these structures is confronted with Nespor & Vogel's relation-based approach, Selkirk's end-based approach and Inkelas & Zec' arboreal approach. Section 6.3 is dedicated to subminimal phrase outputs. The potential triggers of prosodic overparsing, discussed in section 3.5, receive a formal account. Some of the triggers will be argued to be specified by a $\Phi$-head feature in the textual input, others will be argued to be specified by a $\Phi$-template in the templatic input. The textual $\Phi$-head feature must be properly parsed in the output: PARSE-$\Phi$. The template must be properly filled in the output: FILL-$\Phi$. A constraint ranking in which both PARSE-$\Phi$ and FILL-$\Phi$ dominate FILL-Min$\Phi$ accounts for the subminimal phrase outputs.

6.1 (Sub)minimal Phrasing: Inputs and Outputs

In contrast to the large set of textual inputs giving rise to Def$\Phi$ (or 2-$\Sigma$ phrase) outputs, the Min$\Phi$ (or LMin$\Phi$-1-$\Sigma$ phrase) allows for considerably fewer textual inputs. The one-word inputs are listed in (5). Again, the $\sigma$-head features associated with the full vowels (V) are not indicated.

(5) \[
\begin{array}{ccc}
\sigma \\
\text{a.} /CVCVCV/ \\
\quad \text{[sentire]$\Phi$} \\
\quad \text{M28:14} \\
\quad \text{[memoria]$\Phi$} \\
\quad \text{U172:23} \\
\quad \sigma \\
\text{b.} /CVCV/ \\
\quad \text{[Lakme]$\Phi$} \\
\quad \text{M146:9} \\
\quad \text{[cost]$\Phi$} \\
\quad \text{U41: 7}
\end{array}
\]

\footnote{In 5.3, 54 textual inputs to the Default $\Phi$ template were distinguished.}
A constraint that is violated by input-output forms like (5) is PARSE-σ. That is, the initial syllable is not parsed into a foot. Recall from section 5.2.2, that I accounted for such weak layerings by means of FILL-Σ. FILL-Σ outranks PARSE-σ. The tableau in (6) illustrates the interaction with respect to /sentire/. It should be mentioned that in principle all three φ templates, i.e. the Minφ, Defφ and Maxφ template may be associated with a TexIn. Obviously, a matching of the relevant TexIn in (6) with the Maxφ template gives rise to a considerable number of FILL violations.

(6) FILL-Σ >> PARSE-σ, from [sentire]φ (M28:14)

<table>
<thead>
<tr>
<th>Candidates</th>
<th>FILL-Σ</th>
<th>PARSE-σ</th>
</tr>
</thead>
<tbody>
<tr>
<td>/lφ[σ][σ]</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>/lφ[σ][σ]</td>
<td></td>
<td>* !</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>i. sentire</th>
<th>j. sentire</th>
</tr>
</thead>
<tbody>
<tr>
<td>[lφ[σ][σ]]</td>
<td>[lφ[σ][σ]]</td>
</tr>
</tbody>
</table>

In (7), the two-word inputs giving rise to Minφ outputs are listed.5

(7)

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>/l/ /lvcvcv/</td>
<td>[dar] φ [uguale] φ</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M72:8</td>
</tr>
<tr>
<td>b.</td>
<td>/l/ /lvcvcv/</td>
<td>[maccolsero] φ</td>
</tr>
<tr>
<td></td>
<td></td>
<td>U117:17</td>
</tr>
<tr>
<td>c.</td>
<td>/l/ /lvcvcv/</td>
<td>[che sbatt] φ</td>
</tr>
<tr>
<td></td>
<td></td>
<td>U226:31</td>
</tr>
<tr>
<td>d.</td>
<td>/l/ /lvcvcv/</td>
<td>[che qui] φ</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M52:19</td>
</tr>
<tr>
<td></td>
<td>/l/ /lvcvcv/</td>
<td>[sull'erba] φ</td>
</tr>
<tr>
<td></td>
<td></td>
<td>U117:7</td>
</tr>
<tr>
<td></td>
<td>/l/ /lvcvcv/</td>
<td>[che qui] φ</td>
</tr>
<tr>
<td></td>
<td></td>
<td>M125:11</td>
</tr>
<tr>
<td></td>
<td>/l/ /lvcvcv/</td>
<td>[in me] φ</td>
</tr>
<tr>
<td></td>
<td></td>
<td>U253:9</td>
</tr>
</tbody>
</table>

5 Appendix E presents the PR-parsings of the recorded corpus. The contexts in which the above Minφ outputs occur can be found there. At this place, we are interested in the internal properties of the Minφ outputs.
Subphrasal constraint interactions of particular interest involve the input-output pairs in (7f) and (7g). In (7f), a textual Σ-head surfaces as φ-head. The Σ-feature itself is properly parsed into a prosodic word (PARSE-Σ). The φ-head position of the template, by contrast, is not properly filled. That is, the φ head is not realized by a lexical word, as usual, but by a grammatical word. I call the relevant constraint FILL-φ-Head:

(8)  FILL-φ-Head: the head of a φ template is filled with a textually specified φ-head feature

In accounting for the phrasal outputs in (7f), a constraint that is higher-ranked than FILL-φ-Head must be assumed to be active. In section 6.3, I shall argue in favor of a constraint FILL-φ, which will account for the highly specific prosodic outputs caused by Ungaretti's emphatic speech. Here, I want to stress the fact that textual Σ-head features seldom fill φ-head positions. The violation of FILL-φ-Head implies the addition of prosodic features: the head syllable of a grammatical word is lengthened as well as realized with a pitch accent.

Regarding the input-output pair in (7g), recall from section 5.2.3 that lexically specified word stresses do not always surface in the output. In chapter 5, this stress deletion involved Maxφ or default phrases. That is, a head foot must be preceded by a dependent foot (cf. section 5.2.3). In the cases now at hand, both the leftmost φ-node and Σ-node are not properly parsed. In addition to FILL-Maxφ, FILL-Σ is at play. The tableau in (9) illustrates the involved constraint interaction with respect to /tu forse/. As indicated by the dotted lines, the two FILL constraints are ranked with respect to the two PARSE constraints only; neither the FILL nor the PARSE constraints are ranked with respect to one another. In (i), the TexIn is associated with the Minφ template, in (ii), with the Defφ template, and in (iii), with the Maxφ template.
The optimal candidate is (9)i, in which the lexically stressed pronoun /tu/ is realized at the surface as an unstressed upbeat syllable.

In the recorded poems the sole example found of a three-word textual input that gives rise to a Minφ output is the one in (10).

\[
\begin{array}{c}
\text{\(\omega\)} \\
\text{/C/} \\
\text{/VC/} \\
\text{/VCVCV/} \\
\end{array}
\]

\[
[d'un\ \text{ultimo}]_\Phi \quad \text{U158:1}
\]

Constraints involving the subsyllabic constituents Onset and Nucleus are crucially active here. Two of the three words are specified as being vowel-initial, and one as consisting of a bare C. PARSE-consonant (Cs are parsed into onsets) and FILL-onset are both satisfied by the candidate in (11).\(^6\)

\[
\begin{array}{c}
\text{\(\omega\)} \\
\text{/dun/} \\
\text{/ultimo/} \\
\end{array}
\]

\[
[d'un\ \text{ultimo}]_\Phi \quad \text{U158:1}
\]

Obviously, in Minφ's too, segmental inputs may conflict with the subsyllabic constraints. In (6c) above, for instance, the two-word input /che/ /sbattì/ activates constraints on onset complexity.

Passing to the subminimal phrase templates, we find that the textual inputs are few and far between. Consider (12).

\[
\begin{array}{c}
\text{\(\omega\)} \\
\text{/CVCV/} \\
\end{array}
\]

\[
[\text{vedi}]_\Phi \quad \text{M5:8} \\
[\text{volta}]_\Phi \quad \text{U117:4}
\]

\(^6\) Only the /i/ being parsed into a coda position instead of an onset position can be seen as an instance of PARSE-consonant (or NoCoda) violation (cf. Bolognesi 1995).
All five inputs in (12) give rise to a FILL-Minφ violation, i.e., the φ outputs do not contain loose minimal words, but strict minimal words. In addition, the inputs (12c) and (12e) give rise to a FILL-Σ violation, i.e., the foot is not properly filled. And the inputs (12d) and (12e) give rise to FILL-φ-Head violations. It should be noted that these two inputs are found in the poetry of Ungaretti alone. Moreover, the example in (12e) is the only realization of the illustrated input-output pair. The reasons underlying the above constraint violations are dealt with in section 6.3.

Summarizing, twelve textual inputs are found in the poetry of Ungaretti and Montale which give rise to Minφ outputs, and five textual inputs which give rise to Subminφ outputs. Whether these inputs contain one, two or three words makes no difference with respect to syllabification, syllable weak layering, destressing, and so on. All the relevant inputs match with the same Minφ template.

6.2 The Minφ Template versus Syntax-to-Prosody Mapping

This section considers the role of the Minφ template proceeding from the standard syntax-based assumptions to phonological phrase formation. In section 3.3, the prosodic parsings of three syntactic structures were examined which lead to the hypothesis that well-formedness conditions of minimality are crucially involved in prosodic parsing. The structures in question were: (a) head plus non-branching complement sequences, (b) head plus branching complement sequences and (c) head plus head sequences. The relation-based algorithms defined by Nespor & Vogel (1986) are not able to account for the observed parsing outputs. That is, the structures (b) and (c) are incorrectly excluded from being parsed into one phonological phrase, and structure (a) is argued to be optionally parsed into one phonological phrase. On the basis of the perceptually determined parsings, we found that prosodic parsing of two syntactic heads into one phonological phrase depends rather on the metrical properties of the heads.

In what follows, I shall account for the parsings of the above syntactic structures by means of constraint evaluation. The constraint FILL-Minφ is crucially involved.
Afterwards, I shall examine more specific syntactic structures in order to delimit the autonomy of prosody with respect to syntax.

6.2.1 FILL-Mincp and Relation-based Syntax-to-Prosody Mapping: the case of Head-Complement sequences

The examples presented in section 3.3.1.1 of head plus non-branching complement sequences are repeated in (13). While NV-parsing assigns either one or two phrases to the involved sequences, PR-parsing gives rise to just one phrase:

<table>
<thead>
<tr>
<th>(13)</th>
<th>NV-parsing</th>
<th>PR-parsing</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>[mi sara]φ [lieve]φ</td>
<td>[mi sara lieve]φ</td>
</tr>
<tr>
<td>b.</td>
<td>[Le notti]φ [chiare]φ</td>
<td>[Le notti chiare]φ</td>
</tr>
<tr>
<td>d.</td>
<td>[saro]φ [innocente]φ</td>
<td>[saro innocente]φ</td>
</tr>
<tr>
<td>e.</td>
<td>[della]φ [breve]φ</td>
<td>[della breve]φ</td>
</tr>
</tbody>
</table>

In (14), the examples presented in section 3.3.1.3 of head plus branching complement sequences are repeated. Again, while NV-parsing assigns two phrases to the relevant sequences, PR-parsing gives rise to just one phrase:

<table>
<thead>
<tr>
<th>(14)</th>
<th>NV-parsing</th>
<th>PR-parsing</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>[tutto]φ [d'accanto]φ</td>
<td>[tutto d'accanto]φ</td>
</tr>
<tr>
<td>c.</td>
<td>[schiocchi]φ [di merli]φ</td>
<td>[schiocchi di merli]φ</td>
</tr>
<tr>
<td>d.</td>
<td>[frusci]φ [di serpi]φ</td>
<td>[frusci di serpi]φ</td>
</tr>
<tr>
<td>e.</td>
<td>[Faro]φ [da guida]φ</td>
<td>[Faro da guida]φ</td>
</tr>
<tr>
<td>f.</td>
<td>[Sei]φ [la donna]φ</td>
<td>[Sei la donna]φ</td>
</tr>
</tbody>
</table>

In order to account for the observed outputs, a constraint ranking might be suggested in which FILL-Mincp dominates a PARSE constraint which ensures that each head X of a lexical maximal projection X″ surfaces as the head of a φ, PARSE-{X > φ-head}. Arguably, this PARSE constraint would not discriminate between pre-head and post-head modifiers: each lexical head of a X″ is separately parsed into a φ. In comparison with Nespor & Vogel's relation-based approach, PARSE-{X > φ-head} thus also captures the observation that pre-head modifiers may form a φ on their own (cf. section 3.3.2). Consider the tableau in (15), illustrating the input-output relation for /tremi di vita/. In contrast to the prosodic representations

---

This PARSE constraint can also be formulated as a syntax-prosody Alignment constraint, in the sense of McCarthy & Prince (1993b).
considered up till now, the candidates are now enriched with a φ-head feature, supplied by GEN.

\[
(15) \text{FILL-Min}_φ \gg \text{PARSE}-\{X > \text{φ-head}\}, \text{from } [\text{trēmi di vita}]_φ
\]

<table>
<thead>
<tr>
<th>Candidates</th>
<th>FILL-Minφ</th>
<th>PARSE-{X &gt; φ-head}</th>
</tr>
</thead>
<tbody>
<tr>
<td>{φ}</td>
<td></td>
<td>⋆</td>
</tr>
<tr>
<td>[φ]</td>
<td>[φ]</td>
<td></td>
</tr>
<tr>
<td>[0]</td>
<td>[0]</td>
<td></td>
</tr>
<tr>
<td>[ɔ]</td>
<td>[ɔ]</td>
<td></td>
</tr>
<tr>
<td>[ɔ]</td>
<td>[ɔ]</td>
<td></td>
</tr>
<tr>
<td>[ɔ]</td>
<td>[ɔ]</td>
<td></td>
</tr>
<tr>
<td>i. trēmi di vita</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

However, the question is whether the grammar really needs this syntax-prosody PARSE constraint. In the metrical approach outlined in this thesis, the constraint PARSE-ω ensures already that ω-head features are parsed into ϕ's. In fact, regarding the prosodic parsing of the syntactic sequences considered above, there is no need to presuppose a syntax-prosody prespecification. All ω-head features provided by the textual input are parsed into a ϕ, either as a head or as a dependent. It is the ranking position of FILL-Minφ with respect to PARSE-ω which causes an output candidate in which a ω-feature is parsed as ϕ-dependent and not as ϕ-head to be evaluated as optimal. Consider the tableau in (16), for the same input /trēmi di vita/.

\[
(16) \text{FILL-Min}_φ \gg \text{PARSE-ω}, \text{from } [\text{trēmi di vita}]_φ
\]

<table>
<thead>
<tr>
<th>Candidates</th>
<th>FILL-Minφ</th>
<th>PARSE-ω</th>
</tr>
</thead>
<tbody>
<tr>
<td>{lφ}</td>
<td></td>
<td>⋆</td>
</tr>
<tr>
<td>[lφ]</td>
<td>[lφ]</td>
<td>⋆</td>
</tr>
<tr>
<td>[0]</td>
<td>[0]</td>
<td>⋆</td>
</tr>
<tr>
<td>[ɔ]</td>
<td>[ɔ]</td>
<td>⋆</td>
</tr>
<tr>
<td>[ɔ]</td>
<td>[ɔ]</td>
<td>⋆</td>
</tr>
<tr>
<td>[ɔ]</td>
<td>[ɔ]</td>
<td>⋆</td>
</tr>
<tr>
<td>i. trēmi di vita</td>
<td></td>
<td>⋆</td>
</tr>
</tbody>
</table>

As shown in chapter 3, there are also head-complement sequences that are parsed into two ϕ’s. The relevant inputs do not challenge FILL-Minφ, however.

Moreover, what we need to understand is whether there are syntactic configurations other than the head-complement sequences considered above, which
unconditionally either block or trigger phonological phrasing throughout. That is, are there any \{syntax, prosody\} alignment constraints which dominate either the constraint FILL-Min\(\varphi\) or constraints referring to phonological phrase maximality? As shown above, alignment constraints referring to head-complement sequences are not of this kind; head-complement sequences are parsed into either one or more \(\varphi\)'s, dependent on their metrical complexity. Section 6.3, however, presents a small number of syntax-prosody alignments which indeed must be assumed to be part of the grammar. That is, the relevant prosodic outputs violate the metrical constraint FILL-Min\(\varphi\).

6.2.2 FILL-Min\(\varphi\) and End-based Syntax-to-Prosody Mapping: the case of Head-Head sequences

In (17), the examples from section 3.3.3 are repeated. The syntactic sequences involved display head-head structures, and not head-complement ones; syntactic sisters are involved rather than mothers and daughters. Nespor & Vogel's algorithms to \(\varphi\)-formation exclude such sequences from forming a single \(\varphi\). The PR-parsings, by contrast, give rise to single phrase outputs.

(17) NV-parsing            PR-parsing
a. [ora]\(\varphi\) [e finito]\(\varphi\)     [ora è finito]\(\varphi\)     M72:12
b. [pallido]\(\varphi\) [e asse]\(\varphi\)  [pallido è asserto]\(\varphi\)  M28:1
c. [il sole]\(\varphi\) [in alto]\(\varphi\)  [il sole in alto]\(\varphi\)     M37:5
d. [corneggia]\(\varphi\) [la luna]\(\varphi\)  [corneggia la luna]\(\varphi\)  M28:39
e. [hanno]\(\varphi\) [una tale tenerezza]\(\varphi\)  [hanno una tale]\(\varphi\) [tenerezza]\(\varphi\)  U195:5
f. [acque]\(\varphi\) [sontuoso]\(\varphi\)    [acque sontuoso]\(\varphi\)     U117:6

Except for (17c) and (17d), the PR-parsings of the examples in (17) are accounted for by the same FILL-Min\(\varphi\) >> PARSE-\(\varphi\) ranking. If /ora/, /pallido/, /hanno/ and /acque/ are exhaustively realized as a \(\varphi\), then we would be faced with FILL-Min\(\varphi\) violations. In (17c), by contrast, FILL-Onset is at stake, and in (17d), FILL-Defcp.\(^9\)

As mentioned in section 3.3.3, the end-based approach proposed by Selkirk (1986), Ch\'\'en (1987), Selkirk & Shen (1990), and applied by Ghini (1993) to Italian, cannot account for the PR-parsings in (17acf). Ghini suggests that prosodic phrasing in Italian takes the right edge of a maximal projection as the boundary across which continuous parsing is blocked. In (17acf), the relevant syntactic heads are separated by such a boundary, however. In other words, a \{syntax, prosody\} alignment constraint in which \{Xmax, Right\} is associated with the right edge of a

\(^8\) Maximality conditions on the \(\varphi\) are treated in chapter 7.

\(^9\) See chapter 5, for discussion of these constraints.
phonological phrase would certainly not be undominated. That is, FILL-MinΦ still must be assumed to outrank such a constraint.

Assuming the existence of this \( \{X_{\text{max}}/R, \Phi/R\} \) constraint, we should not be deceived, however, about the number of violations this constraint may incur. In addition to the higher-ranked FILL-MinΦ, constraints involving prosodic maximality must also be assumed to be higher-ranked. This is illustrated by the example in (17e): [hanno una tale tenerezza]\( \Phi_p \) > [hanno una tale]\( \Phi_p \) [tenerezza]\( \Phi_q \). The entire \( X_{\text{max}} \), i.e. the VP, is parsed into two \( \Phi \)'s and not into one \( \Phi \). While the right edge of the second \( \Phi \) coincides with the right edge of the \( X_{\text{max}} \), the right edge of the first \( \Phi \) does not. More concretely, the string hanno una tale does not correspond to any syntactic constituent. In fact, as correctly observed by Ghini (1993), end-based mapping to prosody requires a set of rhythmic readjustment principles in order to prevent prosodic phrases from being too long. Again, these readjustment principles render syntax-prosody alignment vacuous, since there is nothing left of \( \Phi \) phrasing that cannot be accounted for by prosodic principles.

In sum, with lexical words prespecified with a ω-head feature, and with FILL-MinΦ dominating PARSE-ω, we are still able to account for the observed phrasal prosodic outputs. The right edge boundary of a maximal projection does not block phonological phrasing. In other words, making reference to syntax is not required up till now. By Occam’s razor, we should abandon it altogether.

### 6.2.3 FILL-MinΦ and Arboreal Syntax-to-Prosody Mapping: the case of Aunts and Nieces

The syntax-to-prosody mapping approach proposed in Zec & Inkelas (1990) and Inkelas & Zec (1995) is not sensitive to the edges of maximal projections. The approach, referred to as arboreal mapping, is based on the assumption that any phonological phrase minimally contains two nonbranching syntactic sisters. Although immediate sisters are given priority, there is in principle no restriction on the syntactic bar level at which this sisterhood criterion may be fulfilled. This implies that head-head sequences like the ones presented in (17) will form a single \( \Phi \) if the branchingness criteria are obeyed.10 Under this approach, it is predicted that FILL-MinΦ violating outputs hardly occur: a \( \Phi \) minimally contains two lexical heads. Again, a {syntax, prosody} alignment constraint can be formulated: for instance, PARSE-{XY > Φ}, where X and Y stand for syntactic sisters.

But let us consider the XY sisters one of which is the mother of a daughter. At the surface, the daughter (x) may occur either to the left or the right of the mother (X). The following four combinations can emerge:

---

10 That is, \((17abcd)\) are predicted to form a single phrase by the arboreal approach. In \((17e)\), the rightmost sister, [una tale tenerezza]\( \Phi_p \), is branching. And in \((17i)\), the leftmost sister is branching: [d’irruenti acque]\( \Phi_p \).
The sequence [sX] typically refers to modifier-head sequences, and [Xx] to head-complement sequences. The arboreal mapping approach predicts that in all cases the mother and daughter are prosodically more connected than the sisters XY. In what follows, I shall present data from the recorded corpora exemplifying the syntactic configurations in (18). On the basis of the perceived parsings, it appears that the sisters XY may phrase together to the exclusion of the daughter x, and that the aunt and niece (Yx/xY) may phrase together to the exclusion of the mother X. Metrical principles are determinant: avoid violation of FILL-Minctp and/or FILL-Defcp.

(19)-(22) illustrate (18a)-(18d), respectively. The parsings on the right are the perceived ones, and those on the left represent the syntactically-based arboreal ones.

(19) [sX][Y]
   a. [di umani atti] [consumenti] of human acts consumed
   b. [d’irruenti / acqua] [sontuosamente] of raging waters rich
   c. [d’avermi atteso] [tanto] to have-me waited so-much
   d. [su estremi fumi] [emerse] on extreme mists emerged

(20) [Xx][Y]
   a. [si compongono qui] [le storie] REFPL compose-3PL here the tales
   b. [dove un’ombra sola] [tiene] where a shadow lonely holds
   c. [finché goccia trepido] [il cielo] until drops-3SG shivering the heaven
   d. [co’ suoi vortici caldi] [emerse] with its whirls warm and disappears

(21) [Y][sX]
   a. [la fuce] [e allato del torrente] the mouth is on th side of-the creek
   b. [la casa] [di questa / mia sen] the house of this my evening
   c. [hanno] [una tale tenerezza] have-3PL a such tenderness
   d. [andro] [senza lasciare impronta] go-1SG.FUT without leave-INF imprint
The PR-parsings in (19)-(22) all give rise to two or less equally balanced $\Psi$'s. More concretely, most of the $\Phi$-pairs consist of 2-$\Sigma$ $\Phi$'s. No violation of FILL-Min$\Phi$ occurs. In (23), I present a full prosodic representation of one example of each syntactic combination. In (23a), the dependent $\omega$-head is unparsed; in (23bcd), by contrast, the dependent $\omega$-heads are indeed parsed, which gives rise to violation of FILL-Max$\omega$ (cf. 5.2.3) and of FILL-$\Sigma$ (cf. 5.2.1).\footnote{Chapter 8 deals with the phonetic interpretations of these violations.}

\begin{itemize}
  \item[(23)]
    \begin{itemize}
      \item[a. \textit{di umani atti consunti}]
        \begin{itemize}
          \item \text{\textit{di} \textit{uman}i \textit{atti} \textit{con}\textit{sunti}}
          \item \text{\textit{di} \textit{manni} \textit{atti} \textit{consunti}}
          \item \text{\textit{di} \textit{man}i \textit{atti} \textit{consunti}}
          \item \text{\textit{di} \textit{man}i \textit{atti} \textit{consunti}}
          \item \text{\textit{di} \textit{man}i \textit{atti} \textit{consunti}}
        \end{itemize}
      \item[b. \textit{si compongono qui le storie}]
        \begin{itemize}
          \item \text{\textit{si} \textit{com}\textit{pon}\textit{go} \textit{qui le storie}}
          \item \text{\textit{si} \textit{com}\textit{pon}\textit{go} \textit{qui le storie}}
          \item \text{\textit{si} \textit{com}\textit{pon}\textit{go} \textit{qui le storie}}
          \item \text{\textit{si} \textit{com}\textit{pon}\textit{go} \textit{qui le storie}}
          \item \text{\textit{si} \textit{com}\textit{pon}\textit{go} \textit{qui le storie}}
        \end{itemize}
      \item[c. \textit{la foc \textit{e allato del torrente}}]
        \begin{itemize}
          \item \text{\textit{la} \textit{foc} \textit{e allato del torrente}}
          \item \text{\textit{la} \textit{foc} \textit{e allato del torrente}}
          \item \text{\textit{la} \textit{foc} \textit{e allato del torrente}}
          \item \text{\textit{la} \textit{foc} \textit{e allato del torrente}}
          \item \text{\textit{la} \textit{foc} \textit{e allato del torrente}}
        \end{itemize}
      \item[d. \textit{dice \textit{alle specchie annerito}}]
        \begin{itemize}
          \item \text{\textit{dice \textit{alle specchie annerito}}}
          \item \text{\textit{dice \textit{alle specchie annerito}}}
          \item \text{\textit{dice \textit{alle specchie annerito}}}
          \item \text{\textit{dice \textit{alle specchie annerito}}}
          \item \text{\textit{dice \textit{alle specchie annerito}}}
        \end{itemize}
    \end{itemize}
\end{itemize}
A textual input in which lexical words are distinguished from grammatical words by means of $\omega$-head features, and a templatic input in which the Loose Min$\theta$ template, straightforwardly account for prosodic phrasing of a variety of syntactic configurations. Making reference to the heads or edges of maximal projections, or to sisterhood relations unnecessarily complicates prosodic phrasing. Moreover, there is no evidence so far that phonological phrasing is based on syntactic constituency.

6.2.4 FILL-Min$\theta$ and Coordination

Coordination is the final syntactic configuration to be examined here in order to enforce the claim that prosodic phrasing is highly independent of syntax. A head $Y$ is followed by two coordinated arguments $X+X$: $[Y\ [X+X]\XP\YP$. The three syntax-based mapping approaches predict three different parsings:

\begin{enumerate}
  \item Relation-based: $[Y]\phi\ [X]\phi\ [+X]\phi$
  \item End-based: $[Y\ X+X]\phi$
  \item Arboreal: $[Y]\phi\ [X+X]\phi$
\end{enumerate}

None of the approaches thus predicts a parsing in which $Y$ forms a single $\phi$ with the leftmost $X$: $[Y\ X]\phi\ [+X]\phi$. Regarding (24a), $\phi$-restructuring between the $Y$-$\phi$ and the leftmost $X$-$\phi$ is blocked since the complement of the $Y$, i.e., the entire $XP$, is branching. Nor can the two $X$'s form a single $\phi$: the $X$'s are not in a modifier-head or head-complement relation. Regarding (24b), the end-based parameter $\{X^{\text{max}}, \text{Right}\}$ predicts that the entire $YP$ should form a single $\phi$. Between the $Y$ and the leftmost $X$ there is no right-edge boundary of a maximal projection. The arboreal approach, in (24c), predicts that the two $X$'s should be parsed into a single $\phi$. Although the $Y$ and the leftmost $X$ form a sister pair at the $YP$ level, priority is given to immediate sisters with respect to $\phi$-formation. Thus, the two $X$'s will be parsed into a single $\phi$.

However, the verse data provide examples which show that the involved syntactic configuration allows for either of three prosodic parsings: (a) $[YX]\phi\ [+X]\phi$, (b) $[Y\phi\ [X+X]\phi$, or (c) $[Y]\phi\ [X]\phi\ [+X]\phi$. Whether an input is prosodically parsed as either (a), (b) or (c) is determined by the metrical properties of the entire string. In other words, one cannot freely choose between these parsings. In the light of $\phi$ minimality, only the (a), (b) and (b) parsings are of interest. (25) illustrates (a) parsings, and (26), (b) parsings.
From a metrical point of view, the parsings in (25) and (26) are highly consistent: most output \( \phi \)'s are default \( \phi \)'s:

\[
\begin{array}{|c|c|c|c|c|c|}
\hline
\text{(27)} & [\emptyset] & [\emptyset] \\
\text{[\emptyset]} & [\emptyset] & [\emptyset] \\
\hline
\end{array}
\]

If the sequences in (25) were parsed as either \([Y][X]+X\) or \([Y][X]+X\), and the sequences in (26) as \([Y][X]+X\), several FILL-Min\( \phi \) violations would be incurred. By contrast, no subminimal \( \phi \)'s arise in the output. The conclusion seems to be that syntax does not provide the necessary tools in order to predict the prosodic parsings of coordinated elements.

6.2.5 Summary

In this section, I showed that two syntactic heads displaying a variety of structural relations may be parsed into a single phonological phrase. That is, not only mothers and daughters, but also sisters as well as aunts and nieces can be parsed together. Whether these relatives are prosodically united or not in the output depends on their metrical shape. The constraint FILL-Min\( \phi \) is crucially involved: two adjacent heads are parsed together in order to satisfy FILL-Min\( \phi \).

The phonological phenomena discussed in chapter 5 provide evidence. That is (a) only the head of the phrase undergoes lengthening, (b) only the head of th...
6.3 Phonological Phrase Subminimality

As discussed in section 3.5, the perceived parsings of the recorded poems of Ungaretti and Montale contain outputs that are smaller than the Min. That is, these outputs lack the initial unstressed syllable preceding the head, and sometimes they also lack the final unstressed syllable following the head. Consequently, these outputs violate Fill-Min. In the present section, I would like to address the following issues: (a) what are the non-prosodic properties of subminimal outputs, and (b) how can we account for the subminimal outputs in a template-and-constraint approach? Consider the predictions in (28), which relate to these issues:

\[(28) \]
\[
a. \text{Fill-Min is crucially dominated by another constraint} \\
b. \text{This constraint ensures faithful parsing or filling of intrinsically non-metrical information} \\
c. \text{Violation of Fill-Min is minimal} \\
\]

In the course of this section, I shall return to these predictions. The list in (29) presents the various potential triggers of prosodic overparsing, as discussed in chapter 3.

\[(29) \]
\[
a. \text{Monosyllabic Lexical Items} \quad (3.5.1.1) \\
b. \text{Adjective/Adverb Allomorphy} \quad (3.5.1.2) \\
c. \text{Imperatives} \quad (3.5.2.1) \\
d. \text{Enumeration} \quad (3.5.2.2) \\
e. \text{Vocatives} \quad (3.5.2.3) \\
f. \text{Deictics} \quad (3.5.2.4) \\
g. \text{Slow Speech} \quad (3.5.2.5) \\
h. \text{Ellipsis} \quad (3.5.3.1) \\
i. \text{Fronting} \quad (3.5.3.2) \\
j. \text{Enjambment} \quad (3.5.4.1) \\
k. \text{Opening and Closing Lines of Poems} \quad (3.5.4.2) \\
l. \text{Short Lines and Edge Position} \quad (3.5.4.3) \\
\]

With respect to (29a) and (29b), recall from section 6.1 that only a restrictive set of textual inputs may give rise to subminimal phrases, namely those inputs that will be parsed into less than a LMin (i.e., lexical monosyllables, disyllables and trisyllables with antepenultimate stress). Adverbs formed by suffixation of -mente never induce subminimality, in contrast to their bare adjectival allomorphs. As shown in chapter
3, 'short' textual inputs are not a sufficient condition for \( \phi \) subminimality to arise. One of the other triggers listed in (29) must also be involved. From now on, I will consider 'short' textual inputs to be an intrinsic prerequisite.

The remaining of the triggers in (29) fall into two subsets: (c), (e) and (f) on the one hand, and (d), (g)-(l) on the other. The former, I suggest, are accounted for by the textual input, and the latter by the templatic input:

(30)

<table>
<thead>
<tr>
<th>TextIn</th>
<th>TemIn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Imperatives</td>
<td>Enumeration</td>
</tr>
<tr>
<td>Vocatives</td>
<td>Slow Speech</td>
</tr>
<tr>
<td>Deictics</td>
<td>Ellipsis</td>
</tr>
<tr>
<td></td>
<td>Fronting</td>
</tr>
<tr>
<td></td>
<td>Enjambment</td>
</tr>
<tr>
<td></td>
<td>Opening and Closing Lines of Poems</td>
</tr>
<tr>
<td></td>
<td>Short Lines and Edge Position</td>
</tr>
</tbody>
</table>

Analogously to the distinction between prosodic head features associated with words, and templatic prosodic features characterizing the prosodic well-formedness of structures/constituents, the TextIn/TemIn distinction in (30) reflects prosodic properties of (sub)classes of words on the one hand, and prosodic properties of constructions on the other. In section 6.3.1, the textual triggers are accounted for, and in section 6.3.2, the templatic triggers.

### 6.3.1 Textual Triggers of \( \phi \)-Subminimality: PARSE

Imperatives, vocatives and deictic elements were recognized in chapter 3 as being potential triggers of \( \phi \) subminimality. The formal account I would like to propose here is that these items are prespecified in the textual input by a feature \( \phi \)-head. That is, these items are considered to be intrinsically emphasized: the \( \phi \)-feature is part of their underlying representation. The constraint PARSE-\( \phi \), repeated for convenience in (31), ensures that the \( \phi \)-feature is properly parsed into an intonation phrase.

(31) \( \text{PARSE-} \phi \): phonological phrases are parsed into intonation phrases

A constraint ranking in which PARSE-\( \phi \) dominates FILL-Min\( \phi \) accounts for the fact that the relevant inputs may give rise to subminimal phrase outputs. Although the

---

13 Enjambment will not be treated here since it rather gives rise to line overparsing than to phrase overparsing. In chapter 7, however, the role of the phenomenon with respect to phrase underparsing is formalized.

14 Proposals like in Selkirk (1984a), in which focus assignment takes place prior to metrical constituency, are reminiscent of a constraint ranking in which PARSE-\( \phi \) is higher ranked than FILL-Min\( \phi \). The crucial difference between Selkirk's Pitch Accent First and the constraint-based approach lies in the constructionistic account of the former and the checking-in-parallel account of the latter. See Selkirk
effect of satisfaction of PARSE-Φ is phonological in nature, the reason that the relevant inputs are prespecified with a Φ-head feature is crucially non-phonological. Rather, focus is at play.15

6.3.1.1 Imperatives

In (32), the examples in which imperative forms give rise to subminimal Φ outputs are repeated from section 3.5.2.1.

(32) a. [Godi]q se il vento ch'entra nel pomario M5:1
b. che ci stringe, tu balza fuori, [fuggi]Φ M5:16
c. [Va]q, per te l'ho pregato, ora la sete M5:17

I suggest that the verbal subclass of imperatives is prespecified by a Φ-head feature:

(33) TexIn: (Imperative, Φ-head)

The tableau in (34) illustrates the supposed constraint ranking PARSE-Φ >> FILL-MinΦ, with respect to (32a).

\[
\begin{array}{|c|c|c|}
\hline
\text{Candidates} & \text{PARSE-Φ} & \text{FILL-MinΦ} \\
\hline
\hline
\end{array}
\]

However, the imperative form is not necessarily realized as a Φ-head. In (35), examples are given of imperatives that are Φ-dependents. The verbal argument is realized as the Φ-head.

(1995a), however, for an allusion towards a constraint-based approach in which the Pitch Accent Prominence Rule and the Nuclear Stress Rule are related to one another such that the former outranks the latter.15 For analyses of semantic focus, see Selkirk (1984a), Rochemont & Culicover (1990), and the references given in these works.
Whether or not the specification IMPERATIVE must include an element Y referring to the argument of the imperative, is a matter which I will leave unanswered. The prosodic realization of the imperative-argument string is subject, however, to conditions of prosodic maximality. Consider in this regard, the broader context of example (35a).

The argument of \( /fa/\) is \( /che\ il\ passo\ su\ la\ ghiaia\ ti\ scricchioli/\), and not \( /che\ il\ passo/\). The prosodic output gives rise to a sequence of three \( \emptyset \)'s, and not to a single \( \emptyset \):

\[
\begin{array}{ccc}
(\omega) & (\emptyset) & (\emptyset) \\
 (\emptyset) & (\emptyset) & (\emptyset) \\
\end{array}
\]

In sum, although PARSE-\( \emptyset \) dominates FILL-Min\( \emptyset \), it is itself dominated by the constraint which ensures that phrasal outputs do not exceed the maximally allowed shape of the phonological phrase. In chapter 7, I shall return to this maximality constraint.

6.3.1.2 Vocatives

As shown in section 3.5.2.3, vocatives too may give rise to subminimal \( \emptyset \) outputs. I suggest that vocatives, like imperatives, are textually prespecified by a \( \emptyset \)-head feature:

\[
\text{TexIn: } \{\text{Vocative, } \emptyset\text{-head}\}
\]

16 Consider in this regard Selkirk’s Phrasal Focus Rule (1984a:207):

A constituent may be a focus if (i) or (ii) (or both) is true:

(i) The constituent that is its head is a focus.
(ii) A constituent contained within it that is an argument of the head is a focus.

17 The prosody of vocatives is often characterized by particular intonational and/or metrical forms. For instance, in a variety of Italian dialects, vocatives have truncated surface forms (cf. Ansaldo 1992, for vocative truncations in the dialect of Naples).
With \textsc{Parse-\ensuremath{\varphi}} dominating \textsc{Fill-Min\ensuremath{\varphi}}, we account for the subminimal \ensuremath{\varphi}'s. Consider some relevant examples in (39), and the tableau in (40).

(39) a. \text{[manc]\ensuremath{\varphi}, ma non pi\`{o} degno} \\
    b. \text{La tua leggenda, [Dom]\ensuremath{\varphi}} \\
    c. \text{[Morte]\ensuremath{\varphi}, arido fiume...} \\
    d. \text{Per condurmi, [Madre]\ensuremath{\varphi}, sino al Signore,} \\
    e. \text{[Animi]\ensuremath{\varphi}, non sapr\`{o} mai calmarti?} \\
    f. \text{[morte]\ensuremath{\varphi}, vocative (U117:15)} \\

(40) \text{PARSE-\ensuremath{\varphi} >> FILL-Min\ensuremath{\varphi} from \text{/morte/} Vocative (U117:15)}

<table>
<thead>
<tr>
<th>\text{Candidates}</th>
<th>\text{\textsc{Parse-\ensuremath{\varphi}}}</th>
<th>\text{\textsc{Fill-Min\ensuremath{\varphi}}}</th>
</tr>
</thead>
<tbody>
<tr>
<td>\text{\ensuremath{\varphi}}</td>
<td>\text{l}</td>
<td>*</td>
</tr>
<tr>
<td>\text{[\text{morte}] arido fiume}</td>
<td>\text{l}</td>
<td>*</td>
</tr>
<tr>
<td>\text{[\text{morte}] arido fiume}</td>
<td>\text{l}</td>
<td>*</td>
</tr>
</tbody>
</table>

6.3.1.3 Deictics

As argued in section 3.5.2.4, deictic adverbs of time and space, as well as personal pronouns and demonstratives acting as deictics, may give rise to subminimal-\ensuremath{\varphi} outputs in the poetry of Montale and Ungaretti. In contrast to anaphoric pronouns or bound variables which connect text-internal expressions, deictics are marked in lyrical poetry when connecting text-internal expressions with text-external reference points. I suggest therefore that deictics are also textually prespecified with a \ensuremath{\varphi}-head feature:

(41) \text{TexIn: \{Deictic, \ensuremath{\varphi}-head\}}

Consider the examples in (42).

(42) a. \text{[qui]\ensuremath{\varphi} dove affonda un morto} \\
    b. \text{[Tosto]\ensuremath{\varphi} potr\`{a} rinascere l'id\`{i}lio.} \\
    c. \text{[Questi]\ensuremath{\varphi} sono i miei fiumi} \\

\text{M5:3} \quad \text{M72:27} \quad \text{U43:61}
Again, deictic elements are not always realized as a \textit{\varphi}-head:

\begin{itemize}
\item[(a)] [ora e finito] il cenuo marezzo. \textit{M72:12}
\item[(b)] [Questo e l'Isonzo] \textit{U43:2718}
\end{itemize}

That is, in comparison to imperatives and vocatives, deictic elements can be argued to have a lower degree of intrinsic relevance. An explanation resides presumably in the fact that deictics belong to the class of grammatical words, rather than to the class of lexical words. Instead of being prespecified by a \textit{\varphi}-head feature, they might be prespecified by a \textit{\omega}-head feature. The verification of this suggestion, however, lies beyond the scope of the present research.

6.3.2 Templatic Triggers of \textit{\varphi}-Subminimality: FILL

The templatic triggers of prosodic overparsing are: enumeration, slow speech, ellipsis, fronting, enjambment, opening/closing lines of poems, and short lines in edge positions. Except for ellipsis, these triggers will now be formally accounted for. As stated, templatic triggers of \varphi subminimality differ from textual triggers of \varphi subminimality insofar that the input items themselves cannot be argued to be intrinsically emphasized. Rather, the following two tendencies are observed: (a) sequences of overparsed (= marked default/minimal/subminimal) \varphi's are created, and (b) structural edge positions in the utterance are emphasized. Analogously to the prespecification of a textual \textit{\varphi}-head feature to certain classes of items, I propose to account for these tendencies by means of the prespecification of a templatic \varphi position to the above constructions. The constraint FILL-\varphi ensures that this templatic \varphi position is filled at the surface:

\begin{equation}
\text{FILL-\varphi: a } \varphi \text{-template is filled with textual material}
\end{equation}

Unlike FILL-Min\varphi (cf. 6.0), FILL-\varphi does not specify the internal metrical composition of the phrase. A constraint ranking in which FILL-\varphi dominates FILL-Min\varphi accounts for the fact that the prespecified \varphi positions may be realized as subminimal \varphi's.

\begin{itemize}
\item[18] As mentioned in section 3.5.2.4, certain elements may have an anaphoric as well as a deictic reading. Example (43b) indeed allows for this twofold interpretation.
\item[19] Edge-located prosodic markedness is also found at lower levels of the prosodic hierarchy: at the left edge of a \varphi, \textit{SC} clusters can be improperly parsed, at the left edge of a \varphi, a syllable can be improperly parsed, and at the right edge of a \varphi, a foot can be improperly filled (cf. chapter 8). Devine & Stephens' (1990:434) observations on phonological phrasing in Classical Greek confirm this prediction: "Constituents that are contrastive or focused, particularly at the beginning of a paragraph, tend to appear as phrases consisting of one appositive group only." This in contrast to the generally observed pattern that phrases consist of two appositive groups.
6.3.2.1 Enumeration

In the literature enumeration is considered to be a foregrounding phenomenon: a series of identical constituent structures each of which is phonetically emphasized (cf. Leech 1969, Wales 1989). I suggest therefore that each member of an enumeration is prespecified with a $\varphi$ position:

(45) TemIn: {Enumeration, [ ]$\varphi$} 

With FILL-$\varphi$ higher ranked than FILL-M$\varphi$, the subminimal $\varphi$'s in (46) are accounted for. The tableau in (47) illustrates the input-output relation with respect to (46a).

(46) a. [alberi$_{\varphi}$ [case]$_{\varphi}$ [colli]$_{\varphi}$ per l'inganno consueto. M40:6 
   b. tra sugheri [alghe]$_{\varphi}$ asterie M52:20 
   c. [voce]$_{\varphi}$, leggenda o destino... M125:60 
   d. Terreni, [danel]$_{\varphi}$, // Rantolo di foreste, [...] U172:6-7

(47) FILL-$\varphi$ >> FILL-M$\varphi$, from /alberi case colli/ Enumeration

<table>
<thead>
<tr>
<th>Candidates</th>
<th>FILL-$\varphi$</th>
<th>FILL-M$\varphi$</th>
</tr>
</thead>
<tbody>
<tr>
<td>[e]</td>
<td>[e]</td>
<td>[e]</td>
</tr>
<tr>
<td>[o]</td>
<td>[o]</td>
<td>[o]</td>
</tr>
<tr>
<td>[E]</td>
<td>[E]</td>
<td>[E]</td>
</tr>
<tr>
<td>$\rightarrow$ [l] in [a] [o] [l]</td>
<td>$\rightarrow$ [l] [a] [o] [l]</td>
<td>$\rightarrow$ [l] [a] [o] [l]</td>
</tr>
<tr>
<td>&quot;alberi case colli&quot;</td>
<td></td>
<td>***</td>
</tr>
</tbody>
</table>

Candidate (47ii) illustrates an output in which FILL-M$\varphi$ is satisfied: the output gives rise to a maximal 3-$\varphi$, in which the $\omega$-head feature of /case/ is not parsed in the output. The observed output is candidate (47i), however: FILL-$\varphi$ is satisfied, which amounts to a prosodic realization of the three members of the enumeration with a high pitch accent as well as with final lengthening. Obviously, when the input members of an enumeration are prosodically more complex, supraminimal phrase outputs will emerge. In such a case FILL-M$\varphi$ will not be violated.

Consider now the example in (48). Two members of the enumeration, /mura/ and /specchi/, are parsed into a single $\varphi$. 
If all members of the list were realized as separate φ's, a sequence of four subminimal φ's would arise:

(49) [strada]φ [portico]φ [mura]φ [specchi]φ

It should be noted that the three subminimal φ sequence in (46a) is the only instance with such a prosodic pattern found in the verse data. That is, a sequence of three subminimal φ's is extremely marked. A sequence of four subminimal φ's appears to be excluded. In other words, a constraint is at play which dominates FILL-φ. Hypothetically, the following generalization holds: metrical organization, i.e. alternation of strong and weak elements, involves not only prosodic constituents ranging from the syllable up to the phonological phrase, but also supra-φ constituents. More specifically, phonological phrases are grouped together such that Light-Heavy patterns arise. Hence, Prince's (1990) Grouping Generalization captures supra-phrasal as well as sub-phrasal constituents.20

6.3.2.2 Slow Speech

As argued in section 3.5.2.5, Ungaretti's recordings evince a relatively high number of (sub)minimal φ's. Often, these φ's follow one another immediately. The items themselves cannot be argued to be intrinsically emphasized. Rather, prespecified positions are imposed on the textual input. The relevant φ template is the Minφ template rather than the Defφ template. I refer to the phenomenon as Emphatic Speech.

(50) TemIn: (Emphatic Speech, [ ]φmin)

Consider the examples in (51).

    c. [e l'ultima]φ [volta]φ [che miro]φ U117:4
    e. [Come]φ [nelle]φ [distanze]φ U226:10

With FILL-φ ranked higher than FILL-Minφ, the subminimal φ outputs are evaluated as optimal. Notice that the lines in (51) do not contain more than three overparsed output φ's. This is not a coincidence; the very few lines in which a sequence of four

---

20 See section 5.2.3.1 for reference to Prince's proposal.
overparsed ϕ's are observed are found in the opening and closing lines of poems alone. Later on, I will turn to these instances.

A final observation that I would like to make regarding *Emphatic Speech* concerns the textual features of the input words. In general, subminimal ϕ's consist of a lexical word. The ϕ-head feature of these inputs is properly parsed into a ϕ. In (51c), however, there are two grammatical words, /come/ 'as' and /nelle/ 'in-the', which exhaustively realize a ϕ. As argued in section 6.1, PARSE-ϕ is satisfied, but FILL-ϕ-Head is violated. By the ranking of FILL-ϕ above FILL-ϕ-Head, the relevant outputs are now accounted for. Notice however that FILL-ϕ-Head violating outputs occur rarely. In fact, the recordings of Montale lack examples in which a subminimal ϕ is exhaustively filled with a grammatical word.

### 6.3.2.3 Fronting

As shown in section 3.5.3.2, fronted syntactic constituents may surface as subminimal ϕ's. Following Graffi (1994), I assume that fronted constituents, either left-dislocated or topicalized, are dominated by the syntactic category TOP, which in turn is dominated by the category E (expression). The relevant {syntax, prosody} alignment template can be formalized as in (52). The TOP position is prosodically prespecified by a Minϕ template.

\[
\text{(52) TemIn: } \{[E \ TOP, [\phi_{\text{min}}] \}
\]

Consider the examples in (53), repeated from section 3.5.3.2.

\[
\text{(53) a. } \text{Un freddo cala... [Duro] il colpo svetta. M150:5}
\]
\[
\text{b. } \text{[L'uguale] mi farài del sogno U117:17}
\]
\[
\text{c. } \text{[Mai] non vedro nella notte del sangue? U172:21}
\]
\[
\text{d. } \text{[In me] che fuoco nuovamente scova U253:9}
\]

With FILL-ϕ outranking FILL-Minϕ, subminimal ϕ outputs are accounted for.

In the light of the issue raised earlier in this chapter, i.e., the extent to which phonological phrasing is independent of syntax, the case of Fronting shows that highly specific syntactic information is indeed crucially involved in prosody.

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21 The E node is introduced by Banfield (1973, 1982). Graffi (1994:204) suggests that the same category E might also be used for vocatives, interjections and *profrasi* like a' and wo, i.e., for linguistic constructions which typically give rise to subminimal ϕ's.
6.3.2.4 Opening/Closing Lines

As mentioned in 6.3.2.2, a sequence of more than three (sub)minimal \( \varphi \)'s in the poetry of Ungaretti and Montale is observed only in either the opening or closing lines of poems. The emphatic speech TemIn, introduced in 6.3.2.2, I assume to be associated with the relevant versification domain:

\[
\text{TemIn: (}A_{\text{final}}, \text{Emphatic Speech/}[ ]_{\varphi \text{min}}\text{)}
\]

The examples in (55) and (56) (repeated from 3.5.4.2) illustrate the effect.

\[
\begin{align*}
(55) & \quad \text{a. } [\text{Perdersi}]_\varphi [\text{nel bigio}]_\varphi [\text{ondoso}]_\varphi \\
& \quad \text{b. } [\text{Fu}]_\varphi [\text{dove il ponte}]_\varphi [\text{di legno}]_\varphi \\
& \quad \text{c. } [\text{E il cuore}]_\varphi [\text{quando}]_\varphi [\text{d'un ultimo}]_\varphi [\text{battito}]_\varphi \\
(56) & \quad \text{a. } [\text{mia sera}]_\varphi [\text{Ed io non so}]_\varphi [\text{chi va}]_\varphi [\text{e chi resta}]_\varphi \\
& \quad \text{b. } [\text{avrai}]_\varphi [\text{negli occhi}]_\varphi [\text{un rapido}]_\varphi [\text{sospiro}]_\varphi \\
& \quad \text{c. } [\text{Lasci}]_\varphi [\text{agli alberi}]_\varphi [\text{un fuoco}]_\varphi [\text{d'autunno}]_\varphi.
\end{align*}
\]

The ultimate interpretation of the above \{versification, prosody\} template is illustrated by the phenomenon to be discussed now.

6.3.2.5 Short Lines and Edge Position

As argued in section 3.5.4.3, extremely short lines in the poetry of Montale occur typically in the right edge positions of large versification domains, like the stanza or the poem. The involved lines consist of a single (sub)minimal \( \varphi \). The \{versification, prosody\} alignment template is formalized as follows:

\[
\text{TemIn: (}A_{\text{final}}, 1-[ ]_{\varphi \text{min}}\text{)}
\]

Consider the examples in (58).

\[
\begin{align*}
(58) & \quad \text{a. } [\text{cuore}]_\varphi \text{poem} \\
& \quad \text{b. } [\text{finito}]_\varphi \text{stanza} \\
& \quad \text{c. } [\text{Luce}]_\varphi \text{poem}
\end{align*}
\]

Again, by ranking FILL-\( \varphi \) higher than FILL-Min\( \varphi \) the grammar accounts for the subminimal \( \varphi \) outputs in (58).
6.3.3 Summary

Subminimal φ's in the poetry of Montale and Ungaretti are grammatically accounted for by a constraint ranking in which PARSE-φ and FILL-φ are ranked higher than FILL-Mincp. The constraint PARSE-φ and FILL-φ ensure faithful parsing and filling of input information which is characterized by alignment of prosodic features with non-prosodic features. These non-prosodic features involve either lexico-semantic, syntactic or versificational information. Inherently emphasized items or classes of items, like imperatives, vocatives and deictics are prespecified in the textual input; inherently emphasized structural positions are prespecified in the templatic input.

6.4 Conclusions

In this chapter, I formalized the metrical conditions on the minimal shape of the phonological phrase in terms of a Mincp template. The template consists of a Loose Mine, i.e. of a foot preceded by an unfooted syllable. Generally, the template is realized by a lexical word possibly preceded by a monosyllabic grammatical word. More complex textual inputs may also give rise to minimal φ outputs. Constraints ensuring proper syllabification, foot formation and word formation are crucially involved then.

With the introduction of a Mincp template, and its related FILL-Mincp constraint, we are able to account for phrasal prosodic outputs which display a variety of syntactic configurations. Syntactic branchingness, syntactic constituent edges or syntactic relations of dominance cannot account for all the observed prosodic outputs. Rather too often these notions either incorrectly exclude or incorrectly predict phonological phrasing. Instead of assuming a rhythmic component which is ordered after the syntax-to-prosody mapping, phrasal prosodic outputs are immediately accounted for if we assume prosodic templates to be part of the input. That is, we can do away with the rhythmic rules that were invoked in order to readjust rhythmically ill-formed outputs (cf. Nespor & Vogel 1989, Ghlini 1993).

When metrically marked subminimal φ's come to the surface, non-metrical information appears to be involved which is much more specific than the information displayed by the above syntactic configurations. Notably, not only syntactic, but also (lexico-)semantic and versificational information may be at play. My proposal is that these two-componential alignments are part of the input. That is, the input does not only include morpho-prosodic features, but also syntactic-prosodic, semantic-prosodic and versificational-prosodic features. The morpho-prosodic features involve default phonological phrasing, the other alignment features involve marked phonological phrasing.