The Intramorphological Meanings of Thematic Vowels in Italian Verbs

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Abstract

Italian verbs are traditionally classified into three major classes called 'conjugations'. Membership of a verb in one of the conjugations rests on the phonological content of the vowel occurring after the verbal root in some (but not all) word forms of the paradigm. This vowel is called 'thematic vowel'.

The main feature that has been attributed to thematic vowels throughout morphological literature is that they do not behave as classical Saussurean signs in that lack any meaning whatsoever.

This work develops the claim that the thematic vowels of Italian verbs are, in fact, Saussurean signs in that they can be attributed a 'meaning' ('*signatum*'), or even more than one ('*signata*'). But the meanings that will be appealed to are somehow different from those which have traditionally been attributed to other morphological units, be they stems or endings: in particular, these meanings would not be relevant to the interpretation of a word form; rather, they would be relevant at the 'purely morphological' ('morphomic', in Aronoff's (1994) terms) level of linguistic analysis. They are thus labelled 'intramorphological', remarking that they serve nothing but the morphological machinery of the language.

The recognition of 'intramorphological *signata*' for linguistic signs strongly supports the claim about the autonomy of morphology within the grammar. If my analysis is correct, the thematic vowels of Italian verbs should be seen as the dedicated *loci* for such *signata*.

Presentazione

I verbi italiani sono tradizionalmente classificati in tre principali classi di flessione dette 'coniugazioni'. L'assegnazione di un verbo ad una delle tre coniugazioni dipende dal contenuto fonologico della vocale che segue la radice verbale in alcune forme flesse del paradigma. Questa vocale è detta 'vocale tematica'.

In letteratura, la principale caratteristica delle vocali tematiche è la loro mancanza di significato: per questa ragione, le vocali tematiche non possono essere considerate dei 'segni' nell'accezione saussuriana del termine.

Nel presente lavoro si rivendica che le vocali tematiche dei verbi italiani sono, di fatto, dei 'segni' di tipo saussuriano, in quanto è possibile assegnar loro un significato ('*signatum*'), o persino più di uno ('*signata*'). I significati a cui si farà riferimento, tuttavia, sono diversi da quelli tradizionalmente attribuiti ad altre unità morfologiche, come le radici o le terminazioni: in particolare, tali significati non avrebbero rilevanza per l'interpretazione di una forma flessa, ma sarebbero decodificati ad un livello di analisi puramente morfologico ('morfomico', secondo la terminologia di Aronoff (1994)). Essi sono perciò definiti 'intramorfologici', a sottolineare che la loro utilità è riservata al componente morfologico della lingua.

L'idea che dei segni linguistici possano avere dei significati intramorfologici è un argomento forte a favore dell'autonomia del componente morfologico all'interno della grammatica di una lingua. Se l'analisi proposta in questo lavoro è corretta, le vocali tematiche dei verbi italiani dovrebbero rappresentare le unità formali dedicate all'espressione di tali significati.

Contents

Chapter 1

Introduction: Thematic Vowels in Italian Verbs

1.1 The paradigmatic strategy

The internal structure of words can be accounted for by either of two strategies, traditionally referred to as 'syntagmatic' and 'paradigmatic'.[1] The key point in the paradigmatic strategy is the comparison of similar words in a language. In the words of Haspelmath (1995: 1), "it is generalizations about sets of similar words and their mutual relations that form the basis of morphological analysis".[2]

In a language like Italian, the notion of 'sets of similar words' clearly appeals to the well-known notion of 'paradigm'. Also, the fact that the inflected forms of Italian verbs are organised into paradigms is certainly not new, as much as it is intuitively recognised that the forms included in a paradigm are 'morphologically related'.

Broadly speaking, the notion of 'paradigm' has been approached in many different ways by the morphological literature: in some frameworks this is regarded as a central notion,[3] in others it is simply ignored, or even explicitly denied.[4] This section is not intended to support either position: as is often the case, my own position in this regard will become clear in the course of this work. Here I would rather point out that the term 'paradigm' is used by most scholars ambiguously, in that it has at least two meanings, whose distinction will turn out to be of crucial relevance for the present work. I will draw a distinction between these two meanings through the labels 'lexical paradigm' and 'morphosyntactic (or 'grammatical') paradigm'.[5] In the following two subsections I will define these two notions. Even though the part on the 'morphosyntactic paradigm' may be seen as a digression outside the real scope of this work, it may help to understand the sense of the comparison across lexemes (i.e. what I will call 'inter-paradigmatic' comparison); moreover, the notion of 'morphosyntactic paradigm' will turn out to be crucial in Chapter 5, where I will tackle the issue of the 'meaning' of the inflectional material of Italian verbs.

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[1] See Haspelmath (1995: 1).
[2] See also Booij (2009).
[3] See, for instance, Robins (1959), Stump (2001).
[4] See, for instance, Lieber (1981), Halle and Marantz (1993).
[5] There are scholars who actually distinguish between these two meanings. See, for instance, Rhodes (1987: 224), who talks of 'paradigm' (i.e., 'lexical paradigm') and 'paradigm set' (i.e., 'morphosyntactic paradigm'). See also Stump (2006).

1.1.1 *Lexical paradigm*

As is traditionally recognised, each paradigm is associated with one 'lexeme', i.e. one lexical entry. Crucially, in inflectional languages like Italian, lexemes occurring in different contexts can assume different forms. These contextually different forms are called 'word-forms'[6] and are the members of the paradigm of that particular lexeme. Accordingly, a first definition of 'paradigm' can be as follows:

(1.1) PARADIGM₁: the whole array of grammatically variant forms of a lexeme. [7]

In this case the paradigm is defined with respect to a lexeme L, in such a way that it can be referred to as 'the paradigm of L'.

This view on paradigms is probably the most traditional one and has the advantage of being very concrete. Students familiar with the study of classical languages will certainly have no troubles with that.

Nevertheless, the term 'paradigm' has at least another meaning, somehow more abstract than that defined in (1.1): it is what I am calling the 'morphosyntactic paradigm'.

1.1.2 Morphosyntactic (or 'grammatical') paradigm

It is certainly not a new idea that inflection, as a sub-field in the study of morphology, is syntactically governed.[8] As pointed out by Aronoff (1994: 10), lexemes differ from 'actual words' in a language in that the former are abstract, standing outside any syntactic (and pragmatic) context, while the latter occur only within any such context. In this sense, inflection can be seen as the sub-field of morphology which allows a lexeme to be used in a specific syntactic context, and the paradigm would be the *locus* where all these syntactic contexts are simultaneously specified.[9]

The notion of (morphosyntactic) c a t e g o r y is central to understanding this point. Syntactically speaking, actual words differ from lexemes in that they are endowed with a given number of "contextually variable syntactic, semantic, and pragmatically determined categories that are encoded by inflection".[10] These categories happen to be

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[6] The term 'inflected forms' is also used.

[7] Definition adapted from Maiden (2010). See also Carstairs-McCarthy (1994: 739).

[8] See, *inter alia*, Matthews (1991), Anderson (1992), Aronoff (1994).

[9] It will be noted that the 'paradigm' is thus something unnatural, actual syntactic contexts occurring one at time. This is confirmed by the well-known difficulties in eliciting verb paradigms from native speakers of a language (cf. Maiden 2004: 6).

[10] Aronoff (1994: 10).

language-particular[11] and, for each language, they usually vary according to the lexical category of the lexeme which they specify.

Take, for instance, the Italian lexeme CASA 'house', belonging to the lexical category 'Noun'. Nouns in Italian, when entered in the context of an utterance, have to be specified for the morphosyntactic category 'Number', which can take either of two possible values ('morphosyntactic properties'), i.e., Singular or Plural. That means that each Italian noun, in actual use, must be specified as being either singular or plural.

It will be noted that the pair *casa* / *case* constitutes an example of lexical paradigm as defined above: thus one can say that the paradigm of the lexeme CASA is *casa*, *case*. In terms of the category Number, the former is the Singular of CASA and the latter is the Plural of CASA. This last observation leads us to define the notion 'paradigm' in a different, novel way, notably as follows:

(1.2)   PARADIGM₂: a close system of oppositions, defined in terms of morphosyntactic categories and of the possible values (morphosyntactic properties) that such categories can take.

Notice that in this second case the paradigm is defined not with respect to a lexeme L, but with respect to the lexical category 'Noun'.[12] The implication is that each Italian lexeme belonging to the lexical category Noun will exhibit the same PARADIGM₂:

(1.3)   **Singular   Plural**

As will be noted, the two meanings of paradigm discussed so far are not mutually exclusive. Rather, they can be usefully unified. The unified version of the paradigm of CASA will be therefore:

(1.4)   **Singular   Plural**
            casa   *case*

From what has been said so far, Stump's (2001: 43) definition of paradigm looks particularly exhaustive, in addition to introducing the useful notion of 'paradigm cell':

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(1.5) The PARADIGM of a lexeme L is a set of cells: each such cell
      is the pairing <Y, σ> of an inflected form Y of the lexeme L
      with a complete set σ of morphosyntactic properties for L.
      Each complete set of morphosyntactic properties for a lexeme
      of some category corresponds to a cell in that lexeme's
      paradigm. The cell <Y, σ> in any given paradigm will be
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[11] Cf. Haspelmath (2005).
[12] Other categories are 'Adjective' and 'Verb'.

According to the definition above, the paradigm of CASA is constituted by two cells, the cell of Singular, occupied by the (word-)form *casa* and the cell of Plural, occupied by the form *case*.

Now, the paradigm of Italian nouns, exemplified by (1.4) above, happens to be of the simplest kind one can imagine: we have two forms opposed on a single dimension. The paradigm of Italian verbs is extremely more complex: each verb may have up to eighty-eight different forms,[13] each occupying a cell which corresponds to a specific combination of morphosyntactic properties, according to a specific multi-dimensional pattern.

Table 1.1 below shows the paradigm portion relevant to the present study:

		Finite forms						
Imper.		**Indicative**				**Subjunctive**		**Conditional**
		Present	**Imperfect**	*Perfetto Semplice*	**Future**	**Present**	**Imperfect**	**Present**
1sg		*amo*	*amavo*	*amai*	*amerò*	*ami*	*amassi*	*amerei*
2sg	*ama!*	*ami*	*amavi*	*amasti*	*amerai*	*ami*	*amassi*	*ameresti*
3sg		*ama*	*amava*	*amò*	*amerà*	*ami*	*amasse*	*amerebbe*
1pl		*amjamo*	*amavamo*	*amammo*	*ameremo*	*amjamo*	*amassimo*	*ameremmo*
2pl	*amate!*	*amate*	*amavate*	*amaste*	*amerete*	*amjate*	*amaste*	*amereste*
3pl		*amano*	*amavano*	*amarono*	*ameranno*	*amino*	*amassero*	*amerebbero*

Non-finite forms		
Infinitive	**Gerund**	**Past Participle**
amare	*amando*	*amato*

Table 1.1 – Relevant paradigm portion

Systematically excluded from this paradigm portion are all periphrastic formations. The reason is that all of them display one and the same 'lexical form', i.e. the Past Participle, which may be counted only once for the purpose of this study, without compromising the analysis. Equally excluded from the present analysis is the so called Present Participle[14] which, because of its syntactic use, seems not to be a real member of the verbal paradigm.[15]

Table 1.1 shows in bold the set of morphosyntactic ('m.s.') properties inherent to the Italian verb. The list of these properties, together with the relative categories, is provided by (1.6):

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[13] Such value refers to transitive verbs, having both an 'active' and a 'passive' voice.
[14] I.e. *amante*, in the case of the verb AMARE.
[15] Cf. Maiden (1995: 123).

(1.6) **M.S. CATEGORIES**   **M.S. PROPERTIES**
    Mood   Indicative, Subjunctive, Conditional, Imperative[16]
    Tense   Present, Past, Imperfect, Future
    Person   1st, 2nd, 3rd
    Number   Singular, Plural

A given combination of values for the categories of Mood and Tense constitutes the first dimension of analysis of the paradigm, by defining the paradigm portion traditionally referred to as SUB-PARADIGM.[17] For example, 'Present Indicative' is one sub-paradigm. Notice that not all of the logically possible combinations of Tense and Mood are given (for instance, the combination 'Future Subjunctive' is not found).[18] Within the sub-paradigm domain, two more dimensions of analysis are involved: each sub-paradigm opposes three persons (i.e. 1st, 2nd, 3rd) but, on another dimension, it opposes Singular and Plural as well. Accordingly, each sub-paradigm is found to consist of a three-by-two array of cells, each defined by a given combination of values for the categories of Person and Number. Notice that in this case all of the logically possible combinations of values are found.[19]

To sum up, the paradigm appears to play a double role in the grammatical machinery of a language like Italian: on the one hand, it is the domain of (morpho)syntax, as it may be defined in terms of oppositions of morphosyntactic categories and properties.[20] On the other hand, the fact that it contains the entire set of variant forms of a given lexeme[21] makes it also a privileged domain for comparison across forms in the process of morphological analysis. The next paragraph illustrates the advantages of such comparison, both across the word-forms of a lexeme (that I will label 'intra-paradigmatic') and across lexemes ('inter-paradigmatic').

1.2 Heuristic comparison

Consider the paradigm portion of the verb AMARE 'love' given in Table 1.1 above and here reported for illustration:

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[16] On the peculiar status of Imperative in the inflectional paradigm see Maiden (2007: 149).

[17] Cf. Pirrelli (2000).

[18] Cf. Vincent (2011: 419ff.).

[19] Cf. Corbett (2007: 9), who points out that such a situation corresponds to Spencer's (2003: 252) notion of 'exhaustivity'.

[20] Cf. the definition of PARADIGM2 in (1.2) above.

[21] Cf. the definition of PARADIGM1 in (1.1) above

	Imperative	Indicative				Subjunctive		Conditional
		Present	Imperfect	*Perfetto Semplice*	Future	Present	Imperfect	Present
1s		amo	amavo	amai	amerò	ami	amassi	amerei
2s	ama!	ami	amavi	amasti	amerai	ami	amassi	ameresti
3s		ama	amava	amò	amerà	ami	amasse	amerebbe
1p		amjamo	amavamo	amammo	ameremo	amjamo	amassimo	ameremmo
2p	amate!	amate	amavate	amaste	amerete	amjate	amaste	amereste
3p		amano	amavano	amarono	ameranno	amino	amassero	amerebbero

Infinitive	Gerund	Past Participle
amare	amando	amato

Comparison across the word-forms of this paradigm leads us to identify a recurrent leftmost component, /am-/,[22] and a rightmost part appearing in different forms. This suggests a possible segmentation of the word-forms in the paradigm, as illustrated below for the Present Indicative:

(1.7) **Present Indicative**
  1sg.   am-*o*
  2sg.   am-*i*
  3sg.   am-*a*
  1pl.   am-*iamo*
  2pl.   am-*ate*
  3pl.   am-*ano*

Inter-paradigmatic comparison[23] reveals that the rightmost parts identified in the word-forms of AMARE recur across verbs, according to a specific paradigmatic pattern. Compare, for instance, the rightmost elements of the Present Indicative of the verbs AMARE 'love' and CANTARE 'sing':

(1.8) **AMARE**   **CANTARE**
  am-***o***   cant-***o***
  am-***i***   cant-***i***
  am-***a***   cant-***a***
  am-***iamo***   cant-***iamo***
  am-***ate***   cant-***ate***
  am-***ano***   cant-***ano***

Such a segmentation is confirmed by traditional terminology: in each word-form, the leftmost segment is traditionally called ROOT, or STEM,[24] while the rightmost one is termed ENDING, or DESINENCE.

Let us focus on the endings of the Present Indicative of AMARE. As will be noted, the singular endings consist of a monovocalic item (i.e. –*o*, -*i*, -*a*), while the plural endings

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[22]Here I am adopting the method used by Palmer (1949: 233) for the analysis of Latin verb.
[23] Notice that the comparison of word-forms belonging to different verbs is possible by virtue of the fact that all Italian verbs display one and the same 'morphosyntactic paradigm' (cf. §1.1.2).
[24] Cf. Aronoff (1994: 33ff.).

consist of richer phonological strings (i.e. *–iamo, -ate, -ano*, respectively). The issue with the plural endings is the following: are they to be further segmented? And if so, how should that be done? Inter-paradigmatic comparison offers a possible answer to these questions. Compare the Present Indicative of the verbs AMARE 'love', TEMERE 'fear' and DORMIRE 'sleep', focussing on their plural endings (in bold):

	AMARE	TEMERE	DORMIRE
1sg.	am-o	tem-o	dorm-o
2sg.	am-i	tem-i	dorm-i
3sg.	am-a	tem-e	dorm-e
1pl.	am-**iamo**	tem-**iamo**	dorm-**iamo**
2pl.	am-**Ate**	tem-**Ete**	dorm-**Ite**
3pl.	am-**Ano**	tem-**Ono**	dorm-**Ono**

Table 1.2 -

It will not have escaped the reader's attention that in the 1st plural the recurrent string corresponds to the whole item that we are left with as the stem is removed. In both the 2nd plural and the 3rd plural, in contrast, we can identify a constant, rightmost element (i.e. *–te* and *–no* respectively) preceded by a vowel which varies as different verbs are considered. This could suggest the need for further segmentation, yielding 2nd pl. /am-a-te/, /tem-e-te/, /dorm-i-te/ and 3rd pl. /am-a-no/, /tem-o-no/, /dorm-o-no/.

Notice that the pattern of variation of the vowels at issue is different in the two persons. In particular, while in the 2nd plural each verb is associated with a different vowel, in the 3rd plural we have *–o-* in the verbs TEMERE and DORMIRE, and *–a-* in AMARE. The question of how to segment the 3rd plural forms will be addressed in Ch.3, §3.3.1.2. Here I simply suggest that the vocalic items which have been isolated in the 2nd plural and 3rd plural of the Present Indicative should be regarded as different elements, despite the fact that they are likewise preceded and followed by constant elements.[25]

Now consider the following data, from the verbs AMARE 'love', TEMERE 'fear' and DORMIRE 'sleep':

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[25] Rememeber that the item which precedes the vowels under discussion is constant on the intra-paradigmatic dimension, whereas the item which follows them is constant on the inter-paradigmatic dimension.

	AMARE		TEMERE		DORMIRE	
	Pres. Ind.	Pres. Subj.	Pres. Ind.	Pres. Subj.	Pres. Ind.	Pres. Subj.
1sg.		a'massi		te'messi		dor'missi
2sg.		a'massi		te'messi		dor'missi
3sg.		a'masse		te'messe		dor'misse
1pl.		a'massimo		te'messimo		dor'missimo
2pl.	a'mate	a'maste	te'mete	te'meste	dor'mite	dor'miste
3pl.		a'massero		te'messero		dor'missero

Table 1.3 -

As Table 1.3 shows, the 'same vowel' which can be isolated in the 2nd plural Present Indicative is also found in all forms of the Imperfect Subjunctive. And this is but an example: if the whole paradigm was taken into account, the 'same vowel' would be found to characterise other word-forms too.[26] Those vocalic elements are traditionally called 'thematic vowels',[27] and constitute the topic of the present work.

Summing up what has been seen about thematic vowels so far, we know that:

  i.   they can be identified (i.e. isolated) as units of morphological analysis, by means of comparison across word-forms, both on the intra-paradigmatic dimension and on the inter-paradigmatic dimension;

 ii.   they are found in some but not all of the inflected forms of a verb's paradigm;

iii.   different verbs (in the sense of 'lexemes') can display different thematic vowels.

As pointed out by Maiden (2011: 201), thematic vowels are not a characteristic feature of the Italian verbal system: they were already present in Latin and were inherited by the verbal systems of virtually all Romance languages.

Thematic vowels, as much in Latin as in the Romance languages, are traditionally assumed to serve a taxonomic function: according to the thematic vowel appearing in stem-following position, any Italian verb can be assigned to a class, also called 'conjugation'; in particular, the vowel *a* is characteristic of the so-called first conjugation, *e* of the second and *i* of the third.

1.3 Plan and purposes

The main feature attributed to thematic vowels throughout the literature on morphology is that they do not behave like classical Saussurean signs in that they are meaningless. If it is relatively easy to claim that, within a given word-form, the stem conveys some lexical meaning and the inflectional ending conveys some grammatical meaning, on the other hand, thematic vowels seem to provide no additional meaning

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[26] Cf. Ch.3.
[27] Cf. Malkiel (1979).

to word-forms; accordingly, thematic vowels find themselves being reduced to the status of empty formatives,[28] achieving either a merely taxonomic function (as in the morphological theory of the American Structuralism), or else a (phonological) function of linking together the stem and the inflectional ending (as in the proposals of the Generative school). No doubt that thematic vowels allow Italian verbs to be classified into conjugations; but the question to be answered here becomes what a 'conjugation' really is: is it merely a way to put some order into verbs,[29] or can it tell us something about the very nature of the items that it helps to classify?

The main idea that I am defending in this work is that, in identifying the conjugation to which a verb belongs, a thematic vowel also achieves a heuristic function, therefore playing an active role in the (grammatical) machinery of the language. In that sense, I will be able to assign a meaning ('*signatum*') to thematic vowels, or even more than one ('*signata*'). What matters about these meanings is that, as we will see, they really make sense only in an autonomously morphological level of linguistic analysis.

That said, the work is organised as follows: in Chapter 2 (***Classical Problems with Thematic Vowels***) I illustrate the state of the art on thematic vowels, focussing on their major problems within the morphological literature, i.e. their (lack of) meaning on the one hand and their paradigmatic distribution on the other. This latter issue may be phrased as follows: provided that all the word-forms of a paradigm are derived from a single underlying base – as stated by the framework of generative morphology – why do some forms exhibit the thematic vowel, while others do not?

As we will see, the problems with thematic vowels change in the course of time depending on the morphological model adopted and, more generally, reflect the changes in the notion of the 'morpheme'.

In the rest of the work, I will try to provide a solution to both problems presented above. In Chapter 3 (***The Thematic Vowel Identification Hypothesis***) I propose a series of conditions that a vowel has to meet in order to be identified as the thematic vowel within a word-form. That allows me to say exactly what forms of the Italian verbal system display the thematic vowel, in such a way as to define the paradigmatic distribution of the thematic vowel in a principled manner. What I am emphasising about the array of paradigm cells involving the thematic vowel is that they cannot be described as a natural class in morphosyntactic terms. Chapter 4 (***The Conjugations of***

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[28] Cf. Spencer (1991).

[29] Notice that, that being the case, one could still claim that the conjugations into which Italian verbs are classified answer to "an inherent human desire for order" (cf. Aronoff (1994)).

Italian) explores the inflection classes of Italian verbs, establishes their number in a principled manner and shows that, as a taxonomy, they do not have any motivation outside the purely morphological machinery of language; nor have they any implication for the use of verbs, for instance at the syntactic level: in that sense, they are claimed to be *intra*morphological. The notion of 'intramorphological category' helps to understand the 'meanings' which I am assigning to thematic vowels in Chapter 5 (*The Intramorphological* **Signata** *of Thematic Vowels in Italian Verbs*): on the one hand, a thematic vowel signals the conjugation of the verb in which it is found. On the other hand, a thematic vowel is also an index that the stem with which it co-occurs in a word-form is the default one within the verb paradigm. Knowing that a verb is member in a given conjugation, or that a given stem is the default one in a verb's paradigm is actually of no use for the direct interpretation of the word-form in which a given thematic vowel is found: in this sense, it is true that the informational content conveyed by a thematic vowel does not serve communicative purposes. Yet this kind of information is not useless in cognitive terms: knowing the conjugation of a verb, in fact, allows to predict the entire set of endings by means of which that verb will be inflected. Moreover, identifying the default stem in a paradigm may be useful in that it is the one which is used as basis for the formation of regular complex stems, namely all the stems which are not included in a verb's lexical entry.

The sign-relationship claimed to exist between the thematic vowel and the default stem plays a crucial role in Chapter 6 (*A case of exaptation in the evolution of the Italian verbal system*), in which I illustrate the diachronic development of an inflectional pattern characterising some third-conjugation verbs, referred to as the *finire*-type.

One of the major shortcomings of the present work is that nearly all data that will be provided are from standard Italian, with only few – though crucial - foretastes from substandard Italian and dialectal varieties (notably Venetian). As noted earlier, thematic vowels were a characteristic feature of the Latin verb system and, as such, were inherited by virtually all Romance languages. Accordingly, it would be interesting to see whether all that I claim about the thematic vowels of Italian verbs also holds for the thematic vowels of the verbs of other Romance varieties. Starting from the assumption that one of the most comfortable scientific strategies to adopt in the study of morphology is to try to understand each system on its own terms,[30] in this

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[30] Cf. Aronoff (1994: 166).

work I have tried to understand the role of thematic vowels in the Italian verb system; my findings about thematic vowels in Italian verbs might then be a starting point for the exploration of thematic vowels in other Romance systems, a task which I leave for future research.

Chapter 2

Classical problems with thematic vowels

2. *Introduction*

The title of this chapter is explicitly reminiscent of Anderson's (1992: 51) "Classical problems with morphemes". Actually, the reason for this reference has a deeper sense than a mere taste for quotation, since the *status quaestionis* on thematic vowels tightly intertwines with the state of the art on the notion of 'morpheme'. In other words, in order to understand the problems that thematic vowels have raised in morphological literature, it is worth considering the parallel changes in the notion of 'morpheme', i.e. a notion which, however it is understood, dominated the morphological scene since the Bloomfieldian school, at least. Broadly speaking, the problem is the following: thematic vowels can be clearly isolated as formal units within some inflected forms of the paradigm of a verb, by means of comparison (cf. Ch.1, §1.2); none the less, they do not have as clearly a meaning. The theoretical notion of 'morpheme' comes into play: as long as the morpheme is seen as a minimal 'sign' in 'Saussurean' terms, i.e., an arbitrary association of form and meaning, it is clear that thematic vowels, lacking in meaning, cannot be regarded as true morphemes. Actually, this is the position of the structuralist framework.[1]

A turning point in the notion of 'morpheme' is made within the framework of Generative morphology. This basically concerns the exclusion of the 'meaning condition' on morphemehood. In other words, according to its revised definition, a 'morpheme' need not have a meaning, it is enough to be recognised by speakers by a specific form. Under this new assumption thematic vowels, while having no meaning, can be thus reasonably regarded as morphemes. However, the real problem with thematic vowels within the generative framework becomes their paradigmatic distribution. Generative morphology approaches the inflectional paradigm according to a transformational, 'item-and-process' model: all the word-forms in a paradigm should be derived by applying rules ('processes') to an underlying base ('item'). In this model, the problem with thematic vowels can be thus formulated as follows: if all the

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[1] The interpretation of the morpheme as a 'minimal sign' crashes against a good number of empirical disconfirmations, especially in inflectional morphology (see *inter alia* Anderson 1992: 48-72).

surface word-forms in a paradigm are assumed to be derived from one and the same base, so why do some forms exhibit the thematic vowel whereas other forms do not?

In the light of what has been said above, the present chapter is divided into two main parts: the former (§2.1), introduces the structuralist view of the morpheme and explores the implications that this has on the treatment of thematic vowels. The latter (§2.2) deals with thematic vowels as 'meaningless morphemes' within the framework of generative morphology, tackling the issue of their paradigmatic distribution. §2.3 concludes the chapter by summing up both positions, getting back to the issue of the meaning of thematic vowels.

2.1 American structuralism

2.1.1 The Bloomfieldian morpheme

Bloomfield's notion of 'morpheme' can be regarded as the major theoretical achievement of American structuralist morphology. Bloomfield's morpheme is mainly understood as the "minimal meaningful unit of language"[2], which comes soon to be equated with the classical, 'Saussurean', minimal sign. In other words, the morpheme is conceived as the smallest unit of language comprising a one-to-one, arbitrary, matching of form and meaning. Bloomfield's morphemes are located in the lexicon and, therefore, they are also regarded as the morphotactically minimal units, from which words should be 'built' by means of 'arrangements'. Since the word is regarded as "some structured combination of [morphemes]",[3] the task of the analyst approaching the study of word structure will be isolating and classifying the morphemes in a language, in a sort of 'discovery procedure'. The isolation of the morphemes in a language is achieved by comparing forms (i.e., words), which show phonetic / semantic resemblance to one other (cf. Nida 1949[2]: 6). In the words of Anderson (1992: 48): "[…] *unreasonable-**ness*** resembles *red-**ness***, ***un**-reasonable* resembles ***un**-true, reason-**able*** resembles *break-**able***, etc. It is this set of partial phonetic-semantic resemblances what suggests the decomposition *un-reason-able-ness*".[4] One of the basic principles in this kind of analytical procedure is 'total accountability' (Hockett 1947: 332): every part of phonemic material that can be isolated in the language must

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[2] At least, this is the traditional interpretation (cf. Bazell 1949); Bloomfield's (1933) original definition ("A linguistic form which bears no partial phonetic-semantic resemblance to any other form") was soon modified, since it seemed as if Bloomfield had wanted to define the morpheme in a negative fashion (cf. Nida (1949[2]: 7)).

[3] S. Anderson (1992: 10).

[4] My emphasis.

correspond to a morpheme; parts which are left over when all other parts have been divided, are likewise assumed to constitute morphemes. One of the first problems found by structuralist morphologists tackling the issue of word analysis is that, in some cases, sequences which are phonetically different are none the less realised as instances of the same morpheme. How is such a fact to be accounted for? Harris (1942) labels these particular phonetic sequences as 'morpheme alternants': while being phonetically different, they can be reasonably regarded as 'the same morpheme', crucially on the basis of meaning. For example, *knife* and *knive-* (this latter taken from *knives*) are asserted to be two separated 'morpheme alternants' of the same 'morpheme'.[5] According to Harris (1942), the first step in the operation of morphemic analysis is to isolate all the so-called 'morpheme alternants' in the utterance; next step is defining the so-called 'morpheme units', by collecting together those morpheme alternants that can be regarded as instances of the same element, chiefly on the basis of their meaning.[6] Thus, in the example above, *knife* and *knive-* are put together into a single 'morpheme unit'.

Hockett (1947: 322) coins the label "morph" to replace Harris's 'morpheme alternant'. This move relies on the (proportional) analogy *(allo)phone : phoneme = morph : morpheme*, and it will be noted that the first two terms in this proportion, i.e., '(allo)phone' and 'phoneme', come from the domain of phonology. Actually, morphology in American structuralism was developed in an attempt to apply most of the results achieved in the field of phonology to the study of word structure. Now, one of the major achievements in American phonology was notably the notion of 'phoneme', defined as the 'minimal distinctive element of sound structure'.[7] However, the phoneme is seen as something abstract, whose actual manifestation is called '(allo)phone'. This digression on the structuralist phonology is useful to see that, when the analogy *(allo)phone : phoneme = morph : morpheme* came to be taken for granted in the field of morphology,[8] the 'morpheme' came to be assumed as a somehow abstract notion, whose actual counterpart in the language is the 'morph'.

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[5] Harris (1942).

[6] Harris states a set of three principles: "Two or more [morpheme alternants] are grouped into a single morpheme if they (a) have the same meaning; (b) never occur in identical environments, and (c) have combined environments no greater than the environments of some single alternant in the language" (Hockett (1947: 322), see also Harris (1942) – my emphasis).

[7] See Anderson (1992: 11).

[8] Notice that the parallel between the basic units in two different levels of linguistic analysis, i.e. phonology and morphology, looked extremely elegant and compelling.

Thematic vowels challenge the structuralist notion of 'morpheme', in that they clearly have a form, but cannot be as clearly said to have a meaning. Take, for instance, the Italian word-form *amo* 'I love'. The comparison with other word-forms, both at an intra- and at an inter-paradigmatic level, reveals this form to be made up of two items, i.e. /am-/ and /-o/ (cf. §1.2 – Ch.1). Within the structuralist framework, these items are understood as morphemes, the former (i.e. /am-/) meaning 'love' and the latter (i.e. /-o/), meaning '1st person singular'.[9] Now take the Italian word-form *amate* 'you (pl.) love'. A comparison reveals three items in this form, i.e., /am-/, /-a-/ and /-te/, one of which (i.e., /-a-) has been previously labelled as the 'thematic vowel' (cf. §1.2 – Ch.1). As far as the meaning of these items is concerned, /am-/ can be once more said to bear the meaning 'love'; on the other hand, /-te/ seems to be associated with the meaning '2nd person plural'.[10] But what about the thematic vowel /-a-/? Actually, no meaning can be so easily found to be attributed to this item. It is clear that, as long as the 'morpheme' is defined as 'the smallest meaningful unit in a language', thematic vowels, lacking in meaning, cannot be reasonably raised to the status of 'morphemes'. It will be noted that the problem here comes to concern Harris and Hockett's principle of 'total accountability' (i.e., 'words are entirely made up of morphemes'): thematic vowels, while obviously contributing to the formal structure of at least some word-forms in the paradigm of a verb, do not seem to contribute in a similar way, in terms of meaning. The implication is that the existence of items such as thematic vowels challenges the principle that the structure of words can be totally intended in terms of 'morphemes'.

The notion of 'morph', elaborated by Hockett (1947 – see § 2.1.1), offers a way to get around this problem, however. Remind that, according to the analogy *(allo)phone : phoneme = morph : morpheme*, the 'morpheme' and the 'morph' are assumed to be found

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[9] It could be objected that this way two 'meanings' at least come to be cumulated within one formal unit, contrary to the assumption of a one-to-one matching of form and meaning within the 'morpheme'. Cumulation is, in fact, one of the troubles with classical morphemes, although it is not relevant here (cf. Anderson (1992); Carstairs (1987)). Another objection could be that a 'meaning' such as '1st person singular' is intuitively different from the meaning 'Love', being somehow 'less concrete'. I will retour on the difference between a meaning like 'Love' and a meaning like '1st person singular' in Ch.5. For the moment, suffice it to say that in the analysis of an ending such as *–o* some meaning can be clearly identified, whatever its very nature. Notice that Harris (1942) seemingly shows no problems in assuming meanings such as '1st person singular'.

[10] See fn. 9.

on different levels, the morpheme being actually understood as the 'abstract' counterpart of the morph. Now, the real problem with thematic vowels survives as long as one assumes that, in the transition process from one level to the other, the number of items has to be identical (that is, there should be as many – abstract - morphemes in an utterance as there are – actual - morphs). Hockett solves this problem by admitting that some of the morphs in the language should be counted as 'morphemically irrelevant'; in other words, some morphs which are found in the language fail to belong to any morpheme, having no meaning at all. Hockett (1947: 333) labels such items as 'empty morphs'. The thematic vowels of Spanish[11] verbs are given as an example of such 'empty morphs':

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(2.1) In certain Spanish verb forms there appears, between the stem
      and the endings, an element often called a conjugation vowel:[12]
      the á, é and í of amar 'to love', beber 'to drink', vivir 'to
      live'; the áb, í and í of amábamos 'we loved', bebíamos 'we
      drank', vivíamos 'we lived', etc. [...].
      The conjugation vowels have no meaning.[13]
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Summing up so far, the study of morphology within American structuralism is centred on the notion of 'morpheme', defined as a directly related association of form and meaning, and therefore equated with the 'Saussurean' sign. Words are assumed to be made up entirely of morphemes, and thematic vowels challenge this assumption, in that they are formal units which seem to have no meaning.

As long as having a meaning is regarded as a condition to be met, for a formal unit to be accorded the status of 'morpheme', the logical possibilities about the relationship between thematic vowels and the 'morpheme' are two:

1. thematic vowels do not have a meaning, so they are not morphemes;
2. thematic vowels do have some kind of meaning, so they are morphemes, actually.

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[11] It could be objected that Hockett mentions Spanish verbs, while the present work deals with Italian. Yet this difference is irrelevant for the present purpose: the thematic vowels of the Italian verbs are, actually, 'empty morphs' in Hockett's sense (see, for instance, Thornton (2005)).

[12] Notice that Hockett does not use the label 'thematic vowel'. Although Hockett's terminological choice is not crucial here (cf. Malkiel (1979)), that is still useful in that it draws a connection between the thematic vowels and the 'conjugations' of the verbs. This connection is worth to be borne in mind, since it will turn out to have extreme relevance to the following line of argument.

[13] Hockett (1947: 337).

We have seen that the post-Bloomfieldian Structuralism maintains the first option: according to Hockett (1947), thematic vowels are not morphemes, they are rather '(empty) morphs'.

There exists at least another logical possibility, however: to set aside the 'meaning condition' on morphemehood, that is, to admit that a 'morpheme', to be defined as such, need not have a meaning. Clearly, the implication of such a possibility is to modify the original notion of 'morpheme'; for this reason, this option cannot be put on the same level as the previous two. Nevertheless, it sounds interesting, since it allows us to cover items such as thematic vowels under the label 'morpheme'. This is in fact the proposal of generative morphology, explored in the next section.

2.2 Generative morphology

2.2.1 Towards a new definition of the morpheme

The Structuralist morphological theory, based on the notion of 'morpheme' as 'Saussurean sign', presented notable problems, as theorists themselves soon recognised. The domain of inflectional morphology was particularly problematic on this point, since it involved many cases of extreme asymmetry between form and meaning. We have seen that thematic vowels, as 'empty morphs' (i.e. formal units with no meaning), actually constitute one of those cases (for a detailed survey of the other problems concerning the traditional morphemes see, for instance, Anderson 1992: 48-72).

In order to get over those problems, post-structuralist morphologists were led to reorient the notion of 'minimal (Saussurean) sign' from the 'morpheme' to the 'word'. This move resulted in the so-called 'word-based' approach to morphology. Within the 'word-based', post-structuralist morphology, the word is assumed to be the morphosyntactic basic unit of language, grammatical properties being associated directly with whole words. Crucially, however, the concept of 'morpheme' is not abolished from this word-based view, although it is conveniently modified. Actually, morphemes keep on being assumed as 'units in morphological analysis', although they lose their status of '(Saussurean) signs'. The fact is that sub-word recurrent items, such as the Structuralist morphemes, are intuitively identified ('recognised') by speakers; actually, words organised into particular sets undeniably show (partial) phonetic /

semantic resemblances to one another.[14] Therefore, 'morpheme' was redefined by Aronoff (1976: 15), as follows:

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(2.2) [...] what is essential about a morpheme: not that it means,
      but rather merely that we are able to recognize it.[15]
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As it will be noted, under such a definition thematic vowels can be reasonably regarded as morphemes, even though they fail to bear any meaning. It is undeniably true that this does not affect the core assumption that thematic vowels are meaningless linguistic items. Crucially, however, under the new definition in (2.2) the (meaningless) thematic vowels can be placed into a morphological model as 'morphemes'. Therefore, the new definition of 'morpheme' looks as more powerful, compared to the previous one (where 'morpheme' basically meant 'minimal meaningful unit'), because it can cover a larger range of items. Notice also that the new definition of 'morpheme' does not claim that no morpheme has a meaning, actually. Simply, a morpheme need not have a meaning, that is, meaningless 'morphemes' are admitted.

2.2.2 The transformational approach to the paradigm

In addition to overcoming the equation 'morpheme = minimal sign', generative morphology is also known for the so-called 'transformational approach to the paradigm'. By this label, I basically refer to the generative approach to inflectional morphology.

Within the Structuralist morphology, all 'words'[16] are assumed to be formed by arranging morphemes into larger strings in a syntagmatic level.[17] By contrast, the core assumption in the Generative morphology is that all the word-forms of a paradigm are derived from a (single) base, by means of (transformational) rules applied to this base. The base should be located in a deep, underlying level and is identified with the lexeme. Accordingly, the relationship between any lexeme and the word-forms in the paradigm of it can be stated in terms of a synchronic derivation. Within this framework a lexeme is a sign, and in this sense it comes to substitute the 'morpheme' within the lexicon. This is the view in Aronoff's (1976) *Word formation in generative grammar* which, while being specifically concerned with derivation only, is normally taken as a

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[14] See the Anderson's (1992: 48) example in the previous section.
[15] My emphasis.
[16] By which I also mean the word-forms in a paradigm.
[17] This approach is traditionally referred to as 'Item-and-arrangement' (see Hockett 1954), where 'Item' is to understand as 'morpheme' (= minimal sign).

cornerstone of Generative morphology.[18] One of the problems with Aronoff's (1976) book was the confusion between the terms 'word' and 'lexeme', as the scholar himself admits later on:[19] actually, he explicitly states his morphological theory as 'word-based', but he develops a theory whose primitive is the 'lexeme' rather than the 'word'.[20] The point is that the lexeme is something different compared to any of the actual 'words'[21] of a language: the lexeme never surfaces, it is abstract. Yet if the lexeme is taken as the basic unit from which all of the word-forms of a paradigm should be derived by means of transformational rules, then the form of the lexeme seems important to establish. Actually, that is a specifically language-related matter: there are some languages where the underlying base forms, to which the derivation applies, seem to parallel whole words;[22] English is language of this kind. But there are also many languages in which this seems not to be the case, since that would require a number of 'truncation' operations to adapt the underlying form to (part of) the form of the derived words; Italian happens to be such a language, actually. An example will help to clarify that. Consider the usual verb AMARE 'love'; as a lexeme, it is traditionally referred to by the form of the Infinitive, which is also taken as the underlying base form. In order to account for the derivation of, say, *amo* 'I love', one should admit a truncation rule deleting the rightmost segment /–are/ before adding the ending /-o/; schematically: *am~~are~~* + *-o* → *am*o. But consider the derivation of *amate* 'you (pl.) love': in this case, one could reasonably assume the deletion to affect only the segment /-re/, the sequence /ama-/ being found in both the base (i.e., the Infinitive) and the derived word-form: schematically, the derivation would be *ama~~re~~* + *-te* → *ama*te. The point is that, starting from the Infinitive, the deletion of /-re/ should be assumed to affect the derivation of all the word-forms of the paradigm,[23] increasing the number of rules in the derivation. It would be clearly more economical, in the case of Italian, at least, to take an item which is smaller than the Infinitive as the base form in the derivation. Notice also that the choice of the Infinitive in order to represent the

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[18] See also Scalise (1984).

[19] See Aronoff (1994: 7).

[20] By 'primitive' I mean the basic unit of a language, both morphosyntactically and morphotactically.

[21] Or word-forms, as in the case of inflection.

[22] Actually, one of the word-forms in a paradigm.

[23] Apart from the Infinitive itself, of course, which, as an actual word-form, happens thus to coincide with the lexeme.

Italian verbal lexemes is simply a convention, with no theoretical validity.[24] Here the issue of how to represent the Italian verbal lexemes leads us back to the thematic vowel: the point is whether the thematic vowel has to be counted as part of the lexical representation of verbs, given that it happens to be found in many but not in all the word-forms in a verb's paradigm (cf. Ch.1).

We have seen that after the new definition of 'morpheme' (see (2.2), in §2.2.1), a thematic vowel can be asserted to constitute an independent morpheme, in that it can be easily isolated ('recognised') in at least some of the word-forms in which it occurs (cf. Ch. 1, §1.2). It follows that a lexeme representation containing the thematic vowel should be regarded as made up of two morphemes at least, one of which being the thematic vowel. This is not the point, however. It is rather as follows: if one assumes that the underlying representation of an Italian verbal lexeme is unique, then the logical possibilities as for the presence of the thematic vowel in it are obviously two: the thematic vowel may be included in this representation, or it may be not.[25] To be sure, both positions are found in the literature. Up to my knowledge, the former is assumed by Scalise (1984, 1994), the latter basically by Wanner (1972) as well as by de Boer (1981). Dressler & Thornton (1991) place themselves in an in-between position, since they argue for the presence of two underlying bases, of which one would be provided with the thematic vowel, the other would be not. In the rest of this section I will discuss these different proposals.

2.2.2.1 Thematic vowels in the underlying stem: Scalise (1984, 1994)

In tackling the question of the representation of the underlying base in Italian verbs, Scalise (1984, 1994: 63ff.), points out the importance of the distinction between the notions of 'actual word' and 'abstract word'. Even though the scholar adheres to Aronoff's 'word-based' approach in a morphosyntactic sense (actually, he takes the whole word as the element to which grammatical properties are directly associated), when he addresses the question of morphotactics in inflectional morphology, he maintains that the word-forms in a paradigm are all derived from a sub-word unit, to be intended as an 'abstract word'. Evidence from both inflection and derivation suggests that, in the case of Italian, the base form in the derivation process is a bimorphemic unit, made up of the verbal root *plus* the thematic vowel; Scalise labels

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[24] Cf. Aronoff (1992).
[25] Cf. Wanner (1972: 300).

this basic element as a stem.[26] For instance, the single base in the paradigm of AMARE 'love' will be /ama-/, that of TEMERE 'fear' will be /teme-/ and that of DORMIRE 'sleep' will be/dormi-/ (the thematic vowels are in capital letters). Henceforth, I will sometimes refer to the syntagmatic position following the root in a structure like Scalise's stem by the label 'thematic slot'. Scalise claims the presence of the ThV in the underlying representation of an Italian verb chiefly on the base of no predictability: there is no way to predict which ThV[27] will characterise a given verb, starting, say, from any phonological or semantic characteristic of its root. Using the scholar's own words:

> (2.3) La VT deve essere considerata come informazione 'data' e non ricavabile attraverso regole. In altri termini, non vi è alcun modo per prevedere quale VT si aggiunga a quale radice verbale: non vi è modo di prevedere che la radice am- prende a come VT e non i o e. Ne concludiamo che la VT deve essere parte della rappresentazione lessicale di una voce verbale.[28]

Now, if the thematic vowel is assumed to be present in the (single) underlying representation of the lexeme, any means have reasonably to be found, for its absence to be justified in those (surface) word-forms where it is not observed. Scalise's account appeals to a 'vowel deletion rule' (VDR), that is, a rule deleting the ThV from the base form wherever a given context is met. Pirrelli (2000: 11) states Scalise's VDR as follows:

$$(2.4) \quad \text{ThV} \rightarrow 0 \quad / \quad [\underset{-\text{stress}}{\underline{\quad\quad}} \quad + \text{V}]$$

This rule is to be read as follows: any ThV undergoes deletion if it is both unstressed and followed by a vowel.[29]

Such a rule is classified by Scalise as a 'readjustment rule', and is assumed to be performed in the derivation of a word-form after the insertion of the inflectional endings. Consider, for instance, the derivation of the word-form *ami* 'you (sg.) love', as stated by Scalise (1984):

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[26] Thus, schematically: Stem = Root + ThV.
[27] Remind that the traditionally recognised thematic vowels are three, i.e. *a*, *e* and *i*, cf. Ch.1 §1.2.
[28] Scalise (1984).
[29] Where the following vowel is taken as (part of) the inflectional ending. It will have been noted that the rule context is stated in phonological terms, while the input of the rule (i.e. the ThV) is rather a morphological element.

(2.5)	**Lexicon**	am	a		
	Inflection	am	a	+ i	
	Deletion		0		
	Output	am		i	

Scalise is not concerned with the derivation of all the word-forms in a verb's paradigm,[30] therefore many of the observations I will made here should be taken as my own applications of his model. In general, Scalise's account has the advantage of simplicity: for each verbal lexeme, a single base form (i.e., the stem) together with one (single) rule is assumed to account for the derivation of all the word-forms in the paradigm. However, the model suffers from some empirical inadequacies. In particular, the shortcomings with Scalise's account concern:

- the 1st pl. of the Present Indicative and Present Subjunctive as well as the 2nd pl. of the Present Subjunctive;
- the 3rd sg. of the *Perfetto Semplice* of first-conjugation verbs;
- the (weak) Past Participle of second-conjugation verbs.

The first problem concerns the fact that, according to Scalise's model, the palatal glide /j/ should be included as a V(owel) in the triggering context of the VDR.[31] Accordingly, the derivation of, say, *amjàmo* 'we love', would be:

(2.6)	**Lexicon**	**a**m	a		
	Inflection	am	a	+ j**a**mo	
	VDR		0		
	Output	am		j**a**mo	

The other problems are even more serious, for they happen to challenge the VDR.

In the *Perfetto Semplice*,[32] the problem concerns the 3rd singular of the first conjugation verbs, where a stressed vowel /-o/ is found within the 'thematic slot', instead of the expected /a/ (e.g., *amò* '(s)he loved' instead of the expected **amà*). Notice that normally the word-forms in the *Perfetto Semplice*, apart from this single form, should display the thematic vowel: these do not undergo the VDR because the relevant conditions are not present. Table 2.1 shows the derivation:

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[30] Admittedly, Scalise's book is not particularly concerned with inflectional morphology, being rather centred on derivation.

[31] Cf. Pirrelli (2000: 11).

[32] Here only the 'weak' *Perfetto* is considered, i.e. that conforming to a structure of the type 'Root + stressed ThV + Ending'. The alternative type (called 'strong') will be introduced and discussed later on.

	Underlying Representation	VDR	Output	E.g., DORMIRE 'sleep' Output
1st sg.	Root-**ThV**-i	dna	Root-**ThV**-i	Dorm-**i**-i
2nd sg.	Root-**ThV**-sti	dna	Root-**ThV**-sti	Dorm-**i**-sti
3rd sg.	Root-**ThV**	dna	Root-**ThV** (●⁑ in first conj.)	Dorm-**i**
1st pl.	Root-**ThV**-mmo	dna	Root-**ThV**-mmo	Dorm-**i**-mmo
2nd pl.	Root-**ThV**-ste	dna	Root-**ThV**-ste	Dorm-**i**-ste
3rd pl.	Root-**ThV**-rono	dna	Root-**ThV**-rono	Dorm-**i**-rono

Table 2.1

bold = stressed
dna = do not apply

The stressed /-o/ in the 3rd singular of the first-conjugation verbs could be regarded as a stressed ending, but this way the structural parallel, together with the other conjugations, would be lost. Alternatively, one could treat the stressed vowel in the 3rd singular always as an ending (actually, analysing *am-ò*, *tem-é* and *dorm-ì* all as 'ROOT + stressed ENDING'), even though such an assumption would lead to lose the structural parallel between the 3rd singular and the other word-forms of the *Perfetto Semplice*.

A very similar problem concerns the (weak)[33] Past Participle of the second-conjugation verbs, as illustrated by Table 2.2:

Underlying Representation	VDR	Output	Examples
Root-**ThV**-to	dna	Root-**ThV**-to	(first conj.) *am-**a**-to* (second conj.) *tem-**u**-to* □ (third conj.) *dorm-**i**-to*

Table 2.2 -

Notice that, according to this account, the VDR is assumed to apply also in the derivation of the following forms:

- 3rd singular Present Indicative of first-conjugation verbs (e.g. *ama* '(s)he loves');
- 3rd plural Present Indicative of first-conjugation verbs (e.g., *amano* 'they love');
- 3rd singular Present Indicative of second-conjugation verbs (e.g. *teme* '(s)he fears').

These are forms whose inflectional endings (or part of them, as in the 3rd plural) happen to be formally identical with the ThV. Despite this misleading identity,

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[33] See fn. 32.

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however, contextual conditions are fully met, for the VDR to apply in the derivation of these forms. For instance the derivation of *ama* '(s)he loves' will be as follows:

(2.7) **Lexicon**   àm   a
         Inflection   àm   a   + a
         Deletion   0
         Output   àm   a

We have seen that Scalise's Vowel Deletion Rule may be claimed to be a phonological rule, its context being phonological in nature. In the following section I will consider a proposal in which phonology plays an even more crucial role for the paradigmatic distribution of thematic vowels.

2.2.2.2 *Thematic vowels as inserted (wherever they are phonologically functional): Wanner (1972)*

Wanner's (1972) proposal differs from Scalise's one because it posits the thematic vowel to be normally absent from the underlying representation of a lexeme.

So the thematic vowel ought to be inserted by rule at some stage in the derivation of those word-forms in which it is recognised.

It is worth noticing that Wanner handles the derivation of Italian verbal paradigms within the framework of (generative) phonology. Accordingly, the conditions of his rule of 'thematic vowel insertion' are stated in phonological terms. In particular, the thematic vowel is assumed to be inserted just in case the stem final consonant is directly followed by

- a consonant initial ending;
- the word boundary.[34]

Actually, the thematic vowel is said to be inserted only where it is "phonologically functional"; in particular, it would act as "a correction of the syllable structure", repairing phonotactically ill-formed sequences.

The condition in 1. predicts the thematic vowel to have a wide paradigmatic distribution, since a consonant initial ending occurs in a good number of word-forms in Italian. Wanner (1972: 303) explicitly mentions "all the forms of imperfect indicative

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[34] Wanner seems therefore to see that the word-forms in Italian are systematically vowel-ending as a (phonological) 'well-formedness condition'.

and subjunctive, some forms of the *Perfetto Semplice*,[35] the 2nd plural present indicative, [as well as] future and conditional".[36] Notice that, according to Wanner's account, the *a* characterising the 3rd plural Present Indicative of first-conjugation verbs is to be interpreted as a thematic vowel[37] (e.g. *amAno* 'they love').[38]

Moreover, the condition in 2. leads Wanner to regard even the vowel occurring in final position in the 3rd person singular Present Indicative of first- and second-conjugation verbs (e.g. *amA* '(s)he loves', *temE* '(s)he fears') as a thematic vowel.[39] Remember that, according to Scalise's analysis, these last three forms (i.e., for instance, *amano* 'they love', *ama* '(s)he loves' and *teme* '(s)he fears') are not predicted to display any thematic vowel, their final vowels being rather regarded as endings.

The crucial difference between Scalise's and Wanner's analysis seem to lie on the fact that Wanner does not posit stress position as a condition on the presence of the thematic vowel, while Scalise does.

The major shortcoming with Wanner's analysis, however, concerns the asymmetry arising in the Present Indicative, when word-forms of different conjugations are compared:

(2.8)	I (ThV a)	II (ThV e)	III (ThV i)
3rd sg.	*ama*	*teme*	*dorme* vs. **dormi*
3rd pl.	*amano*	*temono* vs. **temeno*	*dormono* vs. **dormino*

As (2.8) illustrates, a final *–e* characterises the 3rd singular of third-conjugation verbs, in lieu of the expected thematic vowel *i*; likewise, an unexpected *o* appears in the 3rd plural, in both second- and third-conjugation verbs.[40]

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[35] *Passato remoto*, in Wanner's terminology. Notice that the scholar does not specify the actual forms. Anyway, I suppose he should refer to the persons 1st sg., 3rd sg. and 3rd pl., given that those are equivalent in both the weak and the strong *Perfetto Semplice* (cf. Ch.3).

[36] Remember that, according to Scalise's analysis, the Future and Conditional are assumed not to display any overt thematic vowel (cf. 2.2.2.1).

[37] See Wanner's analysis (1972: 299).

[38] The vowel at issue is in capital.

[39] Once more, the vowels at issue are in capital.

[40] Interestingly enough, Wanner does not consider the possibility that the final *–i* of the 2nd singular forms (e.g. *ami* (you (sg.) love', *temi* 'you (sg.) fear', *dormi* 'you (sg.) sleep') corresponds to the thematic vowel of third conjugation verbs. I suppose that the reason should be that, in this case, no 'inter-conjugational' variation is observed, a final *-i* being found everywhere in the system. Notice, however, that by taking the final *–i* of the 2nd singular as an ending, Wanner implicitly admits that thematic vowels compete with endings in the task of 'syllable structure repairing'. As the reader can see, the problem always concerns asymmetry.

Wanner claims that the information about the actual phonological content of the thematic vowel to be inserted[41] relies on the value of a binary (phonological) feature, labelled as [± high], and is assumed to be given within the lexical representation of the verb.[42] That is expected, after all, firstly because it is in line with the scholar's phonological approach, and secondly because Scalise strikes the right note, as he claims that there is no way to predict the actual phonological content of a verb's thematic vowel starting, say, from any phonological or syntactic characteristic of its root. Therefore, Wanner's recourse to lexical 'features' seems the only possible solution.

Although Wanner assumes the thematic vowel to be normally not present in the underlying representation of the verb, he mentions a few verbs in which that would be exceptionally present. Those are verbs, mostly in the second conjugation, displaying stem alternation patterns in the Present forms, such as *spi[ŋg]o* / *spin[dʒ]i* 'I / you (sg.) push', *ta[tʃt ʃ]o* / *ta[tʃ]i* 'I am / you (sg.) are quiet', *valgo* / *vali* 'I am / you (sg.) are worth'). Wanner regards these alternations as centred around palatalisation and related supplementary (phonological) processes. Consider, for instance, the pair *spingo* / *spingi*;[43] the stem-final consonant is seen to undergo palatalisation before the front vowel *–i* of the 2nd singular, but not before the back vowel *–o* of the 1st singular; this finding is not surprising, since it may be intended by means of a natural phonological rule. But consider now the verb TACERE 'be quiet': the 1st sg. and 2nd sg. of the Present Indicative are *taccio* ['tatʃ:o] and *taci* ['tatʃi], respectively. Aside from the alternation in length, which is not crucial in Wanner's argument, the stem final consonant [tʃ] is unexpectedly found to be palatal both before the back vowel *–o* (i.e., in the 1st sg.) and before the front vowel *–i* (i.e., in the 2nd sg.). Wanner solves this problem by positing an (underlying) thematic vowel *e* as "the only possible source for the palatalisation" before the back vowel *-o*. Schema (2.1) reports the derivation of the two forms discussed:[44]

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[41] Remember that the possible vowels are three, i.e. *a*, *e*, *i*.

[42] It will have been noted that this way the thematic vowels *e* and *i* happen to have the same feature value, i.e. [+ high]. The matter with Wanner's feature(s) is more complicated than what I have depicted here, and, after all, is beyond the aim of this work. What really matters is that also in this case the scholar handles a morphological issue by means of phonological devices.

[43] From the second-conjugation verb SPINGERE 'pull'.

[44] Taken from Wanner (1972: 308).

| | 1st sg. | | | 2nd sg. | | |

	1st sg.			2nd sg.		
	/tāk +	ē	+ ō/	/tāk +	ē	+ ī/
ThV shortening		ĭ			---	
Glide formation		y			---	
elision (glide-laxing)		---			0	
palatalisation	tatʃ			tatʃ		
y-drop		0			---	

Schema 2.1 -

As the schema shows, the thematic vowel is assumed to be present in the underlying representation of both forms. In the derivation of the 1st singular, it becomes a front glide which acts as a palatalisation trigger before undergoing drop. In the derivation of the 2nd singular, in contrast, it simply undergoes elision.

The presence of the thematic vowel in the underlying representation of a verb is once more said to depend on the value of a binary 'feature', i.e. [± Insertion], which is assumed to be provided in the lexical entry of the verb. Accordingly, the Italian verbs can be divided into two groups: a larger one, carrying the lexical specification [-Insertion], whose verbs should not have the thematic vowel in the underlying representation; and a smaller one, carrying the lexical specification [+ Insertion], whose verbs are exceptionally assumed to have the thematic vowel in the underlying representation. This lexical specification cuts across the traditionally recognised conjugation classes, at least partially. In particular, the verbs specified as [+ Insertion] fail to correspond to any conjugation; in this group there are some second-conjugation verbs, besides few third-conjugation ones.

Wanner's analysis seems quite complicated, actually; in particular, the derivation in Schema (2.1) appears highly *ad hoc*. The real problem with this analysis is that it tries to account for the behaviour of morphological items, such as thematic vowels, by means of phonological rules.

Wanner's analysis treats thematic vowels as a sort of 'phonological last resort': those can be inserted in the course of the derivation, in order to repair phonological inadmissible sequences; alternatively, they can be exceptionally present in the underlying representation of a verb, wherever they serve to trigger phonological processes affecting the root. In any event, they are always regarded as something

subordinate to phonology. In this sense, Anderson's (1992: 54) definition of the thematic vowels as "(morphological) glue"[45] looks particularly appropriate.

2.2.2.3 The double base hypothesis: Dressler and Thornton (1991)

Up to now I have been considering analyses which assume a single base form in the derivation of each lexical paradigm. That base can either include the thematic vowel (as in Scalise (1984, 1994)) or not (as in Wanner (1972)); in either case, that is assumed to be unique.

This section explores a different option, namely the idea that each verb lexeme is provided with not one, but two base forms, as stated by Dressler and Thornton (1991):[46] all the inflected forms in a paradigm would derive by applying processes (mostly, by adding endings) to either of two bases, called 'radical base' and 'thematic base', respectively. In 'regular' verbs, i.e., verbs displaying no root alternation, these two bases differ as for the presence of the thematic vowel, as well as for the position of stress. In particular, the 'radical base' is supposed to consist of the bare root,[47] bearing prelexical accent and containing no ThV; on the other hand, the 'thematic base' is assumed to contain a ThV which bears prelexical accent.[48] This accent is claimed to raise as primary accent in surface forms. For example, the usual verb AMARE 'love' is assumed to be stored in the lexicon as provided with both the radical base /àm-/ and the thematic base /amà-/. These bases would then co-participate in the derivation of the word-forms of the verb paradigm, according to a specific paradigmatic pattern: in principle, the singular forms and the 3rd plural of the Present Indicative and Present Subjunctive, and the Imperative singular, would be derived from the radical base; all the other inflected forms would be derived from the thematic base.

Dressler and Thornton's statements lead one to expect that all the word-forms in a paradigm will conform to one of the following morphological structures:

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[45] I think that Anderson's adjective 'morphological' is due to the fact that thematic vowels connect morphological items such as stems and endings. In fact, we have seen that thematic vowels are supposed to serve phonological rather than morphological purposes.

[46] The scholars adhere to the framework of Natural Morphology, actually. Their work is included in this section because it is in line with the generative treatment of inflectional morphology.

[47] The term 'root' is to understand in Scalise's sense (see §2.2.2.1, fn.27).

[48] Dressler and Thornton's 'thematic base' comes thus to correspond to Scalise's 'stem' (cf. §2.2.2.1).

(2.9)   Stressed ROOT + ENDING   (if derived from the 'radical base')

(2.10)   ROOT + stressed THV + ENDING   (if derived from the 'thematic base')

As far as the thematic vowels are concerned, the structure in (2.10) leads to expect them to be stressed and 'phonetically unique' within each lexical paradigm (we have seen that the actual phonetic content of the thematic vowel depends on the verb conjugation: that is, we find *a* for the first conjugation, *e* for the second and *i* for the third).

These predictions are not always borne out, however. In particular, there are some problems with the following forms:

- the 1st plural Present Indicative, the 1st and 2nd plural Present Subjunctive: in these forms the diphthong /jà/ seems to replace the expected thematic vowel;
- the 1st and 2nd plural Imperfect Indicative: here the thematic vowel does not bear stress, falling on the following syllable instead;
- the Future and Conditional: stress falls on the syllable after the thematic vowel.

Table (2.3) illustrates these problematic forms by the three usual verbs AMARE (ThV *a*), TEMERE (ThV *e*) and DORMIRE (ThV *i*):

	Conjugation		
	First	**Second**	**Third**
1st pl. Pres. Subj.	*amjàmo*	*temjàmo*	*dormjàmo*
2nd pl. Pres. Subj.	*amjàte*	*temjàte*	*dormjàte*
1st pl. Impf. Ind.	*amavàmo*	*temevàmo*	*dormivàmo*
2nd pl. Impf. Ind.	*amavàte*	*temevàte*	*dormivàte*
Future	*amerò etc.*	*temerò etc.*	*dormirò etc.*
Conditional	*amerèi*	*temerèi*	*dormirèi*

Table 2.3 -

As the table shows, these problematic forms affect all verbs, regardless of conjugation. Other problematic word-forms are the 'conjugation-particular' ones. These are:

- the 3rd person singular Present Indicative of first-conjugation verbs: here an unexpected stressed *o* is found in the place of the expected thematic vowel *a* (e.g., *amò* 'I loved' vs. *amà);

- the Future and Conditional of first-conjugation verbs: an *e* is found in the place of the expected *a* (e.g., *amerò* 'I will love' vs. **amarò*, *amerei* 'I would love' vs. **amarei*)

- the Gerund of the third conjugation, where an *e* appears, in lieu of the expected *i* (e.g., *dormendo* 'by sleeping' vs. **dormindo*);

- the (weak) Past Participle of the second conjugation, where an *u* occupies the thematic slot in place of the expected *e* (e.g. *temuto* 'feared' vs. **temeto*).

Dressler and Thornton account for the problems about stress position by playing on different levels of stress assignment, i.e. 'prelexical' and 'postlexical'. We have seen that both bases of Dressler and Thornton's model are assumed to be prelexically specified as for to stress position. Yet also the inflectional endings are assumed to be so specified, and stress-clash phenomena may in some cases arise. So one of the accents has to be deleted, in order for the clash to be repaired. For instance, the accent on the thematic vowel is assumed to be deleted by the prelexically stressed endings *–vàmo* and *–vàte* of the Imperfect Indicative (see the problem in point b. above).

The other problem in the model, i.e. the presence of unexpected vowels in the place of the thematic vowels in some forms, is mainly accounted for in terms of 'vowel substitution'. So, for instance, the thematic vowel *a* of the 3rd singular of the *Perfetto Semplice* of first-conjugation verbs is said to be substituted by *o* (see the problem in point d. above).

The main advantage of Dressler and Thornton's analysis, compared to both Scalise's and Wanner's, is that the recognition of the thematic vowel only in some word-forms of the paradigm is regarded by a particular (i.e. stipulated) paradigmatic distribution of a base (actually, the 'thematic base'), rather than by the application of a (phonological) rule. From this point of view, Dressler and Thornton's approach can be regarded as 'more morphological' in spirit than both Wanner's one (which, as we have seen, is rather phonological) and Scalise's one. Furthermore, Dressler and Thornton's analysis looks extremely detailed and careful: if unexpected word-forms are found, those are recognised and accounted for. In my opinion, the fact that at least some of the proposed explanations appear quite *ad hoc*[49] is not the main shortcoming of Dressler

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[49] Cf. Thornton (2007: 48).

and Thornton's analysis. I think that the real problem with this analysis lies in the adoption of a 'transformational approach' to the paradigm.[50]

In the following section, I will sum up and discuss the implications of this approach; that will lead me to briefly review the present chapter, finally focussing on the issue of the meaning of thematic vowels.

2.3 Discussion: the constructive approach to morphology (and again on the meaning issue)

In this chapter I have been considering theoretical positions and analyses referring to two major linguistic frameworks, i.e. Structuralism and Generativism. In general, these are found to differ in many points, yet here I would rather point to a common aspect of the two, concerning the approach to word analysis and morphotactics. I will call that the 'constructive' approach to morphological description.[51] Since I am dealing with inflection, my 'words' will be specifically the 'word-forms' in a paradigm. As we have seen above, in the Structuralist framework the word-forms are assumed to be formed by arranging (lexical) morphemes into larger structures. Generative morphology, in contrast, understands the word-forms in a paradigm as the result of a number of (morpho-phonological) processes applied to an underlying base. In either case, however, actual word-forms are supposed to be 'built up' from smaller items. An important theoretical implication of such an approach is that "individual [word-]forms are [assumed to be] derived in isolation from the other forms in a grammatical system".[52] Actually, the notion of 'paradigm' is basically set aside, up to deny its psychological reality.[53] Even though some of the works that I have been reviewing underline the relevance of the paradigmatic dimension in the study of inflection,[54] in dealing with morphotactics, they seem to forget the 'paradigmatic dimension', the formation of each word-form being basically accounted for by its own. We have seen that one of the major theoretical achievements of the generative morphology is the revindication of an approach based on the 'word' rather than on the 'morpheme'; however, that actually holds for morphosyntax only. That is, within generative

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[50] Dressler and Thornton (1991: 4) explicitly claim that they are carrying out their analysis according to an 'Item-and-Process' model of morphology. Actually, that is the model traditionally adopted within the framework of Natural Morphology, to which the scholars adhere.

[51] Following Blevins's (2006: 533) own terminology.

[52] Blevins (2006: 534).

[53] Lieber (1981: 70), for instance, makes her position clear, as she claims that "the notion of paradigm has no theoretical status".

[54] See Wanner (1972: 293) and de Boer (1981: 55-58).

morphology 'words' are the only true 'signs', but they are none the less assumed to be built up from sub-word units. In the light of a change in the notion of 'morpheme' (from 'minimal meaningful unit' to 'minimal recognised – i.e. psychological - unit'), even the generative analyses turn out to be morphotactically 'morpheme-based'. Crucially, both the post-Bloomfieldian, a structuralist model, and the (post-)Aronovian, a generative one, can be labelled as 'constructive', in that they assume actual word-forms to be built up ('constructed') from smaller items, either by means of arrangements or else by the application of processes.

To turn back to my real concern, the main problem with thematic vowels, i.e., their (lack of) meaning, actually survives throughout the period I have been considering, since it is not affected by the change in the notion of 'morpheme'. From this point of view, the Generative framework seems to me to take no step forwards, compared to the Structuralist one. The point is the following: within the Structuralist framework, the 'morpheme' is conceived of as the 'minimal meaningful unit' and thematic vowels, having no meaning, cannot be regarded as morphemes. On the other hand, within the generative framework, morphemes need not have a meaning, so thematic vowels are morphemes, despite they have no meaning, and, as 'morphemes', they are ready to serve phonological purposes. Clearly, such a reasoning suffers from some circularity, because thematic vowels turn out to be meaningless in either case.

To conclude, in this chapter thematic vowels have been evaluated in the light of the notion of 'morpheme', as what appeared in the morphological literature over the past seventy years, by and large. Notice that this led us to explore two of the three logical possibilities outlined above, about the relationship between thematic vowels and the morpheme.[55]

In the rest of this work I will rather explore and defend the third possibility; I will actually argue that thematic vowels are 'signs', in that they do have a meaning. The key point is that the meaning I have in mind for thematic vowels is something different from all the 'meanings' which have been traditionally recognised in morphology; in particular, this meaning is 'purely morphological', that is, it serves nothing but the morphological machinery of the language. Now, the notion of 'purely morphological meaning' can be captured, provided that one adopts an approach to morphological

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[55] Remind that these are: 'A morpheme must have a meaning → (meaningless) thematic vowels are not morphemes'; or else 'a morpheme need not have a meaning → (meaningless) thematic vowels are morphemes'.

description that I will call 'abstractive', which is, to some extent, the reverse of what I previously called the 'constructive' approach. I will open the next chapter by outlining the 'abstractive' method, which is based on the comparison of word-forms in a paradigm and across paradigms.

Chapter Three

The Thematic Vowel Identification Hypothesis

3.1 The abstractive perspective

At the end of the previous chapter, I claimed that the main shortcoming of the analyses I had been considering is that they adopt a 'constructive approach' to the word-forms of a paradigm. Those analyses see the word-forms in a paradigm as 'constructed' from smaller units given on a different level of linguistic analysis.[1] Within the structuralist framework, these basic entities are the morphemes, intended as 'Saussurean' signs listed in the lexicon, and the word-forms should be 'built up' by arranging morphemes into larger strings. According to a categorisation made by Stump (2001: 1-9), such an approach to inflection is 'lexical' (since it locates basic units in the lexicon) and 'incremental' (in that it concerns the morphosyntactic properties of a word-form being built up gradually, as morphemes carrying these properties are arranged). The analyses carried out within the generative framework, in contrast, see the 'lexeme' as both the 'minimal sign' and the basic unit from which actual word-forms are derived by means of 'processes' (actually, 'rules'). In Stump's terms, such an approach to inflection, appealing to rules, would be 'inferential'. In particular, it is morphosyntactically 'word-based', since it takes the word as the only true sign. What really matters for these purposes, however, is that both of these perspectives are 'constructive', in that their main concern is with the 'building up' of words from simpler elements, whether it performs by means of (morphemes) 'arrangements' or by means of 'processes' applied to a lexeme. I would like to open the present chapter by introducing an alternative approach to the word-forms in a paradigm, which is actually the one that I am adopting in this work. As discussed earlier, I will call this alternative approach 'abstractive', according to Blevins's (2006) terminology.

According to the abstractive approach, the 'cognitive priority' in the language is to be accorded to whole words (in the sense of 'word-forms') rather than simpler units such as 'morphemes' or 'lexemes'. Actual words are seen as the basic units of linguistic analysis, in that they are the items to which morphosyntactic properties are directly associated.[2] None the less, the existence of sub-word units endowed with psychological reality is far from being denied, or even questioned: sub-word units are admitted, in

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[1] Basically in the lexicon.

[2] Actually, they have morphosyntactic priority.

fact, provided that they are taken as mere abstractions over full forms, psychologically (i.e. analytically) secondary to full forms. Therefore, sub-word units are seen as dependent on the full words of which they are part: they are assumed not to exist at any stage of linguistic analysis, prior to the words in which they are found; accordingly, they are assumed not to have any (possible) meaning in isolation. Finally, they have a *raison d'être* only in relation to the inflected forms from which they should be abstracted.

As the reader will probably notice, either perspective (i.e. the 'constructive' and the 'abstractive') takes account of both whole words and sub-word units, where the real difference simply lays on the 'cognitive priority' to be accorded to either. According to the 'constructive' view, sub-word units take priority over whole words. According to the 'abstractive perspective', on the contrary, whole words take priority over sub-word units: sub-word items depend on whole words, in that their potential meaning depends on the meaning of the word from which they should have been abstracted.

Another crucial aspect in which the 'abstractive approach' is different from the 'constructive' is its high cognitive relevance accorded to paradigms. The word-forms of a language are supposed to be psychologically organised into paradigms, so that any analysis cannot choose to take no account of such a specific organisation. The implication is that the analysis of a (single) word-form cannot be given in isolation: the place that the word-form occupies in the paradigm, instead, has to be counted as relevant to the analysis itself.

What I call here the 'abstractive approach' clearly recalls the traditional 'Word-and-Paradigm' model of morphology. In a famous 1959 paper, R. H. Robins draws the basic lines of this model, shading light on the fact that sub-word units such as 'morphemes' should be regarded as 'abstractive' in nature. This move, as the scholar claims, allows us to get over many of the problems that had arisen under the assumption 'morphemes = meaningful 'buildings' blocks' in the mapping from meaning to form in morphology. Using Robins's own words, while "some entities, that are clearly to be assigned morphemic status, may be seen in several languages to bear conflicting and even contradictory grammatical functions when considered in isolation […] words anchored in the paradigms of which they are part usually bear a consistent,

relatively simple and stable grammatical function".[3] The paradigm, seen as a close system of grammatical ('morphosyntactic') oppositions (cf. Ch.1, §1.1.2), provides a sure way of identifying the grammatical functions of the word-forms included. Accordingly, when 'morphemes' are regarded as abstractions over full forms, they can be reasonably thought of as benefitting from the paradigmatic organisation of the inflected forms of which they are part. In other words, if a whole form is assumed to be grammatically unambiguous because of the specific place it occupies within a given paradigm, then at least some of the morphemes taken from that form will be likewise grammatically unambiguous, by virtue of the non-ambiguity of the form from which they are taken.

The differences between the 'constructive' and the 'abstractive' approach to inflection can be also traced back to the dichotomy between the perspectives traditionally referred to as 'synthetic' and 'analytic', whose key notions are those of 'production' and 'recognition', respectively (cf. Lyons (1968), Mel'čuk (1996) and Aronoff & Fudeman (2011)): as noted earlier, the main concern of the 'constructive' approaches is to account for how word-forms are built up; on the other hand, the 'abstractive' approaches only cares about accounting for how sub-word units are recognised within the word-forms they are part of.

Admittedly, most scholars agree that the analytic approach is somehow inferior to the synthetic one;[4] this is no doubt true in the sense that, from a logical point of view, synthesis p r e s u p p o s e s analysis. In order to account for how word-forms are built up, one has to have sub-word units specified, both formally and grammatically, which implies that those sub-word units must have been previously a n a l y s e d. Likewise, speakers who produce word-forms must reasonably have analysed the sub-word units at their disposal. But in order to simply recognise the sub-word units in a word-form, one does not need to know the precise way in which the word-form has been constructed.[5] In these terms, my choice to adopt the abstractive perspective might be regarded as a shortcoming for the present work; actually, it might be objected that I would not be able to 'tell the whole story'. In what follows, I will not be concerned with the production process of the word-forms of the Italian verbal system, in fact; my

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[3] Robins (1959), my emphasis. Notice that the scholar properly talks of 'grammatical function' rather than 'meaning'. I will go back to the difference between these two notions in Ch.5.
[4] See Lyons (1968: 159-160) and Matthews (1991: 187) for discussion. Matthews explicitly claims that the scholars who adopt an analytic approach renounce to "a deeper analysis".
[5] Cf. Blevins (2006).

interest will simply go to how certain sub-word units (in particular, thematic vowels) are analysed, starting from the actual word-forms in which those are found.

Summing up so far, in the present work an abstractive approach to the morphology of Italian verbs will be adopted, which means that whole word-forms will be taken as the primary units of morphological analysis. However, sub-word units will be not just admitted but also constantly referred to, provided that they are understood as mere 'abstractions' over full forms, analytically secondary and formally dependant on full forms. As noticed earlier, the main advantage of this kind of approach is that whole words, contrary to 'morphemes', are unambiguous as for the grammatical functions they achieve within the grammatical architecture of the language; this mainly follows from the assumption that words are organised into paradigms, which should be seen as close systems of (grammatical) oppositions.

We have said that the key notion within the abstractive perspective is recognition. That is reminiscent of Aronoff's (1976) (re)definition of the morpheme, provided in Ch.2 and reported here, for ease of reference:

> (3.1) [...] what is essential about a morpheme: not that it means, but rather merely that we are able to recognize it.

The example discussed by the scholar concerns the English verb formative /-mit/ observed in the verbs *sub*mit, *re*mit etc. By the claim in (3.1), Aronoff (1976: 15) emphasises the existing link between the recognisability of a morpheme[6] on one hand and the fact for that morpheme not only to have a "constant phonetic string" but also to be "arbitrary linked to something" on the other. In the case of the formative /-mit/, the additional 'something' at issue would be a phonological rule[7] changing the final -*t* into -*s* before some derivational suffixes (/-ion/ and /-ive/ among them; e.g. *permit* → *per**miss**ion*, *per**miss**ive*). According to Aronoff, by recognising /-mit/ as a morpheme, the traditional notion of 'meaning' would have been simply broadened so as to include a phonological operation as well.[8]

Let us return to the thematic vowels. Unlike Aronoff's /-mit/, a 'thematic vowel' cannot be claimed to have a constant phonetic value, given that it actually appears in three different variants, i.e. *a* (as in the verb AMARE 'love'), *e* (as in TEMERE 'fear') or

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[6] Accordingly, Aronoff's (1976) 'morpheme' corresponds to what I call 'morphological unit'.
[7] According to Aronoff's own analysis.
[8] See also Bochner (1993).

else *i* (as in DORMIRE 'sleep' – cf. Ch.1). In this sense, mathematically speaking, a 'thematic vowel' would be a variable, to which three different values can be assigned. On the other hand, a thematic vowel, as a variable, is arbitrarily linked to 'something', which is what allows it to be recognised as such, what allows us to say that the *a* of AMARE is 'the same thing' as the *e* of TEMERE and the *i* of DORMIRE. I claim that this 'something', to which the thematic vowel is arbitrarily linked, consists of:

a. a given position in a word-form's morphological structure;
b. a specific pattern of variation: a thematic vowel must be inter-paradigmatically variant so as to assume three[9] different values in each of its occurrences.

Notice that Aronoff (1976) does not claim that a 'morpheme' never has a meaning, actually; a morpheme may have a meaning, of course. What the scholar means is simply that a morpheme, in order to be identified as such, only has to be recognisable as an autonomous, sub-word unit within an inflected form: the issue of its possible meaning becomes somehow secondary. Following Aronoff (1976) I claim that, when a morphological item (a 'morpheme', in traditional terms) is recognised within an inflected form, nothing has been said so far about its meaning, although we could not deny *a priori* that it has a meaning.[10]

As suggested by the title of this work, my real aim is to show that the thematic vowels of the Italian verbal system do have a meaning ('*signatum*'), or even more than one ('*signata*'). Since I intend to proceed in stages, however, the present chapter is not concerned with the meaning(s) of the thematic vowels yet. Here I just would like to show how a thematic vowel could be unambiguously recognised in a word-form, through both the position it occupies within a word-form's morphological structure and the pattern of inter-paradigmatic variation it exhibits.

In the second part of Ch.2 we saw that, once the fact of having a meaning stops being understood as a condition to be met, in order for a sub-word unit to be regarded as a morpheme, then the thematic vowels of the Italian verbs can be reasonably treated as morphemes. At that point, the problem with thematic vowels becomes their paradigmatic distribution: since scholars normally agree that not all the word-forms in a verbal paradigm display the thematic vowel, then the question to be answered is:

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[9] For the time being, this number is to be taken as an assumption; its motivation will become clear in the next chapter.

[10] Actually, there would be a 'suspension of judgment' on this point.

which are exactly the word-forms with the thematic vowel? Actually, morphologists have not reached an agreement on this point. Aside from a cluster of word-forms in which the presence of the thematic vowel is never at issue (which may be thought of as a sort of hard-core for the present purpose), other forms are far more problematic in this respect.

In the rest of this chapter I will be concerned with the recognition of the thematic vowel in the word-forms of the Italian verbs, according to an abstractive perspective. In particular, I will first set a hypothesis about what conditions an item (actually, a vowel) has to meet, in order to be recognised as the 'thematic vowel' within a word-form (§3.2.1), then I will use this hypothesis basically as a principle, in order to check the presence of the thematic vowel in the word-forms of the Italian verbs (§3.2.2);[11] finally, in the light of the same hypothesis, I will review the word-forms regarded as problematic in the previous analyses (§ 3.3). My conclusion (§3.4) is that the thematic vowel identified by means of the ThVIH is something abstract; actually, it is a 'slot' in a word-form's morphological structure.

3.2 The recognition of the thematic vowel

3.2.1 The Thematic Vowel Identification Hypothesis

In this section I will try to establish a criterion for the identification of the thematic vowel within the word-forms of the Italian verbal system. As illustrated earlier (cf. Ch.2, §2.2.2), other scholars, too,[12] posited some criteria which can be used for the same purpose;[13] in this regard, we actually saw that different criteria lead to different conclusions, as for the presence of the thematic vowel in some of the word-forms of the system: the final –a of a form like *ama* '(s)he loves',[14] for instance, is regarded as the thematic vowel within some analyses[15] and as the ending within some others.[16] Moreover, we saw that the conditions posited by the other scholars are basically

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[11] Notice that this will also allow me to define the paradigmatic distribution of the thematic vowel.

[12] In particular, Wanner (1972) and Scalise (1984).

[13] Usually in terms of rules, according to the generative framework they adhere to. Actually, those rules are meant to account for the production of the word-forms with a thematic vowel – remember that they adopt a constructive perspective. However, those rules can be easily read in the opposite sense, so as to account for word analysis as well.

[14] 3rd singular Present Indicative of the verb AMARE 'love'.

[15] See, for instance, Wanner (1972) – cf. Ch. 2, §2.2.2.2.

[16] See Scalise (1984), Dressler & Thornton (1991) – cf. Chapter 2, §§ 2.2.2.1 and 2.2.2.3.

phonological in nature. The posited conditions, in contrast, are basically morphological, in that they mostly concern the morphological structure of the word-form involving the thematic vowel.

I will start by assuming that all the word-forms of the Italian verbal system conform to this canonical structure:

(3.2) STEM + (THEMATIC VOWEL) + (STEM FORMATIVE) + ENDING[17]

The brackets are meant to mark that some of the 'slots' of the canonical structure may be absent from the actual structure of some word-forms: actually, these are the THEMATIC VOWEL and the STEM FORMATIVE. That may be thought of as a sort of well-formedness condition on the word-forms of the Italian verbal system: in order to be regarded as well-formed, any word-form has to be provided with a stem and an inflectional ending. In addition to those items, it may also have a thematic vowel and a stem formative, but there is no need for that. I retour below on the issue of the stem formative (3.2.1.1). As far as the thematic vowel is concerned, I claim that its recognition in a word-form is captured by the

(3.3) **Thematic Vowel Identification Hypothesis (ThVIH)**:

In order to be recognised as the thematic vowel within a word-form, a morphological item must be:

i.   Stressed;[18]
ii. preceded by a simple stem;
iii. followed either by a sequence of the 'stem formative + inflectional ending' kind, or by an inflectional ending alone;
iv. inter-paradigmatically variant so as to assume three[19] values for each of its occurrences in the system.

The linear position occupied by the thematic vowel within the morphological structure of a word-form will be referred to as 'thematic slot'.[20]

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[17] This structure should be seen as an abstract sequence of slots or 'positions'. Accordingly, the first step in the operation of morphological analysis would consist in segmenting a word-form into smaller parts and putting each of those into the correct 'slot'.

[18] Stress might be objected to be a phonological condition, rather than morphological. However, stress position in Italian word-forms is not predictable on phonological grounds; it rather follows a precise paradigmatic pattern suggesting that its final conditioning is morphological and not phonological (see also Vincent (1987: 287), Pirrelli (2000: 11), Maiden (2004: 33).

[19] Cf. fn. 9.

The reader will notice that the conditions listed in points ii. and iii. derive from the 'canonical structure' stated in (3.2) above. In particular, the condition in point iii. is meant to underline that a structure of the 'STEM + (stressed) THEMATIC VOWEL' kind cannot be accepted as a well-formed word-form of Italian: as pointed out earlier, every word-form has to be provided with an inflectional ending, which cannot coincide with the thematic vowel. In other words, a thematic vowel cannot be used in Italian as an inflectional ending.

It will be also noted that compliance with the condition posited in point iv. cannot be evaluated by means of a single word-form, but only through comparison of different inflected forms in the system. The compared forms must be morphosyntactically equivalent (i.e. they must occupy the same 'paradigm cell') and belong to different lexical verbs. This condition is in line with what I said earlier (cf. Ch.1) about the heuristic value of the comparison in the identification of the sub-word units of a word-form.

For what has been said so far, the morphological structure associated to the presence of a thematic vowel may be stated as in (3.4), where the thematic vowel is meant to occupy the 'THEMATIC SLOT':

(3.4) STEM + | THEMATIC SLOT | + (STEM FORMATIVE) + ENDING
                      s t r e s s

Because of the optional character of the slot 'STEM FORMATIVE' (as signalled by the brackets) the structure in (3.4) can be conceived as representing either of the following structures:

(3.5) i. STEM + THEMATIC + ENDING   (if the STEM FORMATIVE
                   SLOT   is not present)
                   stress

      ii. | STEM + THEMATIC + STEM | + ENDING (if the STEM FORMATIVE
          | SLOT   FORMATIVE | is present)
          | stress |
          C o m p l e x   S t e m

In structure (3.5i) the STEM FORMATIVE is assumed to be missing, and the THEMATIC VOWEL should be therefore assumed to stand between the STEM and the inflectional ENDING (while being neither of them); on the other hand, in structure (3.5ii) the

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[20] Cf. Vincent (1980: 387).

THEMATIC VOWEL should be assumed to be actually part of a 'stem', standing as it is before what has been labelled as 'STEM FORMATIVE': the structure in (3.5ii) may be changed, in fact, into the simpler structure 'STEM + ENDING', provided that the 'STEM' of this simplified structure is regarded as somehow 'complex' compared to the STEM of (3.5i): the complexity of the STEM in the structure (3.5ii) will depend on the presence of the slots THEMATIC VOWEL and STEM FORMATIVE in it.

Clearly, the two stems of the structures in (3.5i) and (3.5ii) are different one another, and it would be fine if we could find a way to distinguish them.

The Italian stem morphology is undoubtedly an intricate subject: apart from the distinction between 'simple' and 'complex' stems, with which we are concerned at present, there is, in fact, at least another parameter to take into account, namely the regularity (or predictability) in the shape of a stem. Since these issues are all far from being of secondary importance for what will be said later about thematic vowels, I will spend the next paragraph introducing them. In doing so, my main purpose is still to distinguish a complex stem (i.e. a stem including a 'stem formative') from a 'simple stem' (i.e. a stem with no stem formative).

3.2.2.1 Stems in Italian verbal morphology: some preliminary observations

The notion of 'stem' undoubtedly represents a controversial issue in the morphological theory.[21] Even in those frameworks making large use of the stem as a theoretical notion, that is often taken as intuitively given. Notice that in Ch.1 I gave an example of stem isolation raising no particular problems: in order to identify the stem, I simply had to look for the leftmost common string used in the conjugation of each of the verbs under discussion; so I found /am-/ for AMARE 'love', /tem-/ for TEMERE. Actually, the problem with the example in Ch.1 was not in the procedure, but rather in the data: in that case I was concerned with the Present Indicative of three 'regular' verbs which, as an example, happens to be highly deceptive: actually, it is characterised by stems which are linearly s i m p l e and i n v a r i a n t at the same time.[22] Provided that, as far as Italian is concerned, the Present Indicative of 'regular' verbs is the simplest among possible examples, what we actually need here is a practical device for the identification of the stems of a verb in all cases, no matter how 'regular' the verb is.

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[21] Cf. Aronoff (2010) and, for an opposite position, Embick and Halle (2005).
[22] The sense of these adjectives will be clarified in the course of this chapter.

Such a practical device is provided by Taylor's (2008) Stem Identification Principles, whose basic steps are reported below (3.6):

(3.6)   i.   State all systematic syncretisms [of a paradigm] and abstract away from them;

      ii.   if a partial word-form is used for more than one cell in a lexeme's paradigm, treat it as a stem.[23]

The immediate advantage of Taylor's approach is that, in order to identify the stems in a verb's paradigm, it looks at the whole paradigm rather than at single sub-paradigms (as I did in Ch.1, actually, where I only considered the Present Indicative of the three verbs discussed).

On the other hand, a problem with the principles given in (3.6) is that they aim to identify just the stems of a verb, setting apart the issue of the thematic vowel.[24] Since, I am just interested in the identification of the thematic vowel, differently from Taylor, I have to introduce a codicil to the principles in (3.6), which allows us to keep the thematic vowel separate from any possible stem (3.7):

(3.7)   Except for the stem in the Conditional,

      iii.   if a stem turns out to end in a stressed vowel, do not count that vowel as a part of the stem.

The codicil in (3.7) can be considered as a well-formedness condition of the stems of the Italian verbal system, requiring that no stem should end in a stressed vowel.

By way of example, let us try to apply Taylor's Stem Identification Principles to a couple of Italian verbs, i.e. the 'regular' TEMERE 'fear' and the 'irregular' TENERE 'hold'. The paradigms of those verbs are given in Tables 3.1 and 3.2, respectively:

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[23] Taylor (2008: 231). This is introduced by the scholar as the 'Stem maximisation principle' and is said to constitute the very crucial step for the identification of the stems in a paradigm.

[24] Taylor's (2008) contribution deals with the identifications of the stems in the Spanish verbal system. Spanish verbs resemble Italian ones in having thematic vowels, as Taylor (2008: 231) actually signals. However, she is not interested in thematic vowels, and treats them as part of one of the stems.

Finite forms							
Imperative		**Indicative**				**Subjunctive**		**Conditional**
		Present	**Imperfect**	*Perfetto Semplice*	**Future**	**Present**	**Imperfect**	**Present**
1s		*temo*	*temevo*	*temei*	*temerò*	*tema*	*temessi*	*temerei*
2s	*temi!*	*temi*	*temevi*	*temesti*	*temerai*	*tema*	*temessi*	*temeresti*
3s		*teme*	*temeva*	*temé*	*temerà*	*tema*	*temesse*	*temerebbe*
1p		*temjamo*	*temevamo*	*tememmo*	*temeremo*	*temjamo*	*temessimo*	*temeremmo*
2p	*temete!*	*temete*	*temevate*	*temeste*	*temerete*	*temjate*	*temeste*	*temereste*
3p		*temono*	*temevano*	*temerono*	*temeranno*	*temano*	*temessero*	*temerebbero*

Non-Finite forms			
Infinite	**Gerund**	**Past Participle**	
temere	*temendo*		
		m.	**f.**
		Sg. *temuto*	*temuta*
		Pl. *temuti*	*temute*

Table 3.1 -

Finite forms							
Imperative		**Indicative**				**Subjunctive**		**Conditional**
		Present	**Imperfect**	*Perfetto Semplice*	**Future**	**Present**	**Imperfect**	**Present**
1s		*tengo*	*tenevo*	*tenni*	*terrò*	*tenga*	*tenessi*	*terrei*
2s	*tieni!*	*tieni*	*tenevi*	*tenesti*	*terrai*	*tenga*	*tenessi*	*terresti*
3s		*tiene*	*teneva*	*tenne*	*terrà*	*tenga*	*tenesse*	*terrebbe*
1p		*tenjamo*	*tenevamo*	*tenemmo*	*terremo*	*tenjamo*	*tenessimo*	*terremmo*
2p	*tenete!*	*tenete*	*tenevate*	*teneste*	*terrete*	*tenjate*	*teneste*	*terreste*
3p		*tengono*	*tenevano*	*tennero*	*terranno*	*tengano*	*tenessero*	*terrebbero*

Non-Finite forms			
Infinite	**Gerund**	**Past Participle**	
tenere	*tenendo*		
		m.	**f.**
		Sg. *tenuto*	*tenuta*
		Pl. *tenuti*	*tenute*

Table 3.2 -

Systematic syncretisms are the singular forms of the Present Subjunctive, the 1st plural of Present Subjunctive and Present Indicative and the 2nd plural of Present Indicative and Imperative. By virtue of the principle in i., thus, these should be only counted once.[25]

Let us now turn to point ii., i.e. the very crucial one for the identification of the stems in a verbal paradigm. For TEMERE, the string /tem-/ is found in every cell in the paradigm, so this is undoubtedly a stem. Other common strings, and therefore stems, include /temja-/, /temev-/, /temess-/, /temer-/ and /temere-/. Notice that the possible stem /teme-/ is not to be counted, because of the codicil given in point iii.

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[25] Notice that the possible sincretisms, to be labelled as 'systematic', are to be evaluated at a whole system level, rather than for single verbs.

In the case of TENERE the stems are /teng-/, /tien-/, /ten-/, /tenja-/, /tenev-/ , /teness-/, /terr-/, and /tenn-/. The potential stem /tene-/ should be ruled out for the same reason which led to the exclusion of /teme-/ in TEMERE.

Once the stems in a paradigm have been identified, it is possible to put the stem inventory for a verbal paradigm together.[26] (3.8) shows the stem inventory for the two verbs under discussion:

(3.8)

TEMERE		TENERE	
A	te'm-	A	te'n-
		B	'teng-
		C	'tien-
B	**te'm**ja-	D	**te'n**ja
C	**te'm**ev-	E	**te'n**ev-
D	**te'm**ess-	F	**te'n**ess-
E	**tem**e'r-	G	ter'r-
F	**tem**e're-	H	ter're-
		I	'tenn-

My next step will be comparing the stems found in the paradigm of TEMERE 'fear' with those found in the paradigm of TENERE 'hold', so as to see in what they differ.

The first observation simply concerns their number: according to Taylor's principles, TENERE turns out to have more stems than TEMERE.

Let us now inspect the structure of the stems in each inventory, beginning with TEMERE. All the stems indexed as B to F in (3.8) have a common feature: they are linked to the stem /tem-/ (indexed as A) by a formal relation, which can be stated as an inclusion: each of the stems B to F linearly includes stem A besides any additional segment (which varies depending on the stem itself: we find –*ja*-, -*ev*- etc.). I claim that the stems, other than A, are all linearly complex, whereas A is linearly simple.

Consider now the stems inventoried for TENERE, from the same point of view. In this case, an inclusion relationship can be claimed to hold only between the stem A and the stems indexed as D, E and F, respectively: all the other stems (i.e. B, C, G, H, I) show a greater degree of dissimilarity from A; as far as their linear structure is concerned,

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[26] Taylor (2008: 233) adopts a higher level of abstraction, putting together the stem inventory for the whole verbal system. Some considerations on stems as abstract morphological entities will be made later on. For the time being, it is enough to take account simply of 'stem tokens'.

however, they all seem to be as simple as A,[27] at least judging by an intra-paradigmatic comparison.[28]

Within a constructive framework, the situation observed in the stem inventory of TEMERE would be accounted by claiming that the stems other than A are all built on A in the simplest way possible, namely through the simple addition of phonological material. An account in line with an abstractive perspective would rather emphasise the predictability of the stems other than A (cf. Blevins (2006)): knowing the stem A would make it possible to predict the shape of all the other stems in the paradigm.[29] Since the perspective I am adopting here is abstractive (cf. §3.1), I will refer to the stems of the /temev-/, /tenev-/, /temess-/ etc. kind as '(linearly) complex but predictable'. The stems indexed as B, C, G, H, I in the paradigm of TENERE, on the other hand, are not likewise predictable: they must be assumed to be somehow 'given'. Predictability of the stems in a paradigm (in the sense explained here) is usually seen as a sign of regularity (of that paradigm); now it should be clear in what sense a verb like TEMERE is said to have a regular paradigm, while a verb like TENERE is seen as being (highly) irregular: actually, the paradigm of the latter is provided with a good number of non-predictable stems.

Complex stems have been claimed earlier to be analysable as including a simple stem beside some 'additional phonological material'. Let us focus on the latter. For the sake of readability, (3.9) reports the stem inventory of the verb TEMERE, containing the stems the structure of which will be discussed; the 'additional phonological material' at issue is in bold:

(3.9)

	TEMERE	
A	te'm-	
B	te'm**ja**-	
C	te'm**ev**-	Imperfect Indicative
D	te'm**ess**-	Imperfect Subjunctive
E	teme**'r**-	Future
F	teme**'re**-	Conditional

---

[27] In the sense that they cannot be further segmented (and hence analysed), so as to recognise in them one of the other stems of the same paradigm. Notice that this does not hold for Stem H, which can be reasonably analysed as 'Stem G + e'.

[28] Inter-paradigmatic comparison reveals that Stem G too is further analysable as 'Stem + r'.

[29] The implication is that the 'phonological material' to be added should be assumed to be somehow provided by the grammar, as if it was associated with a specific paradigm cell. We will retour to this point in a moment.

Except for the –ja- of Stem B, all of the other additional segments under discussion turn out to be involved in one sub-paradigm each (the sub-paradigms at issue have been signalled on the right of the stems). This fact could be thought of as an accidental property of the verb under discussion; alternatively (and more interestingly), it could be thought to be a general property of the Italian verbal system, in which case the additional segments at issue should be reasonably found in other verbs too, each one of those as characterising one and the same sub-paradigm. Let us check this latter hypothesis by considering some stem inventories of other verbs in the system. In particular, let us look at the two regular verbs AMARE 'love' and DORMIRE 'sleep', which have been previously introduced, together with TEMERE, in Ch.1. The stem inventories for these two verbs are given in (3.10):

(3.10)		AMARE	DORMIRE		TEMERE
	A	a'm-	dor'm-		te'm-
	B	a'm**ja**-	dor'm**ja**-		te'm**ja**-
	C	a'm**av**-	dor'm**iv**-		te'm**ev**-
	D	a'm**ass**-	dor'm**iss**-		te'm**ess**-
	E	am**e'r**-	dormi**'r**-		teme**'r**-
	F	am**e're**-	dormi**'re**-		teme**'re**-

Actually, my hypothesis turns out to be verified just partially: the 'additional segments' of stems C to F are in fact all found to share the rightmost part, consisting mostly in a consonant (i.e. /-v-/, /-ss-/, /-r-/ and /-re-/, respectively), but they also have an internal, vocalic item which exhibits two different patterns of variation: *a ~ e ~ i* for the stems indexed as C and D, and *e ~ i* for the stems E and F. Notice that stress position is also different in the two cases, which suggests that stems C and D should be kept somehow separated from stems E and F.

The difference between the internal part of stems C and D on one hand and stems E and F on the other is behind the present scope and will be discussed in Ch.5. For the present purpose, I would rather focus on the rightmost part of the stems under discussion, i.e. /-v-/, /-ss-/, /-r-/ and /-re-/, which occur as invariable across the verbs under observation. I claim that each of these segments is a 'Stem Formative' of the kind referred to in the structure STEM + (THEMATIC VOWEL) + (STEM FORMATIVE) + ENDING. Schematically, the linear position occupied by each of those segments within a word-form's structure would be:

(3.11) STEM (THV) STEM ENDING
             FORMATIVE

-v-	Imperfect Indicative
-ss-	Imperfect Subjunctive
-r-	Future
-re-	Conditional

When the whole verbal system is taken into consideration, it is soon found that the stem formatives listed in (3.11) characterise all verbs, with no exception.[30] This suggests that any stem formative should be conceived of as something 'more abstract' than any possible lexical feature of the verb to which it is added.

In this paragraph I have introduced the notion of 'linear complexity', which can be used to classify the stems of the Italian verbal system into two groups, i.e. (linearly) 'simple' and 'complex' stems. Complex stems are characterised by the presence of a 'stem formative', and there are four of them in the Italian verbal system. Each stem formative turns out to be associated with a given sub-paradigm, and should be therefore thought as being grammatically predictable. On the other hand, linearly simple stems do not have any stem formative and are therefore totally unpredictable with regard to their shape.

Since each one of the stem formatives listed in (3.11) has been shown to be systematically preceded, at least in regular verbs, by a vowel which is not part of the (simple) stem, then, in the light of our canonical structure 'STEM + (THV) + (STEM FORMATIVE) + ENDING', that vowel might be simply identified with the thematic vowel, as shown in (3.12):[31]

(3.12) STEM THV STEM ENDING
             FORMATIVE

STEM	THV	STEM FORMATIVE	ENDING	
tem	é	v	o	Imperfect Indicative
tem	é	ss	i	Imperfect Subjunctive
tem	e	r	ò	Future
tem	e	rè	i	Conditional

The shortcoming of such a solution is that it does not take account of stress position, which is not consistent in the forms under discussion. Remind that bearing stress was stated as one of the relevant conditions of the Thematic Vowel Identification Hypothesis (cf. §3.2.1). In the next paragraph, I will basically use that hypothesis as a

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[30] In that sense, the Stem G of the paradigm of TENERE (in (3.8) above) can be claimed to have the complex structure 'Stem + r', cf. fn. 27.

[31] For brevity, I have only provided the first person of each sub-paradigm.

principle so as to make a list of the word-forms of the Italian verbal paradigm, which should include the thematic vowel. What has been previously said in this paragraph about stems will help to identify the word-forms in which a stem formative is also involved.

3.2.2 The identification of the thematic vowel in the Italian word-forms

For what has been said so far, we are now in a position to unambiguously identify the thematic vowel within the word-forms of the Italian verbal system. To recap, according to the Thematic Vowel Identification Hypothesis, a thematic vowel is required to occupy the so-called 'THEMATIC SLOT' within the morphological structure:

(3.13) STEM + THEMATIC SLOT + (STEM FORMATIVE) + ENDING
                    s t r e s s

Apart from being preceded by a simple stem and followed by 'something' (be this 'something' a stem formative or an inflectional ending), a thematic vowel, as a variable, is also required to be inter-paradigmatically variant, so as to assume three values for each of its occurrences across the verbs of the system.

So, according to the ThVIH, word-forms of the Italian verbal system, which should be assumed to contain a thematic vowel, are those that occupy the following paradigm cells:

(3.14) i.   2nd plural Present Indicative;

        ii   2nd plural Imperative;

        iii   1st, 2nd, 3rd singular and 3rd plural Imperfect Indicative;

        iv.   the whole Imperfect Subjunctive;

        v.   1st, 2nd singular, 1st, 2nd, 3rd plural *Perfetto Semplice* (of the weak pattern);

        vi.   2nd singular, 1st plural, 2nd plural *Perfetto Semplice* (of the strong pattern).

        vii. the Infinitive;

        viii. the Past Participle.

Points v. and vi. need some clarifications, in that they make reference to two possible patterns of *Perfetto Semplice*, referred to as 'weak' and 'strong', which have not been introduced so far. For the present purposes, it is enough to show them and say something about their differences. Table 3.3 provides an example of each of the two

patterns, by the verbs TEMERE 'fear' (exemplifying the 'weak' pattern) and TENERE 'hold' (exemplifying the 'strong' pattern).

	TEMERE 'fear'	TENERE 'hold'
1sg	te'mei	'tenni
2sg	te'mesti	te'nesti
3sg	te'me	'tenne
1pl	te'memmo	te'nemmo
2pl	te'meste	te'neste
3pl	te'merono	'tennero

Table 3.3 -

It will be noted that the difference between the two patterns can be basically stated in terms of regularity (in the sense discussed in §3.2.1.1): in particular, the weak pattern is regular, while the strong is not.[32]

Which of the two patterns is actually found in a verb's inflexion is quite a complex issue, and falls outside the present scope.

To retour to our main concern for this section, according to the ThVIH, the paradigmatic distribution of the thematic vowel is as follows:

FINITE FORMS						
	SINGULAR			PLURAL		
	1	2	3	1	2	3
PRESENT SUBJUNCTIVE						
PRESENT INDICATIVE					▓	
IMPERFECT INDICATIVE	▓	▓	▓			▓
IMPERFECT SUB.	▓	▓	▓			▓
WEAK *PERFETTO SEMPLICE*	▓	▓				▓
STRONG *PERFETTO SEMPLICE*[33]		▓		▓	▓	
IMPERATIVE					▓	
CONDITIONAL						
FUTURE						

NON-FINITE FORMS		
(INFINITIVE)	GERUND	PAST PARTICIPLE

Schema 3.1 -

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[32] More precisely, the strong pattern is only partially regular: the persons 2nd singular, 1st plural and 2nd plural are, in fact, regular.

[33] For the sake of completeness, the *Perfetto Semplice* has been reported in both of its possible patterns (i.e. the 'weak' one and the 'strong' one, see above), even though a verb usually follows only one of the two patterns in its inflection.

Notice that this schema is abstract, in the sense that it should be assumed to hold for all verbs and not for a single verb - nor even for single classes of verbs, however defined. The implication is that the phonological content of the thematic vowel associated to any actual verb should be assumed to be independent from its paradigmatic distribution.

In the light of what has been said in §3.2.1.1 about the morphology of the stems of the Italian verbal system, I suggest dividing the word-forms with a thematic vowel into two groups, depending on whether they have a stem formative in the linear position after the thematic vowel.[34] The forms with a stem formative should be provided with a complex stem, in which the thematic vowel comes included. These are the forms of the Imperfect Indicative and Imperfect Subjunctive, as shown by (3.15):[35]

	STRUCTURE		COMPLEX STEM			+	ENDING
(3.15)			STEM	+ **THV** +	FORMATIVE		
	Instances	1ST SG. IMPF. IND.	am	**a**	v		o
		2ND SG. IMPF. IND.	am	**a**	v		i
		3RD SG. IMPF. IND.	am	**a**	v		a
		3RD PL IMPF. IND.	am	**a**	v		ano
		1ST SG. IMPF. SUBJ.	am	**a**	ss		i
		1ST SG. IMPF. SUBJ.	am	**a**	ss		i
		1ST SG. IMPF. SUBJ.	am	**a**	ss		e
		1ST SG. IMPF. SUBJ.	am	**a**	ss(i)		mo
		1ST SG. IMPF. SUBJ.	am	**a**	s		te
		1ST SG. IMPF. SUBJ.	am	**a**	ss		ero

The forms without any stem formative are all others. In these forms the thematic vowel should be assumed to stand between the (simple) stem and the ending:

(3.16)	STRUCTURE		Stem	+ **ThV** +	Ending
	Instances	2ND PL. PRES. IND.	am	**a**	te
		2ND PL. IMPERATIVE	am	**a**	te
		1ST SG. *PERFETTO*	am	**a**	i
		2ND SG. *PERFETTO*	am	**a**	sti
		1ST PL. *PERFETTO*	am	**a**	mmo
		2ND PL. *PERFETTO*	am	**a**	ste
		3RD PL. *PERFETTO*	am	**a**	rono

All the forms mentioned in this paragraph carry a vowel that fully meets the conditions of the ThVIH and is therefore recognised as the thematic vowel. The latter

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[34] The reference is once more to the canonical structure 'STEM + stressed THV + (STEM FORMATIVE) + ENDING'.

[35] I exemplify by the verb AMARE 'love'.

in some cases occupies the position between a simple stem and the inflectional ending, in some others precedes a stem formative, and is therefore regarded as part of a complex stem.

3.3 *Putting some order into the previously problematic forms*

The reader will remember that one point of disagreement of the previous analyses concerns the presence of the thematic vowel in some word-forms of the system. For instance, the 3rd person singular of the Present Indicative is claimed to have the thematic vowel by Wanner (1972) but not by Scalise (1984) (cf. Ch.2, §§2.2.2.2 and 2.2.2.1). In this paragraph I will review those problematic forms, evaluating whether they meet the criteria established by the Thematic Vowel Identification Hypothesis. Accordingly, I will be able to decide whether or not each of them contains a thematic vowel, and I will put some order into the issue. We know from Ch.2 that the problematic forms under discussion are:

(3.17)   a.   the 3rd person singular of the Present Indicative;

b.   the 3rd person plural of the Present Indicative;

c.   the 1st person plural of the Present Indicative, the 1st and 2nd persons plural of the Present Subjunctive;

d.   the 3rd person singular of the *Perfetto Semplice*;

e.   all of the forms of the Future and Conditional;

f.   the 1st and 2nd persons plural of the Imperfect Indicative;

g.   the non-finite forms (i.e. Infinitive, Gerund, and Past Participle).

It will be already noted that, except for the Infinitive and the Past Participle, none of the forms in (3.17) happens to be included in the list of the forms which should have a thematic vowel according to the ThVIH (compare (3.17) with the list in (3.14) above). The implication is that, if the ThVHI is correct, then none of the problematic forms in (3.17) should contain the thematic vowel. Although I am not questioning the validity of the ThVIH, for the sake of demonstration I will spend the rest of this paragraph reviewing the forms in (3.17) one by one, so as to show exactly how each of them fails to comply with the conditions posited by the ThVIH. So I will be able to claim the absence of the thematic vowel in the forms in (3.17) on the basis of the ThVIH itself.

Remind that, except for the forms listed in points c. and f., all the forms in (3.17) are affected by one and the same problem: only some analyses claim the presence of a

thematic vowel in them. Furthermore, in those analyses, the situation is the following: the conditions posited for the recognition of the thematic vowel, are actually met, none the less at least some verbs in the system are found to display an item, whose phonological content is different from the expected one, in the place of the thematic vowel. The word 'expected' is important here. The point is the following: the conditions posited by the previous analyses, whatever they are,[36] allow us to identify the thematic vowel in a certain number of word-forms in a paradigm. Now, the scholars soon find that, in the overwhelming majority of cases, the phonological content of the thematic vowel occurring in those forms happens to be consistent throughout each lexical paradigm; actually, each verb displays one and the same thematic vowel in all of the relevant word-forms.[37] Accordingly, expectation arises about the phonological content of the vowel to regard as the thematic vowel for a given verb, and when in a word-form a vowel, different from the expected one, is found to appear in the 'slot' in which the thematic vowel is expected, then that word-form is labelled as 'problematic'.[38] Some examples will help to clarify this point.

3.3.1 Finite forms

3.3.1.1   3rd person singular of the Present Indicative

In (3.18) the relevant word-forms of the verbs, AMARE 'love', TEMERE 'fear' and DORMIRE 'sleep' are given, together with the 2nd person plural forms. These latter will be used as control forms, in that the presence of the thematic vowel in them seems uncontroversial.[39] For the sake of readability, stems have been separated from the rest of the word-form, and the vowels under discussion have been marked in bold. Remind that the 3rd person singular of the Present Indicative had been claimed to have the thematic vowel by Wanner (1972): actually, the thematic vowel, which is assumed to be specified in the lexical entry of each verb, should be inserted before the word boundary in the derivation of this form, in order to prevent the occurrence of a bare consonant-

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[36] As noted earlier, the conditions of the previous analyses differ from mine, mainly because they are phonological rather than morphological in nature. Notice also that these conditions may vary from an analysis to another, and the implication is that even the number of word-forms displaying the thematic vowel is found to vary.

[37] Henceforth, I will refer to this characteristic feature of the thematic vowel as 'intra-paradigmatic consistency'.

[38] In my view, we should rather conclude that something in the analysis itself is going wrong.

[39] The second plural of the Present Indicative turns out to have a thematic vowel not only under all of the previous analyses (cf. Ch.2), but also under my ThVIH.

final stem (cf. Ch. 2, §2.2.2.2). As indicated by the symbol ☙, under this kind of analysis, the problem concerns the type DORMIRE 'sleep', which has an *e* en lieu of the expected *i* in the position the other two verbs display the expected *a* and *e*, respectively.

(3.18)   AMARE   TEMERE   DORMIRE
        3rd sg.   àm-**a**   tèm-**e**   dòrm-**e** ☙
        2nd pl. (control) am-à-te   tem-é-te   dorm-ì-te

Let us evaluate the 3rd singular forms in the light of the morphological criteria of the ThVIH. First of all, let us check to what extent the morphological structure of these forms conforms to the structure 'STEM + stressed slot + ENDING', namely the structure required for hosting a thematic vowel. What we are really interested in at the moment is to see whether or not there is a stressed slot in the linear position between the stem and the inflectional ending: remind that such a position is given as optional within the canonical structure

(N)   STEM + (THV) + (STEM FORMATIVE) + ENDING

It is easy to see that the structure of the word-forms under discussion actually offers no room for any 'thematic slot'. Once the stem is abstracted away, (in (3.18) I kept it separated by a hyphen), there is in fact only one vowel left; now, according to our reference structure in (3.2), the recognition of this vowel as an ENDING should be assumed to take precedence over its recognition as a THEMATIC VOWEL.

Previous analyses emphasised the problematicity of the 3rd sg. Present Indicative only in the verbs of the 'DORMIRE type', because of their displaying an unexpected –*e* in the syntagmatic position immediately after the stem. On the other hand, word-forms such as *ama* '(s)he loves' and *teme* '(s)he fears' raised no problems while being analysed, as having the structure 'STEM + THEMATIC VOWEL'.

Crucially, in my view, the apparent misbehaviour of DORMIRE 'sleep' is not the decisive point for claiming that we are not in the presence of a thematic vowel in the 3rd person singular of the Present Indicative. The crucial point is rather that the morphological structure of this form does not comply with the structure which should be assumed to involve the thematic vowel, according to the ThVIH (see (3.3) above); these elements considered, the evaluation of the phonological content of the stem-following vowel (namely its consistency with the thematic vowel found elsewhere in the paradigm) simply becomes pointless. In this view, the fact that the ending of *am-***a**

'(s)he loves' and *tem-***e** '(s)he fears' corresponds to the thematic vowel of these verbs (cf. *am-*à-*te* 'you (pl.) love', *tem-*é-*te* 'you (pl.) fear') is to be regarded as a coincidence.

In my opinion, the assumption of the actual phonological content of a vowel as a condition for it to be identified as the ThV in a given word-form would be a dangerous move, in any case: provided that vowels in Italian work as inflectional endings as well, and provided also that they are few in number,[40] it is highly probable for the same vowel to be used both as a thematic vowel and as an ending within the same verb paradigm, because of economy reasons. In this case, it is the morphological structure of the word-form which can unambiguously identify the status of a given vowel, namely to say whether it is a thematic vowel or an ending.[41]

Summing up so far, what is crucial for a vowel to be upgraded to the status of 'thematic vowel' is the position it occupies within the morphological structure of a word-form. It is worth noticing that the morphological structure appears as something abstract, in the sense that it seems to be inherent to paradigm cells[42], rather than to the actual word-forms by which these cells are occupied. In that sense, stating the compliance with a particular morphological structure, as a condition that a word-form has to meet in order for a thematic vowel to be recognised in it, will allow us to make claims about the presence of the thematic vowel in some forms which hold at a whole system level, rather than at the level of single verbs.

As far as the case at hand is concerned, I claim that the three word-forms *ama* '(s)he loves', *teme* '(s)he fears' and *dorme* '(s)he sleeps' are perfectly equivalent concerning their morphological structure,[43] which can be stated as 'STEM + ENDING', with stressed stem.

I think the lines of my argument are now clear enough so that we can proceed with the discussion of the other problematic forms more quickly.

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[40] They can be five or seven, depending on the analysis.

[41] Crucially, ambiguity is avoided in either case.

[42] As combinations of morphosyntactic properties, cf. Ch.1, §1.1.2. These cells may be conceived as the smallest paradigm portion which can be defined in terms of a given combination of morphosyntactic properties, for instance '1st person singular Present Indicative'.

[43] In that they occupy the same paradigm cell, '3rd singular Present Indicative'.

3.3.1.2 3rd person plural of the Present Indicative

(3.19)   3rd pl.   àm-**a**-no   tèm-**o**-no 💣✳   dòrm-**o**-no 💣✳
        2nd pl. (control)   am-à-te   tem-é-te   dorm-ì-te

The vowels under discussion are in bold. Admittedly, those are stem-following. However, the reader will have noted that they are not stressed, which is sufficient to reject them as possible thematic vowels, according to the ThVIH. I suggest treating them as part of the ending, so as to assign the morphological structure 'STEM + ENDING' also to the 3rd plural of the Present Indicative. The segmentation of the word-forms in (3.19) will be therefore *am-ano* 'they love', *tem-ono* 'they fear' and *dorm-ono* 'they sleep', respectively. The ending in these forms happens to be different from what observed in the 3rd person singular, in that, from a linear point of view, it is actually more 'complex' than the other: inter-paradigmatic comparison suggests to analyse it as consisting of two parts, so as to distinguish the rightmost *–no*, recurring in all verbs, from the more internal vowel, which is found to vary between /–a-/ (as in AMARE 'love') and /-o-/ (as in TEMERE 'fear' and DORMIRE 'sleep').

3.3.1.3 3rd person singular of the Perfetto Semplice[44]

(3.20)   3rd sg.   am-**ò** 💣✳   tem-**é**   dorm-**ì**
        2nd pl. Present Indicative (control)   am-à-te   tem-é-te   dorm-ì-te

The stem following vowels (in bold), i.e. the ones to be evaluated as possible thematic vowels, actually meet two of the three structural conditions posited by the ThVIH: they bear stress and are preceded by a simple stem. On the other hand, they fail to be followed by any other segment, and this is what prevents us from identifying them as thematic vowels. If the stem-following vowels discussed were thematic vowels, then the word-forms in (3.20) should not have any ending, differently from to what is required by the canonical structure 'STEM + (THV) + (STEM FORMATIVE) + ENDING'. Of course one might appeal to zero endings, but in the present analysis I am rejecting this solution, for reasons that will become clear in Ch.5. Accordingly, I claim that the morphological structure of the 3rd singular Present Indicative is 'STEM + ENDING', with stress on the ending and no thematic vowel involved.

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[44] The data discussed here concern the weak pattern; the other pattern of inflection for the Perfetto (i.e. the strong pattern – see above) will not be discussed here.

3.3.1.4   The forms of Future and Conditional

Likewise, I claim the morphological structure 'STEM + ENDING' for all the forms of the Future and the Conditional. Some relevant data are in (3.21) below, with the 1ˢᵗ person singular used as a sample-form for each sub-paradigm. The vowels at issue are in bold, as usual:

(3.21)   1ˢᵗ sg. Future   am-**e**-rò ☀️   tem-**e**-rò   dorm-**i**-rò
         1ˢᵗ sg. Conditional   am-**e**-rèi ☀️   tem-**e**-rèi   dorm-**i**-rèi
         2ⁿᵈ pl. Present Indicative (control)   am-à-te   tem-é-te   dorm-ì-te

As the reader will see, these vowels fail to bear stress, and this is sufficient to reject them as possible thematic vowels. I suggest segmenting the word-forms in (3.21) as *amer-ò* 'I will love', *temer-ò* 'I will fear', *dormir-ò* 'I will sleep' and *amerè-i* 'I would love', *temerè-i* 'I would fear', *dormirè-i* 'I would sleep', respectively, which is also in line with the segmentation proposed in §2.1.1. The stressed /-e-/ which - according to my analysis - appears in stem-final position in the Conditional (e.g. *amer**è**-i*, *temer**è**-i*, *dormir**è**-i*) might be claimed to be a thematic vowel because, in addition to bearing stress, it is also preceded by a stem[45] and followed by an ending. There are two arguments against this claim, however:

i.   the possible preceding stem is not 'simple' (in the sense explained in §3.2.1.1), which contravenes the second condition of the ThVHI (cf. §3.2.1);

ii. additionally, the vowel discussed is not inter-paradigmatically variant, it is always *e* (which contravenes the fourth condition of the ThVIH – cf. §3.2.1).

According to my analysis, thus, the forms of the Future and the Conditional show no thematic vowel. The vowel taken as a thematic vowel in some of the previous analyses (signalled in bold in (3.21)) turns out to be simply part of the stem, no matter how complex this stem is (cf. §3.2.1.1).

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[45] Actually, the stem also found in the Future.

3.3.1.5 1st person plural of Present Indicative, 1st and 2nd persons plural of Present Subjunctive

(3.22)	1st pl.		am-jà-mo 💣☀	tem-jà-mo 💣☀	dorm-jà-mo 💣☀
	2nd pl.		am-jà-te 💣☀	tem-jà-te 💣☀	dorm-jà-te 💣☀
	2nd pl. Pres. Ind. (control)		am-à-te	tem-é-te	dorm-ì-te

The problem raised by these forms[46] is different from the problems considered in the previous paragraphs. As far as I know, none of the analyses in the literature claims the presence of a thematic vowel in this case. Neither will I, actually. As far as the literature is concerned, the problem with these forms is that the thematic vowel is predicted to occur in the tonic position between the stem and the ending by both Scalise's (1983) Vowel Deletion Rule and Dressler & Thornton's (1991) model,[47] but it is not actually found: in its place there appears the diphthong *–jà-*, which nobody would claim to be a thematic vowel, of course.[48] Dressler & Thornton (1991) solve this problem by appealing to a rule of 'vowel substitution'. The diphthong *–jà-* might be claimed to occupy the 'Thematic Slot' in my framework too, because of the structural position it occupies within the word-form. Vincent (1980: 387) argues for the 'positional sameness' of the *–jà-* and the thematic vowel, by the comparison of the second persons plural of Present Indicative and Present Subjunctive. As shown by (3.23), the morphological structure of these two forms seems to be exactly the same, despite the fact that the 'slot' between the stem and the ending is occupied by the thematic vowel in one case and by the diphthong in the other:

(3.23)[49]	Indicative	Subjunctive
	am-a-te	*am-ia-te*
	tem-e-te	*tem-ia-te*
	dorm-i-te	*dorm-ia-te*

Summing up so far, in the forms discussed a stressed 'slot' can be actually identified in the linear position between the stem and the ending, and it would be straightforward to regard this slot as the 'thematic slot'. The problem is that this thematic slot should be then occupied by the diphthong *–jà-*, which is clearly not a thematic vowel.

As it will be recalled from the above, the linear position between a simple stem and the ending and bearing stress are not the only aspects to be taken into account for the recognition of a thematic vowel in a word-form: the ThVIH requires that, besides being

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[46] Remind that the 1st person plural of Present Indicative and Present Subjunctive are systematically syncrethic in Italian.

[47] Cf. Ch.2, §2.2.2.1 and §2.2.2.3.

[48] Simply because it is not a 'vowel': it is a diphthong.

[49] Adapted from Vincent (1980: 387).

stressed and standing between a (simple) stem and the ending, a vowel should be also inter-paradigmatically variant, according to a precise pattern (cf. §3.2.1). Now, the diphthong *–jà-* (apart from being a diphthong and not a vowel, as noted earlier), happens to be inter-paradigmatically consistent, in the sense that it recurs unvaried in all of the verbs in the system; this is what leads me to reject it as a possible 'thematic item', in any event.

At this point, the actual 'morphological status' of *–jà-* becomes a matter of controversy: according to our canonical structure (i.e. 'STEM + (THV) + (STEM FORMATIVE) + ENDING'), it could be a realised stem formative (thus, finally a part of the stem),[50] or else a part of the ending.[51] Actually, the status of *–jà-* falls outside the present purpose: what matters is that the diphthong is not to be placed in the 'thematic slot', mainly because of its being inter-paradigmatically consistent.

For what has been said so far, I will assign the morphological structure 'STEM + ENDING' to the forms under discussion. The segmentation of the word-forms in (3.22) might either be *amià-mo* 'we love', *temià-mo* 'we fear' and *dormià-mo* 'we sleep' (with stress on the final part of stem, actually, on the stem formative *–ia-*), or else *am-iàmo*, *tem-iàmo* and *dorm-iàmo* (with stress on the ending).

3.3.1.6   1ˢᵗ and 2ⁿᵈ persons plural of the Imperfect Indicative

The discussion of these forms has been left at the end of this section because, unlike all the other forms considered so far, those seem to challenge the ThVIH. The forms under analysis are illustrated in (3.24), with relevant vowels in bold:

(3.24)	1ˢᵗ pl. Imperfect	*am**a**v-àmo* 🌑	*tem**e**v-àmo* 🌑	*dorm**i**v-àmo* 🌑
	2ⁿᵈ pl. Imperfect	*am**a**v-àte* 🌑	*tem**e**v-àte* 🌑	*dorm**i**v-àte* 🌑
	2ⁿᵈ pl. Present (control)	*am-**à**-te*	*tem-**é**-te*	*dorm-**ì**-te*

It will be easy for the reader to see that the stressed vowels of these forms cannot be claimed to be thematic vowels: in fact, these are not inter-paradigmatically variant,[52] and follow a complex stem, the one with stem formative *–v-* (cf. §3.2.1.1). On the other hand, the vowels preceding the stem formative, marked in bold in (3.24), while bearing no stress, meet the condition about inter-paradigmatic variation. The comparison with the other word-forms of the Imperfect Indicative shows that, aside from stress, the

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[50] Notice that this analysis is suggested by the application of Taylor's Stem Identification Principles, cf. §3.2.1.1.

[51] As suggested by Vanelli (2007) and Spina (2007).

[52] Actually, the vowel *–a-* characterises all verbs.

vowels under discussion exactly parallel the thematic vowels, because of the position they occupy within the word-form. Moreover, they are inter-paradigmatically consistent:

(3.25) 1ˢᵗ pl. Imperfect   *am**a**v-àmo   tem**e**v-àmo   dorm**i**v-àmo*
        3ʳᵈ pl. Imperfect (control) *am**à**v-ano   tem**é**v-ano   dorm**ì**v-ano*

Seemingly, thus, we are faced with a clash of conditions: all other things being equal, on one hand we have tonic vowels which fail to be preceded by a simple stem and to show the required pattern of variation; on the other hand, we have unstressed vowels which actually 'look like thematic vowels'.

Should we admit the presence of unstressed thematic vowels in this case? The problem with this solution is that it would seriously undermine my previous claim, i.e., a thematic vowel has to be stressed. Another option could be to admit that we are in the presence of non-thematic vowels accidentally behaving like thematic vowels. It might be, but why should they do such a thing? Actually, this possibility seems even less attractive than the other one.

If the ThVIH holds true, the disturbing factor here is the pattern of inter-paradigmatic variation displayed by some vowels that, being unstressed, should be rejected as possible thematic vowels.

From a logical point of view, the possible ways of accommodating the data in (3.24) with the ThVIH seem to me to be two:

   i.   changing the pattern of variation of the vowels (i.e. their phonological content), so as that they stop 'mimicking' the actual thematic vowels;

   ii. changing the position of the stress, so as to make the vowels at issue stressed, and therefore 'promote' them to the status of thematic vowels.

In the former case, the change of phonological content of the vowels should be meant to emphasise that they are not thematic vowels, which lines up with their not being stressed; in the latter, in contrast, 'novel' thematic vowels come to be produced. In either case, we have compliance with the ThVIH.

As varieties different from standard Italian are taken into consideration, both of the possibilities above happen to be realised. In particular, the change in the phonological content of the vowels under discussion is observed in substandard Italian throughout Italy, whereas the change in the position of stress is attested in most dialects.

Table 3.4 shows some occurrences of the 1st plural of the Imperfect Indicative in substandard Italian, collected from actual speech in Venice and Padua.[53] Beside each 1st plural form, the corresponding 1st singular is provided, as a control form. Crucially, the phonological content of the vowel before the stem formative –*v*- is different from the content of the corresponding one observed in the standard language (cf. (3.25)) so as that it is no longer phonologically consistent with the thematic vowel observed in the control form:

Imperfect Indicative					
1st plural	1st singular (control)	1st plural	1st singular (control)	1st plural	1st singular (control)
*rub**e**vàmo*	*rub**à**vo*	*perd**a**vàmo*	*perd**é**vo*	*dorm**a**vàmo*	*dorm**ì**vo*
*gioch**e**vàmo*	*gioc**à**vo*	*chiud**a**vàmo*	*chiud**é**vo*	*part**a**vàmo*	*part**ì**vo*
*port**e**vàmo*	*port**à**vo*	*nascond**a**vàmo*	*nascond**é**vo*	*part**e**vàmo*	
		*sosten**a**vàmo*	*sost**é**nevo*		
		*stringi**a**vàmo*	*string**é**vo*		
		*mett**a**vàmo*	*mett**é**vo*		

Table 3.4 -

Actually, I have no explanation for what determines the actual phonological content of the vowel preceding the –*v*- in the substandard forms. What matters for the present purpose, however, is that in the forms of Table 3.4 the vowels under discussion do not 'behave like thematic vowels' (actually, they do not show the vocalic gamut, typical of the thematic vowels), which is what we would expect according to the ThVIH: since these vowels are not stressed, they are predicted not to be recognised as thematic vowels; accordingly, any phonological consistency with the actual thematic vowels should be regarded as accidental: what the substandard language seems to do, thus, is to 'get rid' of this accidental fact.

As far as the change in the position of the stress is concerned, that is found to occur in most of Italian dialects. Here I will provide some data from Venetian, my own variety.[54] Table 3.5 shows the Imperfect Indicative of the verbs *magnàr* 'eat' (with thematic vowel *a*), *savér* 'know, taste' (with thematic vowel *e*) and *dormìr* 'sleep' (with thematic vowel *i*) as it appears in the dialect of Venice:

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[53] These data have been then checked on Google, with positive results: the forms in Table 3.4 can be therefore claimed to be present in both spoken and written substandard Italian. Notice that Leone (1981) claims the presence of similar forms in the substandard Italian spoken in Sicily.
[54] See Rohlfs (1968) for many other instances of the phenomenon.

	MAGNÀR 'eat'	SAVÉR 'know, taste'	DORMÌR 'sleep'
1sg	*magnàvo*	*savévo*	*dormìvo*
2sg	*magnàvi*	*savévi*	*dormìvi*
3sg	*magnàva*	*savéva*	*dormìva*
1pl	*magnàvimo*	*savévimo*	*dormìvimo*
2pl	*magnàvi*	*savévi*	*dormìvi*
3pl	*magnàva*	*savéva*	*dormìva*

Table 3.5 -

What the table is meant to show is that the stress position in the persons 1st plural and 2nd plural is consistent with the one observed in the other persons.[55] It seems as if the stress has been vertically aligned on the vowel before the stem formative –*v*-; moreover, this vowel displays a pattern of inter-paradigmatic variation fully in line with the one requested by the ThVIH. From these elements, it seems that we should conclude that, in a variety such as Venetian, all the word-forms of the Imperfect Indicative show the thematic vowel. As revealed earlier, that is not a peculiarity of Venetian, actually: Rohlfs (1968) signals this feature as characteristic of most of Italian dialects.

The present case provides good evidence that there is actually a close relationship between stress and thematic vowel. On one hand, standard Italian challenges the ThVIH, having unstressed vowels which 'look like thematic vowels'. On the other hand, the changes observed in both substandard Italian and Venetian bring the forms at issue into compliance with the ThVIH, making us feel more and more confident with the validity of that hypothesis.

3.3.2 Non-finite forms

I must admit that when I began writing up this chapter I had decided not to take non-finite forms into consideration. The apparent reason for that was that their membership in a verb's paradigm is controversial: non-finite forms do not inflect for the morphosyntactic properties of person and number, are not organised into sub-paradigms and, syntactically, display a very different distribution compared to the finite forms. The actual reason was that the analysis of two of them (i.e., the Infinitive and the Past Participle) raised issues that I was not able to reconcile with my line of argument. I think I have solved the problem with the Past Participle and, for the sake of completeness, I am dealing with the other non-finite forms as well; I guess that my

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[55] Notice that in the Venetian Imperfect Indicative the 2nd person plural is systematically synchretic with the 2nd singular. Of course, synchretism also involves stress position.

problem with the Infinitive, which is actually left to explain, depends on the fact that this form enjoys a peculiar status within the paradigm: in fact, although it is formally related to the verb, as far as its syntax is concerned it rather behaves like a noun.

3.3.2.1 Infinitive

Judging from the usual verbs AMARE 'love', TEMERE 'fear' and DORMIRE 'sleep', Infinitive seems to raise no problems as for the recognition of the thematic vowel: according to the ThVIH, this form can be simply claimed to have the thematic vowel, as shown by (3.26):[56]

(3.26) **Infinitive**   am-**à**-re   tem-é-re   dorm-ì-re
       2nd pl. (control)   am-à-te   tem-é-te   dorm-ì-te

But consider the following case:

(3.27) **Infinitive**   crédere 💣
       2nd pl. (control)   cred-é-te

The problem with the Infinitive of CRÉDERE 'believe' concerns the position of stress, which falls on the stem, rather than on the stem-following vowel. Notice that, aside from this peculiarity, the verb CRÉDERE is inflectionally identical to TEMERE 'fear' (in particular, it displays thematic vowel *e* in the expected paradigm cells). Crucially, an Infinitive such as CRÉDERE could be simply claimed to have no thematic vowel, differently from the other infinitive-types.[57] The problem with this kind of analysis is that it leads to posit two different morphological structures (one with thematic vowel and one without it) for one paradigm cell (i.e. 'Infinitive'): but remember that the morphological structure had been claimed to be a property of a paradigm cell (in the abstract sense), rather than a feature which has to be lexically specified.

As far as the finite forms are concerned, when similar cases of 'inter-paradigmatic asymmetry' seem to arise, the forms at issue always turn out not to have the thematic vowel in their morphological structure, according to the ThVIH. Crucially, in those forms the possible presence of the thematic vowel seems to be stated at the level of the paradigm cell, rather than at the level of any actual word-form occupying that cell (cf. § 3.4): the implication is that the morphological structure of a word-form (be it with or

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[56] Notice that the Infinitive forms of these verbs have been repeatedly reported, since the Infinitive is the traditional citation form for Italian verbs (see Aronoff 1994: p).

[57] From a statistical point of view, the vast majority of the verbs with thematic vowel *e* display stem-stressed Infinitive (following the pattern of CRÉDERE rather than that of TEMÉRE).

without the thematic vowel) should be possibly inferred from the paradigm cell occupied by that form, instead of having to be specified lexically. In the present case, in contrast, it seems as if the verbs with thematic vowel *e* have to be specified lexically as for the position of stress on the Infinitive (which, in turn, has consequences on the morphological structure of the word-form, with or without the thematic vowel).

It should be clear, however, that what the present case seems to challenge is not the ThVIH in itself, but is rather my claim that the morphological structure of a word-form, be it with or without the thematic vowel, is a property of an 'abstract' paradigm cell.

3.3.2.2 Gerund

(3.28) **Gerund**   am-**à**ndo   tem-**è**ndo   dorm-**è**ndo 💣※
    2ⁿᵈ pl. (control)   am-à-te   tem-é-te   dorm-ì-te

The stem-following vowel of the Italian gerund (in bold in (3.28)) fails to meet the condition on inter-paradigmatic variation: the values that that vowel may assume across the verbs of the system are in fact only two, i.e. *a* (as in AMARE) and *e* (as in TEMERE and DORMIRE).[58]

According to the ThVIH, thus, the Italian Gerund should be assumed not to show the thematic vowel. Notice that the condition on inter-paradigmatic variation is decisive in this case: provided that the final segment /-ndo/ is taken as a stem formative, the stem-following vowel is in fact stressed, preceded by a simple stem and followed by a stem formative - therefore complying with the ThVIH. The reader will remember that the condition on inter-paradigmatic variation was also decisive in the case of the 1ˢᵗ person plural of the Present Indicative, where the diphthong *–jà-* was rejected as a candidate for occupying the 'thematic slot', crucially on the base of its being inter-paradigmatically invariant. However, unlike the *–jà-* of the 1ˢᵗ plural Present Indicative, which exhibits no inter-paradigmatic variation at all, the vowel of the Gerund displays some variation: actually, some verbs have stem-following *a* (like AMARE 'love'), some others have stem-following *e* (like TEMERE 'fear' and DORMIRE 'sleep'). The problem with this variation is that it is not 'enough' for claiming that we are in the presence of a thematic vowel, the possible values being only two and not three, as required by the ThVIH. Anyway, the stem-following vowel of the Gerund may be reasonably claimed to resemble the thematic vowel more than the diphthong *–jà-*.

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[58] As will be recalled, the ThVIH requires the values of the thematic vowel to be three(cf. §3.2.1).

Romance varieties other than Italian actually have Gerund forms which, according to the ThVIH, may be claimed to have the thematic vowel. Let us consider Venetian, for instance. (3.29) reports the Gerund forms of the Venetian verbs AMAR 'love', SAVER 'know, taste', and DORMIR 'sleep':

(3.29) **Gerund**   am-**à**-ndo   sav-é-ndo   dorm-ì-ndo
       1st sg. Impf. Ind. (control)   am-**à**-vo   sav-é-vo   dorm-ì-vo

From these data, it seems that we should conclude that the phonological content of a vowel may change, so as to make it consistent with the pattern of inter-paradigmatic variation observed elsewhere in the system. The consequence is that the vowel in question can be identified as a thematic vowel.[59]

3.3.2.3 Past Participle

Past Participle differs from Infinitive and Gerund in two aspects, at least: on one hand, it may be claimed to be more directly involved in a verb's paradigm, since it is used in the inflexion of all the so-called analytic word-forms (cf. Ch.1). On the other hand, unlike the other non-finite forms, that is not indeclinable: actually, it inflects for the morphosyntactic categories of Person, Number and Gender, following the inflectional pattern of a four-endings adjective. It looks as if the Past Participle 'keeps a paradigm on its own', although it is involved in the traditional verbal paradigm at the same time.

(3.30) provides the forms I am discussing:

(3.30) **Past Participle**   **'weak type'**   **'strong type'**
                                 am-à-t-o   *tem-ù-t-o* ☝   *prés-o* ☝   *dorm-ì-t-o*
       2nd pl. (control)   *am-à-te*   *tem-é-te*   *prend-é-te*   *dorm-ì-te*

Notice that the 'strong type' is only found in some verbs displaying the thematic vowel *e* elsewhere in the paradigm; this type is peculiar, both because of its morphological structure (i.e. 'STEM + ENDING', with no thematic vowel) and the shape of its stem (i.e. /prés-/ vs. /prend-/, as shown by the control form prend*ete*).

For the present purpose, let us focus on the other three forms, i.e. *amàto* 'loved' for AMARE, *temùto* 'feared' for TEMERE and *dormìto* 'slept' for DORMIRE, which are clearly parallel to one another as for their stress pattern (and, intuitively, as for their morphological structure). According to the ThVIH, all of these forms can be claimed to

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[59] This suggests that the change should be assumed to be morphologically motivated from the very beginning.

have the thematic vowel. Schema (3.2) is meant to illustrate that the stressed vowels of the 'weak' Past Participle meet all **of** the conditions posited by the ThVIH:

Conditions of the ThVIH		Checking			Result
		AMARE	**TEMERE**	**DORMIRE**	
i. Stressed		*am**à**to*	*tem**ù**to*	*dorm**ì**to*	✓
ii. Preceded by a simple stem	preceding stem	*am-*	*tem-*	*dorm-*	✓
iii. Followed by a stem formative (i.e. -t-) and an ending	following string	*-t-o*	*-t-o*	*-t-o*	✓
iv. Inter-paradigmatically variant so as to assume **three possible values**	pattern of variation	*a*	*u*	*i*	✓

Schema 3.2 -

The crucial point is with condition iv. A possible objection to the analysis given above is that the stressed *u*, characterising the Past Participle of TEMERE 'fear' and identified as the thematic vowel, is phonologically different from the thematic vowel *e* found elsewhere in the paradigm of that verb. As it will be recalled from Ch.2, this *u* was labelled as problematic by other analyses too: actually, any constructive analysis assuming one underlying thematic vowel for each lexical verb would have to account for this actual difference between the *u* of the Past Participle and the *e* surfacing as thematic vowel elsewhere in the paradigm. Dressler and Thornton's (1991) proposal, for instance, appeals to a 'substitution rule', changing the underlying thematic vowel *e* into *u* in the Past Participle (cf. Ch. 2, §2.2.2.3). I claim that the inconsistency of the *u* of the Past Participle is not a crucial problem, once we recall that we are adopting an abstractive perspective: I do not assume the existence of one underlying thematic vowel for each lexical verb, from which all **of** the thematic vowels actually observed in the word-forms would be derived, by means of rules of any kind. The scholar concerned with the recognition of sub-word units simply has to account for what the language actually provides: in the Italian Past Participle, there are three stressed vowels, *a*, *u*, and *i*, occupying the linear position between the stem and the stem formative –t-. According to the ThVHI, thus, each of these vowels can be reasonably claimed to be a thematic vowel. Crucially, nothing in the ThVIH seems to compromise the recognition of the –u- in *temuto* 'feared' as a thematic vowel.

This is not to deny that we are in the presence of an idiosyncrasy, however: intra-paradigmatic consistency, while not appearing among the conditions of the ThVIH, is in fact a characteristic feature of the thematic vowels of the Italian verbal system: normally, if a verb shows the thematic vowel, say, *a* in one of its word-forms, it will

have *a* throughout its paradigm. From this point of view, the thematic vowel *u* found in the Past Participle of Temere is undoubtedly peculiar.

Nonetheless, I claim that this *u* is actually a thematic vowel, as much as the *e* found elsewhere in the paradigm of Temere. Remember that at the beginning of this chapter I assumed the thematic vowel to be a variable, in mathematical sense; it should be clear now that the ThVIH is meant to identify a thematic vowel understood in that sense, i.e. as a variable. The actual value (in phonological terms) that the thematic vowel may assume within the system is something different, and I will retour on that in Ch.5.

3.4 Again on the morphological structure of word-forms

Putting together what has been said in § 3.2 and § 3.3 about the morphological structure of the word-forms with and without a thematic vowel, we are now in a position to describe the whole Italian verb paradigm in terms of the morphological structure of the word-forms in it. Schema 3.3 provides an illustration of that. For the sake of completeness, the *Perfetto Semplice* has been reported in both of its possible inflectional patterns, i.e. the 'strong' one and the 'weak' one, in spite of the fact that each lexical verb normally displays only one of these patterns.

Finite Forms					
	Indicative				
	Present	Imperfect	Future	Strong *Perfetto*	Weak *Perfetto*
1s	STEM+END.	STEM+THV+v+END.	STEM-r+END.	STEM+END.	STEM+THV+END.
2s	STEM+END.	STEM+THV+v+END.	STEM-r+END.	STEM+THV+END.	STEM+THV+END.
3s	STEM+END.	STEM+THV+v+END.	STEM-r+END.	STEM+END.	STEM+ENDING
1p	STEM+END.	STEM+END.	STEM-r+END.	STEM+THV+END.	STEM+THV+END.
2p	STEM+THV+END.	STEM+END.	STEM-r+END.	STEM+THV+END.	STEM+THV+END.
3p	STEM+END.	STEM+THV+END.	STEM-r+END.	STEM+END.	STEM+THV+END.

	Imperative	Subjunctive		Conditional
		Present	Imperfect	
1s		STEM+END.	STEM+THV+ss+END.	STEM-re+END.
2s	STEM+END.	STEM+END.	STEM+THV+ss+END.	STEM-re+END.
3s		STEM+END.	STEM+THV+ss+END.	STEM-re+END.
1p		STEM+END.	STEM+THV+ss+END.	STEM-re+END.
2p	STEM+THV+END.	STEM+END.	STEM+THV+ss+END.	STEM-re+END.
3p		STEM+END.	STEM+THV+ss+END.	STEM-re+END.

Schema 3.3 -

As revealed earlier, this is an abstract schema, in the sense that it is meant to hold for the whole verbal system rather than for single verbs (or for single classes of verbs). I have repeatedly claimed that the morphological structure of a word-form should be seen as something anchored to a paradigm cell (in the abstract sense of the term, see fn. 41): Schema 3.3 is meant to illustrate such a claim. The implication is also that, when

two or more morphosyntactically equivalent word-forms are compared,[60] those are expected to have the same morphological structure.[61] Actually, if a word-form occupying the paradigm cell C - for instance, 2nd plural Present Indicative - is analysed as having a thematic vowel involved in its morphological structure, then the presence of a thematic vowel should be reasonably expected for all the word-forms in the system occupying the same paradigm cell C.[62]

After saying this, my purpose for this paragraph is that of comparing the two morphological structures observed in Schema 3.3 above, i.e. 'STEM-(STEM FORMATIVE) + ENDING' – with no thematic vowel - and 'STEM + THV + (STEM FORMATIVE) + ENDING' – with thematic vowel. It will be found that both the STEM and the ENDING involved in the structure with thematic vowel enjoy some properties; on the other hand, the STEM and the ENDING involved in the structure without thematic vowel only have these properties optionally.

Let us consider the inflectional endings first.

In this regard, it is worthwhile introducing the label 'superstable ending', developed within the framework of Natural Morphology (cf. Wurzel 1989: 132 ff.). Briefly, an ending is defined as s u p e r s t a b l e if, for a given paradigm cell, it recurs in all the verbs of the system. Consider, for instance, the cell '1st singular Present Indicative': its ending –*o* is found throughout the system and can therefore be labelled as 'superstable':

(3.31)   AMARE   TEMERE   DORMIRE
                         'love'   'fear'   'sleep'
   1st sg. Pres. Ind.   *am-o*   *tem-o*   *dorm-o*

Clearly, the fact that the notion of superstable ending is in need of some specification implies that, from a logical point of view, this is not the only possibility within the system. Actually, 'rival' endings competing for one morphosyntactic paradigm cell are found in the Italian verbal system. Take, for instance, the 3rd singular of the *Perfetto Semplice* (as it appears in the 'weak' pattern) for the same three verbs used above to exemplify the superstable ending -*o*. According to the analysis which I gave in §3.3.1.3, three rival endings are found for this paradigm cell, i.e. –*ò*, -*é*, or –*ì*:[63]

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[60] Obviously, word-forms belonging to different verbs.

[61] Notice that this 'inter-paradigmatic inconsistency' is the main shortcoming of the analyses of the generative framework (cf. Ch.2, §2.2.2).

[62] That might be interpreted as 'system congruity' (in the terms of Wurzel 1989).

[63] We will see in Ch.4 that the notion of 'inflectional class' has a key role in the lexical distribution of rival endings such as those in (3.31).

(3.32)   **3ʳᵈ sg.** *Perfetto Semplice*   *am-ò   tem-é   dorm-ì*

Such endings, unlike the *–o* of the 1ˢᵗ singular Present Indicative, are not superstable.

Let us now evaluate the endings involved in Schema 3.32 in the light of the label 'superstable'. The observation of the entire body of data in the Italian verbal system reveals that the endings found in the structure with thematic vowel are all 'superstable', in the sense explained above. The structure involving no thematic vowel, on the other hand, is not specified as for the 'superstability' of its ending, which means that the latter may be superstable, but it is not necessary: notice that both the 1ˢᵗ person singular of the Present Indicative illustrated in (3.31) above and the 3ʳᵈ singular of the *Perfetto Semplice* illustrated in (3.32) have the structure STEM + ENDING (cf. Schema 3.3), although only the former displays a superstable ending.

Let us next consider the stem involved in each of the two structures, with and without thematic vowel. In dealing with the inflectional endings, it was necessary to introduce the notion of 'superstable (ending)'; now, in tackling the issue of stems, it is worthwhile introducing the notion of 'default (stem)'. Unfortunately, such a notion happens to be as much intuitive as it is in fact difficult to theorise. In order to explain this statement, I will basically refer to a work by Pirrelli and Battista (2000), which specifically deals with stems in Italian verb morphology.

Since most of the claims that I will make in this section rise from the comparison of regular and irregular paradigms, for the sake of readability I report the paradigms of the verbs TEMERE 'fear' (regular) and TENERE 'hold' (irregular) in Tables 3.6 and 3.7 below.[64] The stem inventories for these verbs are also repeated, in (3.33) below:

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[64] These tables were already given in §3.2.1.1, where I put forward some introductory remarks about stems.

Finite forms								
	Imperative	**Indicative**				**Subjunctive**		**Conditional**
		Present	**Imperfect**	***Perfetto Semplice***	**Future**	**Present**	**Imperfect**	**Present**
1s		*temo*	*temevo*	*temei*	*temerò*	*tema*	*temessi*	*temerei*
2s	*temi!*	*temi*	*temevi*	*temesti*	*temerai*	*tema*	*temessi*	*temeresti*
3s		*teme*	*temeva*	*temé*	*temerà*	*tema*	*temesse*	*temerebbe*
1p		*temjamo*	*temevamo*	*tememmo*	*temeremo*	*temjamo*	*temessimo*	*temeremmo*
2p	*temete!*	*temete*	*temevate*	*temeste*	*temerete*	*temjate*	*temeste*	*temereste*
3p		*temono*	*temevano*	*temerono*	*temeranno*	*temano*	*temessero*	*temerebbero*

Table 3.6 -

Finite forms								
	Imperative	**Indicative**				**Subjunctive**		**Conditional**
		Present	**Imperfect**	***Perfetto Semplice***	**Future**	**Present**	**Imperfect**	**Present**
1s		*tengo*	*tenevo*	*tenni*	*terrò*	*tenga*	*tenessi*	*terrei*
2s	*tieni!*	*tieni*	*tenevi*	*tenesti*	*terrai*	*tenga*	*tenessi*	*terresti*
3s		*tiene*	*teneva*	*tenne*	*terrà*	*tenga*	*tenesse*	*terrebbe*
1p		*tenjamo*	*tenevamo*	*tenemmo*	*terremo*	*tenjamo*	*tenessimo*	*terremmo*
2p	*tenete!*	*tenete*	*tenevate*	*teneste*	*terrete*	*tenjate*	*teneste*	*terreste*
3p		*tengono*	*tenevano*	*tennero*	*terranno*	*tengano*	*tenessero*	*terrebbero*

Table 3.7 -

(3.33)

	TEMERE		TENERE
A	Tem-	A	Ten-
		B	'Teng-
		C	'Tien-
B	**Te'm**ev-	D	**Te'n**ev-
C	**Te'm**ess-	E	**Te'n**ess-
D	**Tem**er-	F	Ter'r-
E	**Teme**'re-	G	Ter're-
		H	'Tenn-

In what follows, I will speak in terms of morphosyntactic paradigm cells (e.g. '1st sg. Present Indicative') and of the stems which can be found to occupy them across the verbs of the system; crucially, I will focus on whether or not those stems are predictable (in the sense explained in §3.2.1.1). In doing so, I will adopt Aronoff's (1994: 51) view, explaining that each stem is the sound form of a lexeme, the output of a function relating the 'lexicon' to the 'morphology' of a language.

Let us consider, for instance, the paradigm cell '1st sg., Future (Indicative)': as far as verbs TEMERE and TENERE are concerned, we have a predictable stem in the former (i.e. /temer-/) and a non-predictable stem in the latter (i.e. /terr-/): actually, two of the lexemes in the system are found to behave differently with regard to the predictability of the stem observed in a given paradigm cell. In Aronoff's terms, such a paradigm cell is associated with a discontinuous function (also called 'variable function'). The

structure-type of the predictable stems outputted by a discontinuous function is referred to as 'default'.[65]

Consider now the paradigm cell '1st sg. Imperfect Indicative' for the same verbs TEMERE and TENERE. The stems of the word-form occupying this paradigm cell (i.e. /temev-/ and /tenev-/, see Tables 3.6 and 3.7), can be both analysed as the result of adding the segment /-ev-/to the stem indexed as A.[66] Now, the structural consistency of the stems /temev-/ and /tenev-/ could be thought to be simply a coincidence, a peculiar solidarity between the two verbs discussed. However, the inspection of the entire verbal system reveals that this is not the case: the shape of the stem governing the realisation of the cell '1st sg. Imperfect Indicative' is always analysable as 'Stem A + ThV + –v-' (crucially, it can be said to be predictable from stem A).[67] In the terms of Aronoff (1994) such a paradigm cell is associated with a constant function. It means that the function outputting the stem for this paradigm cell is one and the same across all the verbs of the system. Stems tokens such as /temev-/ and /tenev-/ are called 'formally constant stems'.

The unpredictable stems outputted by a variable function are called 'basic stems'(BSs). Within the theoretical framework I am adhering to (see especially Pirrelli (2000), Pirrelli & Battista (2000)), an index is assigned to each BS in a paradigm. Table 3.8 reports the stem inventory for the verb TENERE, with the BSs indexed on the left:[68]

TENERE			
S_1	ten-	S_1	**te'nev-**
S_2	'teng-	S_1	**te'ness-**
S_3	'tien-	S_4	**ter're-**
S_4	ter'r-		
S_5	'tenn-		

Table 3.8

For the sake of completeness, the stems /te'nev-/, /ten'ess-/ and /ter're-/ have been reported in Table 3.8, although they do not enjoy the status of BSs (we saw in §3.2.1.1

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[65] Cf. Aronoff (1994: 52). The scholar, who adopts a constructive perspective (cf. Ch.3, §3.1), actually speaks of 'default method of building (a given) stem'. Notice that, in this case, the term 'default' is used with reference to the structure of a given complex stem. What I am trying to define, on the other hand, is the 'Default Stem' as a given simple stem in the paradigm.

[66] Remember that the additional segment at issue has been analysed as consisting of ThV -e- plus stem formative -v-.

[67]This holds for all the verbs of the system; the only exception is the verb ESSERE 'be'.

[68] The letters of the alphabet that had been assigned to the stems of Table 3.33 were not meant to indicate whether those stems were predictable or not; actually, we have seen that only those stems that are formally unpredictable enjoy the status of 'basic stems'. Accordingly, the labels S_1, S_2 etc. used here are meant to index 'basic stems' only.

that those stems are morphologically predictable). The reader will note that the index they have assigned immediately captures the formal relationship that links them to actual BSs (i.e. S_1 /ten-/ and S_4 /terr-/, respectively). Notably, the stems /tenev-/ and /teness-/ are formally constant (in the sense explained above) and have been both indexed as S_1. That leads us to state a crucial generalisation about S_1: that is the BS from which the shape of all the constant stems in a paradigm can be predicted. In that sense, S_1 is claimed to be the default stem in a paradigm. Notice that this is in line with Pirrelli and Battista's (2000: 356) Paradigmatic Formal Consistency Principle:

(3.34) Regular stems are assumed to be derived from default BSs.

Table 3.9 illustrates the paradigm of the verb TENERE in terms of the BSs involved in it. Given that such a representation provides information about the paradigmatic distribution of the different BSs, it is referred to as 'Distribution Schema' (cf. Pirrelli & Battista (2000):

Finite forms								
	Imperative	Indicative				Subjunctive		Conditional
		Present	Imperfect	*Perfetto Semplice*	Future	Present	Imperfect	Present
1s		S_2	S_1	S_5	S_4	S_2	S_1	S_4
2s	S_3	S_3	S_1	S_1	S_4	S_2	S_1	S_4
3s		S_3	S_1	S_5	S_4	S_2	S_1	S_4
1p		S_1	S_1	S_1	S_4	S_1	S_1	S_4
2p	S_1	S_1	S_1	S_1	S_4	S_1	S_1	S_4
3p		S_2	S_1	S_5	S_4	S_2	S_1	S_4

Table 3.9 -

Pirrelli and Battista (2000), by means of a detailed survey of the entire body of data in the Italian verbal system, have resulted in a schema like that in Table (3.4) below, which is abstract in the sense that it is meant to describe the situation of the whole verbal system, rather than that of a single verb. This is called Overall Distribution Schema (ODS) and has been set up by picking up, for each sub-paradigm type, the distribution schema specified for the maximum number of stem indices:

FINITE FORMS						
	SINGULAR			PLURAL		
	1	2	3	1	2	3
PRESENT SUBJUNCTIVE	S_2			S_4		S_2
PRESENT INDICATIVE		S_3				
IMPERFECT INDICATIVE	S_1					
IMPERFECT SUB.						
PERFETTO SEMPLICE	S_5		S_5			S_5
IMPERATIVE	-	S_3	S_2	S_4		S_2
CONDITIONAL	S_6					
FUTURE						

Schema 3.4 -

Since the purpose of Pirrelli and Battista's schema is to capture the highest degree of unpredictability conceivable for a verbal paradigm of Italian, the paradigm portion indexed as S_1 within this schema (called 'S_1 partition class') clearly comes to be endowed with a heuristic value: actually, it points towards those paradigm cells univocally associated with constant functions. The analysis of the word-forms occupying these cells allows us to identify the default stem for each verb paradigm, no matter how regular this paradigm is. The idea is that, even in the case of the most irregular verb in the system, the default stem will be the one found in the S_1 partition class of the ODS. In this sense, this partition class can be seen as an 'island of reliability' for the identification of the default stem of a paradigm.

As noted by Pirrelli and Battista (2000: 356), a 'default' stem also happens to be the most widespread within a verb's paradigm. Accordingly, it would have been much easier for me to define a 'Default Stem' simply as 'the stem provided with the widest paradigmatic distribution'. Yet there are two shortcomings in such a definition: first, it only holds for single verbs, that is, it only allows us to say that a stem is the default one 'for a given verb'. Secondly, it implies that the whole paradigm of a verb is known: in order to identify a stem as the default one, according to this latter definition, one is required to know the whole paradigm of a verb, so as to abstract away all **of** the stems and evaluate their relative occurrence. On the other hand, the definition which relates the default stem to formally constant stems, while taking me longer to be demostrated, has the advantage that it is abstract: actually, it allows us to identify the default stem of a verb's paradigm somehow *a priori*, i.e. without the whole paradigm to be necessarily known. Under this definition, it is sufficient to know one of the constant stems of a

verb's paradigm (actually, one word-form)[69] to correctly infer the default stem for that verb.

To retour to our main purpose for this section, let us compare the two morphological structures 'STEM-(STEM FORMATIVE) + ENDING' and 'STEM + THV + (STEM FORMATIVE) + ENDING' looking at the kind of stem which can be found in each of them, where by 'kind of stem' I mean 'default' vs. 'non-default'.

The reader will find that the stem involved in the structure with the thematic vowel is always the default one: all the paradigm cells whose word-forms display the thematic vowel (cf. Schema 3.1 in §3.2.2) are in fact indexed as 'S_1' within the ODS.[70] On the other hand, the word-forms containing no thematic vowel in their structure turn out not to be specified as for the kind of stem they exhibit: they may have the default stem S_1 (as shown by the form *teniamo* 'we hold', in (3.35) below) but they do not have to do so (as shown by *tengo* 'I hold', in (3.36) below):

(3.35)   *ten*   iamo   1st plural Present Indicative
                               'we hold'
       STEM   **ENDING**
         S_1 (Cf. Table 3.9 above)

(3.36)   *teng*   o   1st singular Present Indicative
                               'I hold'
       STEM   ENDING
         S_2 (Cf. Table 3.9 above)

Now, imagine that we are redrawing Schema (3.3) so as to put the information that we have been collecting in this paragraph in it, concerning the distribution of both the default stem S_1 and the superstable endings. We know the paradigmatic distribution of S_1 from Pirrelli and Battista's ODS; as far as the superstable endings are concerned, given that they have been said to recur across verbs as invariant, each of them can be reasonably seen as a characteristic feature of the morphosyntactic paradigm cell in which it is recurring. Schema 3.5 illustrates this new version of the Schema (3.3), with S_1 and the superstable endings placed accordingly:

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[69] Provided that this is included in the paradigm portion associated with S_1.

[70] In fact, the distribution schema of the thematic vowel (given in Schema 3.1, in §3.2.2) is included in the S_1 partition class of Pirrelli and Battista's ODS (given in Schema 3.4 above).

Finite Forms					
	Indicative				
	Present	Imperfect	Future	Strong *Perfetto*	Weak *Perfetto*
1s	**STEM**+o	S_1+**THV**+v+o	STEMr+**ò**		S_1+**THV**+I
2s	**STEM**+i	S_1+**THV**+v+i	STEMr+**ài**	S_1+**THV**+sti	S_1+**THV**+sti
3s	**STEM**+END.	S_1+**THV**+v+a	STEMr+**à**		S_1+**ENDING**
1p	STEM**ià**+mo		STEMr+**émo**	S_1+**THV**+mmo	S_1+**THV**+mmo
2p	S_1+**THV**+te		STEMr+**éte**	S_1+**THV**+ste	S_1+**THV**+ste
3p	**STEM**+END.	S_1+**THV**+v+ano	STEMr+**ànno**		S_1+**THV**+rono

	Imperative	Subjunctive		Conditional
		Present	Imperfect	
1s		**STEM**+END.	S_1+**THV**+ss+i	STEMr**è**+i
2s	**STEM**+END.	**STEM**+END.	S_1+**THV**+ss+i	STEMr**é**+sti
3s		**STEM**+END.	S_1+**THV**+ss+e	STEMr**é**+bbe
1p		STEM+**ià**+mo	S_1+**THV**+ss+imo	STEMr**é**+mmo
2p	S_1+**THV**+te	STEM+**ià**+te	S_1+**THV**+s+te	STEMr**é**+ste
3p		**STEM**+END.	S_1+**THV**+ss+ero	STEMr**é**+bbero

Schema 3.5

The advantage of the Schema 3.5 is that it captures all what should be provided by a component other than the lexicon in the inflexion of a verb. It is also meant to cast light on the fact that, at a whole system level, the thematic vowel systematically co-occurs with the default stem S_1 on one hand, and with a superstable ending on the other. Notice that this will turn out to be a crucial point in the following analysis.

As it has been noted, I have said nothing about the non-superstable endings;[71] nor I have tackled the issue of the possible indices of the stems other than S_1. The reason for this reticence is twofold: on one hand, both of these issues happen to be highly complex, and in order to be fully understood, they will need much more introductory remarks than what would be possible to make in a few lines. On the other hand, those are far from being of secondary importance for what will be said later about thematic vowels. For these reasons, I will tackle both the issues in the next chapter.

3.5 Conclusions

This chapter was concerned with the recognition of the thematic vowel in the word-forms of the Italian verbs. It has been claimed that a morphological item (actually, a vowel), in order to be recognised as the thematic vowel within a word-form, must meet a set of four conditions; **of** these conditions, three are basically positional in nature (a thematic vowel must be stressed, preceded by a simple stem and followed by a stem

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[71] Yet their paradigmatic distribution can be inferred from the table, since that happens to be complementary with the distribution of the (specified) superstable endings.

formative and an ending), and one concerns the phonological content of the vowel, to understand not in absolute but in relative terms; a thematic vowel must be inter-paradigmatically variant so as to assume three values in each of its occurrences in the system. This set of conditions has been referred to as 'Thematic Vowel Identification Hypothesis'. According to the ThVIH, a thematic vowel may occur either between the stem and the ending – while being neither – or else before a stem formative, in which case that is in fact part of the stem, however complex such a stem is.

Using the ThVIH as a principle, I have been able to claim which word-forms in a paradigm display the thematic vowel; actually, I have defined the paradigmatic distribution of the thematic vowel. This also allowed me to make a decision about the presence of the thematic vowel in the word-forms which have raised problems in the previous analyses. I knew the list of these forms from Ch.2, and I knew that the major problem with them concerned the so-called 'inter-paradigmatic asymmetry': in all of these forms the thematic vowel seems to be present only in some verbs in the system, while it cannot be recognised in some others. It has been shown that, according to the ThVIH, no one of the previously problematic forms displays a thematic vowel, actually. As the thematic vowel is understood as a 'slot' in a word-form's morphological structure, which may be not present and whose actual presence crucially depends on positional conditions, then any 'inter-paradigmatic asymmetry' is simply to rule out *a priori*: the morphological structure of a word-form, I claimed, is not to see as a characteristic feature of a given word-form (which is something concrete); it would be rather paired to a morphosyntactic paradigm cell (which is something abstract). In that sense, it is the paradigm cell, and not the actual word-form, which may have the thematic vowel.

I have shown that both the stem and the ending involved in the morphological structure with the thematic vowel (i.e. 'simple STEM + stressed THV + (STEM FORMATIVE) + ENDING') enjoy some peculiar properties: the ending is always superstable, the stem is always the default one.

To conclude this summary, I would like to briefly discuss about the paradigmatic distribution of the thematic vowel. I have claimed that the paradigm cells involved are the following:

(3.37) i. 2nd pl. Present Indicative;

     ii 2nd pl. Imperative;

     iii 1st, 2nd, 3rd sg., 3rd pl. Imperfect Indicative;

     iv. whole Imperfect Subjunctive;

     v. 1st, 2nd sg., 1st, 2nd, 3rd pl. *Perfetto Semplice* (weak pattern);

     vi. 2nd sg., 1st pl., 2nd pl. *Perfetto Semplice* (strong pattern);

     vii. (Infinitive);

     vii. Past Participle (weak pattern)

Crucially, these paradigm cells do not constitute a natural class in morphosyntactic terms. From a morphosyntactic point of view, such a cluster of paradigm cells simply makes no sense. That is reminiscent of Aronoff's (1994: 25) morphomes, i.e. clusters of cells in a verb's paradigm which are as much morphosyntactically nonsensical as they are actually coherent with one another, as for one, at least, of the formal properties of their word-forms. The group of paradigm cells listed in (3.37) cannot be defined on the base of a common morphosyntactic property; what they have in common, instead, is the presence of the thematic vowel in the word-forms occupying them.

Chapter four

The Conjugations of Italian

This chapter is seemingly wandering from the subject, in that it is not centered on the thematic vowels but is tackling the issue of `allomorphy`. In Italian verbal inflexion, allomorphy may affect both endings ('desinences') and stems. Desinential allomorphy is claimed to occur where different lexical verbs possibly display rival inflectional endings for morphosyntactically equivalent paradigm 'cells'. In contrast, stem allomorphy is appealed in the case where different basic stems (cf. Ch.3, §3.2.1.1) are found in one verb's paradigm. The content of this chapter is actually far from being a simple digression about a characteristic feature of the Italian verbal morphology: in fact, on one hand it clarifies some points that were left outstanding in the previous chapter, where I limited myself to mentioning both the basic stems other than the default one and the endings other than the superstable ones (cf. Ch. 3, §3.4); on the other hand, it paves the way to what will be discussed in the following chapter about the real nature of thematic vowels, which is actually the core of the present work. Therefore, if you are just going to read a couple of chapters of this work, make sure they are the present and the next ones.

4.1. Desinential allomorphy and inflection classes

The phenomenon of desinential allomorphy inevitably appeals to the notion of 'inflection class'. One of the aims of this section is, in fact, to show how the notion of 'inflection class' can help seeing a sort of order beyond the proliferation of inflectional resources in a language with allomorphy.

The definition of 'inflection class' is one of the aims of this section; for the moment, however, I will start from the intuition that two or more lexemes which belong to a given part of speech (for instance, Verb) which inflect differently for at least one of the morphosyntactic bundles in the paradigm,[1] should be assumed to belong to (or to be members of) two different inflectional classes. Then, for instance, the different inflexion of the two verbal lexemes AMARE 'love' and TEMERE 'fear' for the 3rd person singular of the Present Indicative (i.e. *am*a '(s)he loves' with ending *–a* and *tem*e '(s)he fears' with

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[1] In the sense of one 'cell' in the morphosyntactic paradigm (e.g. 1st sg. Present Indicative) – Ch.1,§1.1.2.

ending –*e* – cf. Ch. 3, §3.3.1.1) would be sufficient for claiming that these two verbs belong to two different inflectional classes.

In tackling the issues of allomorphy and inflection classes, I will make constant reference to two works in particular, i.e. Carstairs's (1987) *Allomorphy in inflexion* and Aronoff's (1994) *Morphology by itself*. These two works can be regarded as somehow complementary, because, besides helping defining the notion of 'inflection class', they jointly contribute to cast light on the following points about the inflectional classes of a system:

1. The actual number of inflection classes for a given part of speech in a language can be determined in a principled manner, since it follows on from some general constraints about the organisation of the inflectional resources in the system;
2. Inflection classes are 'purely morphological' in nature (in Aronoff's terms, they are 'morphomic').

This section is thus divided into two main parts: in the former one I will introduce and define the notion of inflectional class, and I will try to determine exactly how many inflection classes there are within the Italian verbal system, by means of Carstairs's (1987) Economy Principle (EP). That will lead us to the question of what part of a word-form has to count as actually relevant for the purpose of assigning the lexeme which that word-form makes to one of the inflectional classes of the system: I will argue that thematic vowels, while not being directly involved by Carstairs's principle, do have a role in distinguishing the inflectional classes of the Italian verbal system. In the latter part of this section I will show that the inflectional classes into which Italian verbs are distinguished do not find any justification outside the 'purely morphological' level of linguistic analysis. What I would like to emphasise about this section is that the two questions I am tackling are actually more tightly linked to each other than it might seem: as I will show, at least some of Carstairs's remarks about what of an inflected form has to count as relevant for the purpose of identifying the inflectional classes in a language are perfectly in line with Aronoff's definition of the properties of a language which are to be circumscribed to the 'morphomic' level of linguistic analysis. For this reason, I claim that Carstairs's work (1987) can be reasonably ascribed to the 'Morphology by itself era', even though it precedes Aronoff's work chronologically.

4.1.2. Inflectional classes: underlying principles and definitions

I have said that the situation in which a language has multiple, 'rival' inflectional resources for a given 'cell' at its disposal in the morphosyntactic paradigm[2] is normally labelled as 'desinential allomorphy'.[3]

In the next chapter, where I will be dealing with the issue of the meaning of sub-word units, I will show that the existence of rival inflectional endings for one morphosyntactic bundle actually questions the semiotic principle of Uniformity, known by the formula 'one-meaning-one-form'. My concern for the present section is more modest in nature: I simply aim to show that a proliferation of inflectional resources, like the one exemplified by the pair *am***a** 'he loves' vs. *tem***e** 'he fears', is not as free as it might seem: on the contrary, it is subject to some specific constraints, which lead us to see an order in it, where by 'order' I mean a symptom of 'grammar at work'.

The constraints on desinential allomorphy, which I will take into account, have been described by Carstairs (1987). There are three of them; the first two are labelled as 'Inflectional Parsimony Hypothesis' and 'Non-Independent Distribution Characteristic', and are independent one another. The third, called 'Inflection Class Uniqueness Claim', should be assumed somehow to derive from the other two. Anyway, these are all to understand as general principles, constraining the use that a given language can make of its inflectional resources, in case of inflectional allomorphy.

The 'Inflectional Parsimony Hypothesis' claims that, when the system provides more than one inflectional 'means' (for instance, more than one inflectional ending) for a given morphosyntactic bundle (namely in the presence of desinential allomorphy), a given lexeme[4] will select only one of the endings in its inflection for that morphosyntactic bundle. Going back to our Italian data, we see, for example, that as for the morphosyntactic bundle '3rd singular Present Indicative' there are (at least) two endings available within the system, i.e. –*a*, as in *am***a** 'he loves' or else –*e*, as in *tem***e** 'he fears'. The 'Inflectional Parsimony Hypothesis' predicts that each verb in the system, as

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[2] I.e., '3rd singular Present Indicative' – see below.
[3] Carstairs (1987: 15) also signals the label 'suppletion in inflection', even though, as the scholar himself points out, "the term 'suppletion' is more traditionally restricted to stem alternations".
[4] Carstairs speaks in terms of 'stem'.

a lexeme, will select either *–a* or *–e* when inflected for that paradigm cell, but not both of those. The implication is that, given the occurrence of *am**a*** '(s)he loves' (with ending *–a*) and *tem**e*** '(s)he fears' (with ending *–e*), the 'Inflectional Parsimony Hypothesis' rules out the occurrence of word-forms like **ame* or **tema*.

The 'Non-Independent Distribution Characteristic' observes that there are some restrictions, in the inflection of a given lexeme, linking the choice of one affix with another one. For instance, the choice of *–a* over *–e* in the 3rd singular Present Indicative of AMARE 'love' would imply a series of other choices, concerning the other affixes used in the inflection of this verb. Such a piece of information will be of particular relevance for conjugating the lexeme in the other paradigm 'cells', where 'rival' inflections are provided by the system.[5] Consider, for instance, the 3rd person plural Present Indicative of the usual two verbs AMARE 'love' and TEMERE 'fear'. As it is shown by (4.1), also this morphosyntactic bundle involves desinential allomorphy:

(4.1)

Present Indicative		
	AMARE	TEMERE
3rd pl.	*am**a**no*	*tem**o**no*

According to the 'Non-Independent Distribution Characteristic', there would be a relationship between the selection of *–a* in the 3rd person singular and the selection of *–ano* in the 3rd person plural, as exemplified by AMARE 'love'. Likewise, the selection of *–e* in the 3rd singular of TEMERE would be linked with the selection of *–ono* in the 3rd plural (see (4.1) above).

Both of the constraints above find a motivation under the notion of 'inflectional class'.[6] In the light of what has been said so far, we are now in the right to define an inflectional class as follows:

(4.2) INFLECTION CLASS: the set of all the lexemes which belong to the same lexical category (for instance, VERB) and share their inflectional behaviour.[7]

The reader will note that such a definition makes sense only in those situations where inflectional allomorphy is involved.[8] It will be also noted that in (4.2) an inflection class is actually defined simply through its members and not really 'in itself'.

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[5] I.e. in the other morphosyntactic bundles actually affected by desinential allomorphy.
[6] 'Paradigm' in Carstairs's terminology.
[7] An alternative definition is given by Aronoff (1994: 64).

Carstairs (1987: 48) gives the following definition:

```
(4.3) A paradigm [inflection class] for a part of speech N in a
      language L is a pattern P of inflectional realisations for all
      combinations   of   non-lexically  determined  morphosyntactic
      properties  associated  with  N  such  that  some  member of N
      exemplifies P (i.e. displays all and only the realisations in
      P).
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The advantage of this definition, compared to the previous one, is that it tries to capture an inflection class 'in itself', and not by means of the verbs in it. On the other hand, what makes it difficult to understand is its reference to the "realisations for […] non-lexically determined morphosyntactic properties". A simplified version of the definition in (4.3), avoiding that problematic point and suitable for a language such as Italian, could sound as follows:

(4.4) An inflection class for a part of speech N in a language L is a pattern P of inflectional endings associated with N such that some member of N exemplifies P (i.e. displays all and only the endings in P).

Actually, the specification which makes the original definition in (4.3) probably hard to grasp happens to be, at the same time, of particular interest for the present purposes: first, it reveals in advance that at least some of the morphosyntactic properties of a verb are assumed to be realised inflectionally (cf. Ch.5). Secondly, it introduces the labels 'morphosyntactic' and 'non-lexically determined' with regard to some of the properties of a word. Let us try to understand this point.

As far as Italian verbs are concerned, the 'morphosyntactic properties' are those with which verbal lexemes are assumed to be endowed by means of the syntactic process of agreement; to put it differently, they are all the specific values of what I have called 'morphosyntactic paradigm' (see Chapter 1, §1.1.2). The label 'morphosyntactic' comes from the fact that they are assumed to be encoded by the morphology, but relevant to the syntax; the label 'non-lexically specified' comes from the fact that they are assumed not to be present in a lexeme's lexical entry, but rather acquired by way of syntax (i.e. agreement). Notice that the 'non-lexically determined' and 'morphosyntactic' features are logically independent one another. Carstairs (1987: 49) mentions the values for the

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[8] Cf. Aronoff (1994: 61ff.).

(nominal) category of Gender as an example of lexically specified morphosyntactic properties; according to the definition in (4.3), thus, gender has not to count in the identification of the inflection class of a lexeme. That is, two lexemes may be assigned to the same inflection class, even though they differ in their Gender (see, for instance, the Latin nouns *rosa* 'rose' and *nauta* 'sailor', which belong to the same inflectional class even though the former is feminine and the latter is masculine). On the other hand, the values for the category, say, Case, while being non-lexically specified, are not *morpho*syntactic in Italian, since they never require a morphological marker. It will be noted that both the properties of Gender and Case affect nominal inflection, while in this work I am specifically concerned with verbal inflection. As far as I can see, Italian verbs have no lexically specified morphosyntactic categories such as Gender. A verbal category such as Transitivity, for instance, while having to be specified in a lexeme's lexical entry, cannot be qualified as '*morpho*syntactic', in that transitive verbs are not inflected, differently from intransitive ones.

I would like to conclude this introductive part by mentioning a characteristic feature of the systems with inflectional classes, which can be inferred from the two constraints that I have been considering so far (i.e. the 'Inflectional Parsimony Hypothesis' and the 'Non-Independent Distribution Characteristic'). The argument runs as follows: provided that each lexeme in a system is assumed to select only one of the 'rival' inflectional resources (for instance, a given affix) for a given morphosyntactic bundle (as required by the 'Inflectional Parsimony Hypothesis'), and provided that the choice of a given affix is linked to the choice of the other affixes in the same verb paradigm (as required by the 'Non-Independent Distribution Characteristic'), it follows that each lexeme, when inflected, will be associated to one and only one affix set, i.e. to one and only one inflection class. This inference is captured by Carstairs's (1987: 76) '[Inflection Class] Uniqueness Claim', and is repeatedly pointed out by Aronoff (1994).[9] Lexemes which select their inflectional resources from two (or more) different inflectional

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[9] "[...] no noun can belong to more than one inflectional class" (p. 69), and again "No noun may be specified for individual case endings from different paradigms" (p. 73). Aronoff is actuallyconcerned with nominal inflectional classes, but the difference between noun and verb classes is irrelevant, as far as the 'Uniqueness claim' is regarded.

classes will be supposed to display 'mixed inflexion', which has to be interpreted as an instance of 'inflectional misbehaviour', at least within the framework I am adopting.[10]

The constraints which I have been introducing so far are meant to prove that the 'inflectional classes' of a language are part of its 'grammar': since the inflectional classes allow to see an order in the multiplication of inflectional resources in a language, it is reasonable to claim that they have to be learned as part of the grammar of that language.

To retour to our example from Italian, it should be now clearer what we mean by saying that the verbs AMARE 'love' and TEMERE 'fear' belong to (or else, are members of) two different inflection classes. Notice that the verbal inflectional classes are usually referred to as 'conjugations'.

4.1.3 A three-classes system: the role of thematic vowels

In the previous paragraph it was claimed that the two Italian verbs AMARE 'love' and TEMERE 'fear' are members of two different inflectional classes, in that they possibly select different inflectional endings for morphosyntactically equivalent bundles. That implies at least two observations: first, the Italian verbal system is organised into inflectional classes; secondly, the inflection classes of the Italian verbal system are at least two (i.e. that of AMARE and that of TEMERE). As far as the former observation is concerned, although it may seem obvious after what has been said so far, it is not so obvious from a typological point of view. There are languages in the world that, while displaying inflexion, can perfectly do without inflectional classes (cf. Wurzel 1989: 74 ff.). The latter observation is far less obvious. The fact is that, once a given language is supposed to be provided with inflectional classes, nothing has been said yet about the actual number of the inflectional classes of that language. Concerning what has been said in the previous paragraph about the verbs AMARE and TEMERE, the Italian verbal system will clearly have at least two inflectional classes. From a logical point of view, however, nothing of what has been said so far prevents the system from having more than two classes.

A glance at the literature reveals that there is actually more than one position about the actual number of the inflectional classes of the Italian verbal system.

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[10] This 'mixed inflection', also known as 'heteroclisis' (cf. Stump (2006)) can be marginally tolerated in the system, but it regards few verbs, to understand as exceptions.

Actually, there are arguments for two up to five conjugations, depending on the basis on which the classification is made. Basically, Italian verbs have been classified on the basis of two formal characteristics, i.e. the thematic vowel displayed in certain forms of the paradigm, notably the Infinitive, or else the distribution of certain endings. The former criterion leads to a three-classes division, where the classes are customarily referred to by cardinal numbers, as shown by (4.5):[11]

(4.5) **Conjugation** First Second Third
                        am**a**re tem**e**re dorm**i**re

For the time being, this is the most traditional classification, maintained, *inter alia*, by Napoli and Vogel (1987) and Vincent (1987). It is also the classification that I will claim at the end of this paragraph.

As revealed earlier, another classification provided by the literature is based on the distribution of certain inflectional endings. The endings at issue are those of the 3rd singular and 3rd plural of the Present Indicative, those of the whole singular and 3rd plural of the Present Subjunctive as well as that of the 2nd singular of the Imperative. Looking at the values that these endings may assume across the verbs in the system, two major classes are established (actually, the second and third conjugation of the former classification are grouped together). Table 4.1 illustrates the endings at issue only; Table 4.2 shows the inflection of the verbs mentioned in (4.5), to favour the comparison between the two classifications under discussion:

	Present Indicative	Present Subjunctive	Imperative
1st sg.		**i** ≈ **a**	
2nd sg.		**i** ≈ **a**	**a** ≈ **i**
3rd sg.	**a** ≈ **e**	**i** ≈ **a**	
1st pl.			
2nd pl.			
3rd pl.	**a**no ≈ **o**no	**i**no ≈ **o**no	

Table 4.1 -

	Present Indicative	Present Subjunctive	Imperative
1st sg.		*am**i** ≈ tem**a** / dorm**a***	
2nd sg.		*am**i** ≈ tem**a** / dorm**a***	*am**a** ≈ tem**i** / dorm**i***
3rd sg.	*am**a** ≈ tem**e** / dorm**e***	*am**i** ≈ tem**a** / dorm**a***	
1st pl.			
2nd pl.			
3rd pl.	*am**a**no ≈ tem**o**no / dorm**o**no*	*am**i**no ≈ tem**a**no / dorm**a**no*	

Table 4.2 -

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[11] Thematic vowels are in bold.

This classification is maintained by those scholars who adhered to the Natural Morphology framework.[12] They actually speak in terms of two macroclasses (the first, including the 'AMARE-type' verbs and the second, including both the TEMERE- and the DORMIRE-type verbs). Crucially, the partition into three conjugations - made on the basis of the thematic vowel - is not totally abandoned by the Natural Morphologists: in addition to these two macroclasses, in fact, they are used to posit three 'classes', depending on the thematic vowel. The implication is that the second macroclass comes to include two classes, i.e. the 'TEMERE-type' and the 'DORMIRE-type', and the model is finally reconciled with the previous one.

The two kinds of classification considered so far resemble one another, in that they do not take account of stem morphology as for the purpose of distinguishing the inflectional classes of a language. Other classifications do, and classify Italian verbs into four or even five conjugations on the base of stem morphology. These classifications are based on the position of stress on the infinitive of the verbs with thematic vowel *e* (opposing stem-stressed infinitives to infinitives stressed on the thematic vowel, see (4.6) below) and on the presence or absence of the infix –*isc*- in some word-forms of the verbs with thematic vowel *i* (see Table (4.3) below).

(4.6)   TE'MERE ≈ 'FREMERE

	Present Indicative	Present Subjunctive	Imperative
1st sg.	*finisc***o** ≈ *dorm***o**	*finisc***a** ≈ *dorm***a**	
2nd sg.	*finisc***i** ≈ *dorm***i**	*finisc***a** ≈ *dorm***a**	*finisc***i** ≈ *dorm***i**
3rd sg.	*finisc***e** ≈ *dorm***e**	*finisc***a** ≈ *dorm***a**	
1st pl.			
2nd pl.			
3rd pl.	*finisc***ono** ≈ *dorm***ono**	*finisc***ano** ≈ *dorm***ano**	

Table 4.3 -

I have appealed to 'stem morphology' in these latter cases because the differences illustrated in (4.6) and in Table (4.3) only affect the part of the inflected form labelled as 'stem': actually, both TEMÉRE 'fear' and FRÈMERE 'quiver, tremble' on one hand**,** and FINIRE 'finish, end' and DORMIRE 'sleep' on the other, have one and the same thematic vowel (i.e. *e* and *i*, respectively) and inflect identically (as Table 4.3 shows for the pair FINIRE ≈ DORMIRE). The observed differences can be therefore described only in terms of stem variation: actually, the verbs with thematic vowel *e* may have root-stressed

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[12] Cf. Dressler & Thornton (1991), Dressler & al. (2003), Spina (2007).

infinitive, while the verbs with thematic vowel *i* may have the segment *–isc-* in some word-forms of the present tense.

If the stress position on the Infinitive and the presence of the segment *–isc-* are counted as relevant for the purpose of distinguishing the inflection classes in the system,[13] then the number of classes of the Italian verbal system is raised up to five, as shown by schema (4.7):[14]

(4.7)

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                          a-verbs
                                                         Stem-stressed infinitive
                                        e-verbs
              i/e-verbs                                  Ending-stressed infinitive

                                                         With –isc- augment
                                        i-verbs
                                                         Without –isc- augment
```
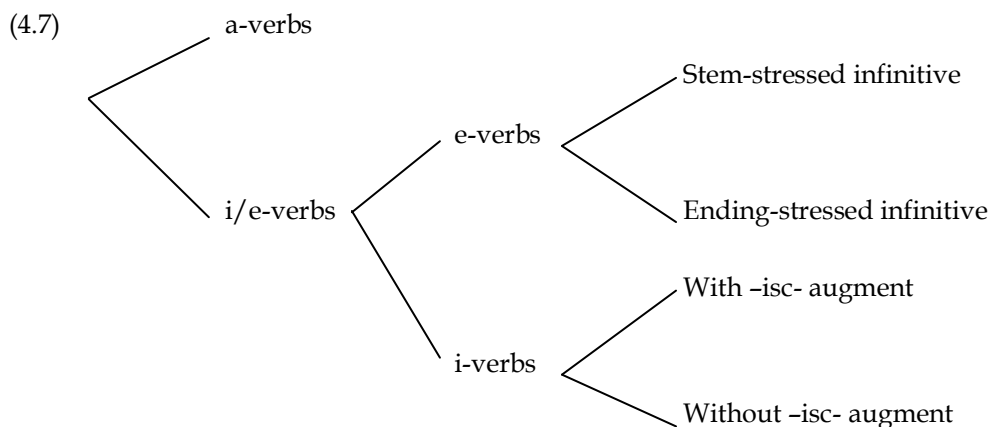
In order to establish the exact number of inflection classes in the Italian verbal system, I will rely on Carstairs's (1987), [Inflection Class][15] Economy Principle (EP). This is formulated as follows (4.8):

(4.8) [INFLECTION CLASS] ECONOMY PRINCIPLE:[16]

When in a given language L more than one inflectional realisation is available for some bundle or bundles of non-lexically-determined morphosyntactic properties associated with some part of speech N, the number of [inflectional classes] for N is the same as the number of distinct 'rival' inflections available for that bundle, which is most generously endowed with such rival realisations.

This formulation, which is actually quite complicated, may be paraphrased as follows: in a language with desinential allomorphy affecting some part of speech N (for instance, Verbs), identify the morphosyntactic bundle with the greatest number of

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[13] See, for instance, Albright (2002), who argues for a four classes system, on the base of the stress position on the Infinitive.
[14] From Vincent (1987: 291).
[15] 'Paradigm Economy Principle' in Carstairs's original formulation. Cf. fn. 6.
[16] This is actually a simplified version, whose modifications are mine. For the original formulation of the principle, see Carstairs (1987: 51).

'rival' inflections; that number will correspond to the number of inflectional classes for N.

In what follows, I will take the validity of the EP for granted, and I will try to apply it to Italian verbal system data.

It should have been noticed that the EP mentions 'rival inflections'. Accordingly, what we need first is to exactly establish what has to count as 'inflections' for the purpose of the EP.

Carstairs (1987: 221 ff.) repeatedly claims that stem morphology is irrelevant for the purpose of identifying the inflectional classes of a system. That is, in the application of the Economy Principle, only affixal morphology should be taken into account. Following Carstairs, I will not consider stem morphology as a symptom of inflection class distinction. This actually allows me to ignore the differences about infinitive stress position and about the presence or absence of the segment –*isc*-, which led other scholars to posit two sub-classes for verbs with thematic vowels *e* and *i*, so that the grand total of the conjugations of Italian raises up to five. Once stem behaviour is ignored, the question becomes whether thematic vowels are to be ascribed to 'affixal morphology' for the purpose of the Economy Principle. It will be noted that, judging from the literature, the two options seem to lead to different conclusions: if thematic vowels are counted, the classes are three; if they are not counted, the classes seem to be two – at least according to the analysis of Natural Morphology (see Tables 4.1 and 4.2 above).

As shown in Ch.1, §1.1.2, thematic vowels actually constitute autonomous units of analysis, in that they can be isolated by comparison of word-forms both on the intra- and on the inter-paradigmatic dimension. In that sense, I claim that they have to be distinguished from 'endings' (see Ch. 3, §3.4).[17]

I will now suggest a way to reconcile the 'ending only' analysis with the solution, setting three inflectional classes on the base of the thematic vowel, provided that the conditions that I proposed in Ch.3 for the recognition of the thematic vowel in a word-form are correct.

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[17] Carstairs-McCarthy (1994: 762) use the term 'inflections proper' to refer to 'endings' in opposition to thematic vowels. Some further evidence of the difference between thematic vowels and 'inflections proper' will be provided in the next chapter.

As shown by Tables 4.1 and 4.2 above, the analysis positing two conjugations relies on the distinctive value of some endings in the Present (Indicative and Subjunctive) and of the 2nd person singular of the Imperative. These are to be regarded as 'pure endings',[18] in that no thematic vowel appears in the word-forms at issue.[19] But notice that, according to the Thematic Vowel Identification Hypothesis (cf. Ch. 3), other word-forms, too, display the morphological structure 'STEM + ENDING'; these are the forms of the Future and Conditional, the 1st and 2nd pl. of the Imperfect Indicative, the 1st and 2nd pl. of the Present Subjunctive, the 1st and 2nd sg. of the Present Indicative, as well as the 3rd singular of the *Perfetto Semplice* as it appears in the weak pattern (cf. Table N Ch. 3).

I claim that any analysis looking at the contrast in terms of endings, and not at the contrast in terms of thematic vowels, for the purpose of distinguishing the inflectional classes in a system should be then coherent in considering the endings of all the word-forms where the thematic vowel is not found.

Table 4.4 illustrates the endings at issue, according to the analysis given in Ch. 3. Since these endings are those to count as 'inflections' in the application of the Economy Principle, for the sake of the argument they have been already disposed into arrays of 'rival inflections':

	Imperative	Present Indicative	Present Subjunctive	Imperfect Indicative	*'weak' Perfetto Semplice*	Future	Conditional
1st sg.		-o	i ≈ a			-ò	-èi
2nd sg.	a ≈ i	-i	i ≈ a			-ài	-ésti
3rd sg.		a ≈ e	i ≈ a		ò ≈ è ≈ ì	-à	-ébbe
1st pl.		-mo	-mo	-mo		-émo	-émmo
2nd pl.			-te	-te		-éte	-éste
3rd pl.		ano ≈ ono	ino ≈ ono			-ànno	-ébbero

Table 4.4 -

As shown by the table, the overwhelming majority of the endings added to those considered by the Natural Morphologists (cf. Table 4.2 above) are actually not helpful for the purpose of the EP, since they do not vary across verbs.[20] In this view, only the ending of the 3rd singular of the weak *Perfetto Semplice* is really of interest: crucially, an inter-paradigmatic variation is observed in this case, and the possible values for this

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[18] Label by Maschi (2005: 99-102), see also Vanelli (2007: 1803).
[19] Remind that in Ch. 3 I had set up the morphological structure of these word-forms as 'STEM + ENDING', with no thematic vowel involved.
[20] According to the terminology introduced in Ch. 3, they are 'superstable endings' (cf. Ch.3, §3.4).

ending are three, which promote the 3ʳᵈ singular of the weak *Perfetto Semplice* to the morphosyntactic bundle as the "most generously endowed with rival realisations", i.e. the one identified for the purpose of the EP: in all the other cases, where any ending-variation is found across verbs, in fact, the number of the rival endings only amounts to two. Thus, according to Carstairs's Economy Principle, the actual number of inflectional classes in the Italian verbal system should be established to be three.

Let us retour to our original question, i.e. whether the thematic vowels should be counted as 'inflections' with the purpose of identifying the inflection classes of the Italian verbal system. In applying the Economy Principle to the Italian data, I have considered only 'pure endings', i.e. the inflectional endings of those word-forms which display no thematic vowel according to the Thematic Vowel Identification Hypothesis (see Ch. 3). The rival, 'pure endings' found in the 3ʳᵈ singular of the weak *Perfetto Semplice* allowed me to claim that the Italian verbal system is divided into three inflectional classes. Notice that three is exactly the number at which I would have arrived if I had taken the thematic vowels as 'inflections' into account for the same purpose. Notice also that these two criteria (the one looking at pure endings and the other, looking at thematic vowels) lead exactly to the same classification of the verbal lexemes: the verbs which have the ending –*ò* in the 3ʳᵈ singular of the weak *Perfetto Semplice* have the thematic vowel *a* elsewhere in the paradigm; likewise, the verbs with the ending –*é* in the 3ʳᵈ sg. of the *Perfetto* have the thematic vowel *e* and the verbs with the ending –*ì* have the thematic vowel *i*. To put it differently, the inter-paradigmatic contrast of the thematic vowels somehow 'replicates' the contrast of the 'pure endings' observed in the 3ʳᵈ singular of the weak *Perfetto Semplice*. What makes the contrast of thematic vowels interesting for the present purposes is that, differently from the contrast of the endings observed in the *Perfetto*, which is unique in the ending-domain, that consistently recurs in many cells of the paradigm: except for the Past Participle,[21] the contrast-pattern of the thematic vowels is always *a* vs. *e* vs. *i*. The reiteration of this pattern in so many morphosyntactic bundles [paradigm cells] should be assumed to increase the cognitive strenght of the pattern itself (in the terms of Bybee 1985).

For what has been said in this paragraph I am now in a position to claim that, for the purpose of the Economy Principle, the thematic vowels of the Italian verbal system play a somehow ambiguous role. On one hand, they can be kept separated from the

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[21] We have seen that the contrast in this case is *a* vs. *u* vs. *i* – cf. Ch. 3, §3.3.2.3.

'inflections proper' in the operation of morphological analysis, and in that sense they should not count in the application of the Economy Principle, which requires considering 'inflections' alone. On the other hand, their contrast pattern turns out to replicate the relevant contrast for the Economy Principle, i.e. that of the rival endings found in the morphosyntactic bundle '3rd singular *Perfetto Semplice*'. Since the thematic vowels repeatedly recur throughout the verbal paradigm, always displaying one and the same contrast patterning (i.e. *a* vs. *e* vs. *i*), they can be reasonably claimed to contribute to the distinction of the inflectional classes of the system. This conclusion turns out to be in line with Carstairs-McCarthy's remark about the 'theme vowels' of the Latin nouns:[22]

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[the infant learners] do indeed [...] implicitly distinguish
theme vowels from 'inflection proper' [...]. In that sense,
analyses [...] excluding theme vowels are correct. But
children learning Latin also sought to give to each directly
competing inflectional affix an information content distinct
from all the others [...]. What they had to do is analyze
most inflections [...] as consisting in the combination of
inflection proper and theme vowel.[23]
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Also Pirrelli (2000: 23) claims that the thematic vowel tends to be re-analysed by speakers as a part of the inflectional ending: both entities – he says – differ from the stems, in that they exhibit basic formal stability throughout the system. The meaning of this last observation will be clear in section 4.3, where I will deal with the phenomenon of stem allomorphy within the Italian verb system.

In the next paragraph I would rather show that the inflection classes which I have been discussing so far are purely morphological in nature; in other words, the kind of classification instantiated by the conjugations of the Italian verbs cannot be described neither in phonological, nor in syntactic, nor even in conceptual terms. In Aronoff's (1994) terms, thus, the conjugations of Italian are 'morphomic'.

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[22] The reader could object that Carstairs-McCarthy's claim concerns nouns, while I am specifically dealing with verbs. Although I am not extending the notion of thematic vowel to the Italian nouns (like, for instance, Scalise), I claim that Carstairs-McCarthy's observation also holds for the thematic vowels of the Italian verbs.
[23] Carstairs-McCarthy (1994: 762).

4.2. Conjugations: the "morphology per se of inflection"

The previous paragraph aimed to show that there is actually a method in the apparent madness of the inflectional classes into which Italian verbs are customarily divided.

This paragraph is rather concerned with the significance of the inflectional classes within the grammatical machinery: provided that the inflectional classes are part of a language grammar, at what level of linguistic analysis should they actually be located?

Whatever their actual significance, inflectional classes are firstly a means for the classification of lexemes. In the case at hand, the Italian conjugations are a means for classifying the verbs in the system. Since all the verbs belonging to one conjugation are identical from a morphological point of view, one might be led to believe that such an identity has some counterpart on some other level of linguistic analysis, e.g. phonology or syntax. In that sense, the three conjugations I have been introducing in the previous paragraph might be thought of as having any phonological or syntactic motivation; another logical possibility is that the membership in a given conjugation has any implication for the behaviour of a verb at some other level of linguistic analysis: one could think, for instance, that all the verbs of, say, the first conjugation require some specific modification in the words syntactically associated with them.

I will show that this is not the case of the conjugations of Italian: first, as classes of verbs, those are in fact motivated neither on phonological nor on syntactic grounds: in that sense, they are autonomous; on the other hand, the membership in one of the three conjugations does not have any implication for the syntactic behaviour of a verb: in that sense, I will say that the conjugations are somehow self-feeding. To make the point even clearer, let us imagine a situation pointing to the reverse. Words, as lexemes, are commonly assumed to have properties on multiple levels of linguistic analysis. Let us take phonology, for instance: a certain root shape, say, the fact of displaying only certain consonants in root-final position, may be regarded as a phonological property of a lexeme. Now, if the membership in a given inflectional class C was found to systematically correlate with any specific root shape S, then the information 'inflection class C' might be considered as inferred from the root shape for the members of that class, and therefore it might be claimed to depend on the root shape itself. More concretely, if all the verbs of a given conjugation A were found to display, say, root final sonorant consonants only, then the membership in A might be

said to depend on this phonological feature of the root, and the inflection class A itself might be actually defined ('motivated') in phonological terms. But whereas the membership in the inflection class A was found not to consistently correlate with any phonological property of the root, the two classifications, i.e. the phonological one (grounded on the kind of root final consonant) and the morphological one (grounded on the inflectional behaviour of the lexeme) should be assumed to be independent to each other, and either of them can be claimed to be autonomous. The same holds for any possible correlation between a verb's inflectional class and a given syntactic property of that verb: if all the verbs in a hypothetical conjugation A were found to be, say, transitive, then the membership in A might be claimed to depend on the transitiveness of the verbal lexeme. But in the absence of such a correlation, the two classifications should be assumed to be independent of each other.

In discussing the phenomenon of the inflectional classes, Aronoff (1994) focuses on noun morphology, which involves the (morpho-)syntactic category of gender. What the scholar wants to point out is that gender and inflection classes, while both being grounds on which the nouns of a language can be classified, and while both having implications for the morphology of the nouns, may still lead to overlap classifications (at least partially). Just to quote one of Aronoff's examples (1994: 67), consider some instances from the Spanish nominal system: *dia* 'day' and *muchacha* 'girl' belong to the same inflection class, despite being masculine the former and feminine the latter: more than one gender class is therefore found to 'map onto' one inflection class. On the other hand, *muchacho* 'boy' and *dia* 'day' have the same gender, i.e. masculine, even though they belong to two different inflection classes, as shown by their different inflectional behaviour in the singular. In the view of Aronoff, that should provide evidence that the classification in terms of inflection classes is independent from the classification in terms of gender.

The present study, differently from Aronoff's one, specifically deals with the morphology of the verb, and the problem with the Italian verbal lexemes is that they happen not to involve any inherent *morpho*syntactic property such as the nominal gender (cf. §4.1.2). The implication is that, while in the case of nouns scholars soon find two distinct and well-established classifications, both of which are actually relevant to the morphology (i.e. the morphosyntactic gender and the morphological inflection classes), verbs do not provide such a possibility. As far as I know, the Italian verbal

lexemes, besides being divided into inflection classes, are possibly classified on the base of transitivity and *Aktionsart*. Neither of these latter categories can be claimed to be morphosyntactic, however: although they are actually relevant to the syntax (being then *syntactic*), they happen not to be encoded by the *morphology* in a principled manner (cf. §4.1.2). That is not the real point, however. What really matters for the present argument is that neither of the syntactic classifications above is found to correlate consistently with the classification into inflection classes. For the sake of demonstration, let us consider some actual data. Both transitive and intransitive verbs are found in each of the three conjugations, which actually prevents from correlating the membership in one of the inflection classes with the property of transitivity. (4.9) illustrates some examples:

(4.9) **Conjugation**	I		II		III	
ThV	*a*		*e*		*i*	
	T.	**Int.**	**T.**	**Int.**	**T.**	**Int.**
	AMARE	CAMMINARE	VEDERE	RIDERE	SENTIRE	DORMIRE
	'love'	'walk'	'see'	'laugh'	'feel, perceive'	'sleep'

Likewise, verbs belonging to all of the *Aktionsart* major classes are found throughout the system, i.e. independently of the inflection class, as shown by (4.10):

(4.10) **Conj.**	I		II		III	
ThV	*a*		*e*		*i*	
	Dur.	**Non-Dur.**	**Dur.**	**Non-Dur.**	**Dur.**	**Non-Dur.**
	LAVORARE	INCONTRARE	SCRIVERE	ESPLODERE	DORMIRE	PARTIRE
	'work'	'meet'	'write'	'explode'	'sleep'	'leave'

The lack of any correlation between transitivity or *Aktionsart* on one hand and inflection classes on the other may be used as evidence for the autonomy of each of these classifications.

Let us now turn to evaluate the possibility that the membership in one of the conjugations is conditioned on phonological grounds. The data in (4.11) are meant to show that verbs whose roots display similar phonological features (notably one and the same root final consonants cluster) may be actually found in each of the three conjugations. The bottom line illustrates a nice example of a quasi-minimal pair:

(4.11)	**1st conjugation**	**2nd conjugation**	**3rd conjugation**
	tardare	ardere	ardire
	regnare	spegnere	grugnire
	fondare	fondere	condire
	spar-are 'shoot'	par-ere 'seem'	spar-ire 'disappear'

Even in this case the absence of a strong correlation between any classification on phonological grounds and the three inflection classes can prove the autonomy of either taxonomy.[24]

So far it has been shown that the conjugations of the Italian verbal system are not motivated on phonological or syntactic grounds. Nor even has the membership in a given conjugation any implication for the words that co-occur with the verb in a phrase or sentence. The syntagmatic relationships among the elements in a sentence are always governed by word-properties other than its inflectional class. Thus, the three conjugations into which the Italian verbs are divided not only do not derive from any phonological, syntactic or conceptual characteristic of their members; they also constitute 'useless' information for the building up of a sentence, in that they have no syntactic relevance at all. The implication of the former claim is that the information about the inflectional class of a lexeme should be part of the lexical entry of that lexeme[25]; the implication of the latter claim is that the classification of verbal lexemes into conjugations is 'purely morphological' in nature.[26] In Aronoff's terms (1994, 25 ff.), the conjugations of the Italian verbs are morphomic, in the sense that they do not find any motivation outside the purely morphological machinery of the language. "The inflectional classes – says Aronoff (1994: 71) – neither mediate between morphology and another linguistic level nor have any substantial properties characteristic of another. They are purely morphological."

I would like to conclude this paragraph by remarking some implications that such claims about the purely morphological nature of the inflectional classes have for the architecture of the grammar. It is traditionally recognised that there are multiple levels of linguistic analysis, and in this regard nobody would seriously discuss the existence of a phonological level, a syntactic level and a semantic level. On the other hand, the actual existence of a morphological level, one independent from one another, has been

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[24] Albright (2002) shows that in some cases some correlation between the root phonological environment and the conjugational class of a given verb may be actually found. However, the scholar himself points out that, all things considered, in Italian "class membership is [actually] only somewhat less than arbitrary [in the sense that] even the most comprehensive search could not possibly come up with a clean analysis that predicts the correct conjugation class in all cases based solely on phonological environment". Again, "none of [the] templates [which can be used to describe the phonological environments of the Italian verbal roots] works perfectly, […] as a synchronic description of conjugation class membership".

[25] Notice that on this regard the inflectional classes resemble the nominal genders, which must be also lexically specified (cf. §4.1.2).

[26] Unlike genders ('agreement classes'), which are relevant to the syntax (cf. again §4.1.2).

long topic of debate among scholars: morphological facts were in fact argued to be possibly accounted for simply by means of rules of phonology or syntax, with consequently no need for an autonomous module to be posited in the grammar. Imagine that the classification of the Italian verbs into conjugations was actually found to correlate with the classification on some other level, say, for instance, the phonological one. You see that in such a case there would be no need for an autonomous, morphological component in the grammar, including the information about the organisation of the lexemes into inflection classes: the phonological component would be sufficient. But since it has been shown that the organisation of the Italian verbs into conjugations does not correlate with any other property of the lexemes, it follows that we are somehow entitled to see morphology as an autonomous component of grammar. In that sense, the absence of a one-to-one mapping between the classification of verbal lexemes into inflectional classes and any other kind of classification can be regarded as strong evidence in favour of the autonomy of morphology within the grammar. Quoting again Aronoff (1994: 71) inflection classes represent the "morphology per se of inflection".

4. 3 Stem allomorphy and conjugations

In §4.1.3 I tackled the issue of establishing the exact number of conjugations of the Italian verbal system. In doing so, I basically followed Carstairs's (1987) Economy Principle, according to which only inflectional endings should be taken into account for the purpose of identifying the inflectional classes of a system. Actually, that led me to set aside both thematic vowels and stem morphology, and to focus on endings only ('inflections proper'). In that paragraph I also claimed that thematic vowels, while not being directly involved by Carstairs's Economy Principle, do play some role in the identification of the inflectional classes of the system; I will retour to the relationship between a verb's thematic vowel and the membership of that verb in one of the conjugations in the next chapter, which is in fact the core of the present work. In this paragraph I would rather tackle the issue of the relationship between conjugations and stem morphology. I will show that even though stem morphology is actually not worthy for the purpose of establishing the number of inflectional classes of a system, that is not to say that the possible presence of stem allomorphy in a verb's paradigm and the inflectional class of that verb constitute totally separate matters. In §4.1.3 we identified three conjugations in the Italian verbal system; I will now show that, among

these three classes, only two, namely those labelled as 'second' and 'third', display stem allomorphy, while the 'first' does not. In doing so, I will refer to the different basic stems (BSs) found in paradigms with stem allomorphy by the indices devised by Pirrelli and Battista (2000). The concept is that each non-default basic stem is distributed according to a precise pattern ('stem allomorphy pattern', or else 'distribution schema', in Pirrelli and Battista's terms, cf. Ch. 3, §N). The actual distributional patterns observed in Italian verbs are few in number (we shall basically count three of them, each one assigned an arbitrary label) and are found to recur in different verbs, so as that it is possible to define classes of verbs on that basis. We shall see that these classes of verbs interact with the conjugations in a complex manner; in particular, it is possible to describe the conjugations, other than the first, in terms of characteristic 'stem allomorphy patterns'. This paragraph is therefore mainly descriptive in nature and is organised as follows: in the first part (§4.3.1) a synchronic overview of the Italian verbal system is provided, which aims to introduce the stem allomorphy patterns and to show that each of them mainly occurs in one of the conjugations; in the second part (§4.3.2) some evidence is provided that the diachronic spreading of the stem allomorphy patterns across verbs was actually sensitive to the division into conjugations; in particular, it has been found that, with the passing of time, the first conjugation tends to get rid of stem allomorphy, while the second and the third tend not only to tolerate it, but even to increase it.

4.3.1 Synchronic overview

4.3.1.1 First Conjugation

As already pointed out above, in Modern Italian the first conjugation is characterised by the absence of any stem allomorphy. According to Pirrelli and Battista's (2000) model, this means that each first-conjugation verb displays only one BS (indexed as S_1) throughout its paradigm. If on one hand that makes this class not really interesting for us (since at present we are rather interested in stem allomorphy), on the other hand, the fact itself that the absence of stem allomorphy may be so firmly linked to one of the conjugations should be of some interest for the present purpose, since that can guarantee the psychological reality of the notion of 'conjugation' (see below, §4.3.2).

4.3.1.2 Second conjugation

This conjugation is the most affected by the phenomenon of stem allomorphy. BSs other than the default one (i.e. S_1) possibly occur in the Present (Indicative and Subjunctive), in the *Perfetto Semplice*, in the Past Participle as well as in the Future and Conditional. Remind that the set of paradigm cells whose word-forms share their BS is labelled 'partition class' (cf. Ch. 3, §N). Now, while the Past Participle, Future and Conditional are systematically associated to one partition class each,[27] in the case of the Present and of the *Perfetto Semplice* multiple BSs are possibly found within one sub-paradigm, so as that patterns ('schemata') may be drawn, accounting for the actual distribution of each BS other than S_1. As pointed out by Thornton (2007: 43) "Martin Maiden has devised a clever system for labelling at least some [of those distribution patterns] […], by means of associating each pattern with the name of a letter of the alphabet". The two patterns possibly found in the Present of the Italian verbs are labelled as 'U-pattern' and 'N-pattern', and are shown in (4.12) and (4.13):

(4.12) **U-pattern**

	1st singular	2nd singular	3rd singular	1st plural	2nd plural	3rd plural
Present Indicative	S_n					S_n
Present Subjunctive	S_n	S_n	S_n			S_n

(4.13) **N-pattern**

	1st singular	2nd singular	3rd singular	1st plural	2nd plural	3rd plural
Present Indicative	S_n	S_n	S_n			S_n
Present Subjunctive	S_n	S_n	S_n			S_n

As far as the Present (Indicative and Subjunctive) is concerned, several second-conjugation verbs are found to have two BS, mainly distributed according to U-pattern. In other words, in many second-conjugation verbs a distinctive stem is shared by the first person singular and third person plural of the Present Indicative, as well as by the whole singular and the third person plural of the Present Subjunctive. Table 4.5 exemplifies this pattern by the second-conjugation verbs CONOSCERE 'know' and VINCERE 'win':

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[27] Notice that Future and Conditional are always part of the same partition class.

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		1sg.	2 sg.	3 sg.	1pl.	2 pl.	3 pl.
i.	CONOSCERE 'know'						
	Present Indicative	ko'nosko	ko'noʃʃi	ko'noʃʃe	konoʃ'ʃamo	konoʃ'ʃete	ko'noskono
	Present Subjunctive	ko'noska	ko'noska	ko'noska	konoʃ'ʃamo	konoʃ'ʃate	ko'noskano
ii.	VINCERE 'win'						
	Present Indicative	'viŋko	'vintʃi	'vintʃe	vin'tʃamo	vin'tʃete	'viŋkono
	Present Subjunctive	'viŋka	'viŋka	'viŋka	vin'tʃamo	vin'tʃate	'viŋkano
	U-pattern[28]	S₂	S₁	S₁	S₁	S₁	S₂
		S₂	S₂	S₂	S₁	S₁	S₂

Table 4.5 -

Pirrelli and Battista (2000: 325) identify 54 second-conjugation verbs whose BSs are distributed according to U-pattern.

One second-conjugation verb (i.e. SEDERE 'sit') is found to display stem allomorphy in the Present according to N-pattern, as illustrated by Table (4.6):

	1sg.	2 sg.	3 sg.	1pl.	2 pl.	3 pl.
SEDERE 'sit'						
Present Indicative	'sjɛdo	'sjɛdo	'sjɛdo	se'djamo	se'dete	'sjɛdono
Present Subjunctive	'sjɛda	'sjɛda	'sjɛda	se'djamo	se'djate	'sjɛdano
	S₂	S₂	S₂	S₁	S₁	S₂
	S₂	S₂	S₂	S₁	S₁	S₂

Table 4.6 -

Let us turn to the *Perfetto Semplice*. The pattern of allomorphy possibly found in this sub-paradigm is labelled as 'PYTA'[29] and is shown in (4.14):[30]

(4.14)   PYTA-pattern

	1st singular	2nd singular	3rd singular	1st plural	2nd plural	3rd plural
Perfetto Semplice	Sₙ	S₁	Sₙ	S₁	S₁	Sₙ

This pattern turns out to be almost exclusively confined to second-conjugation verbs.[31] Table 4.7 illustrates two instances, i.e. the verbs SCRIVERE 'write' and SAPERE 'know':

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[28] Cf. the distribution of the BS indexed as S₂ in Pirrelli and Battista's Overall Distribution Schema (Cf. Ch.3).

[29] Cf. Maiden (2000).

[30] It is the 'strong *Perfetto*' mentioned in Ch. 3.

[31] VENIRE 'come' is the only exception in Modern Italian, to which I retour below.

	1sg.	2sg.	3sg.	1pl.	2pl.	3pl.
SCRIVERE 'write'						
Perfetto Semplice	'skrissi	skri'vesti	'skrisse	skri'vemmo	skri'veste	'skrissero
SAPERE 'know'						
Perfetto Semplice	'seppi	sa'pesti	'seppe	sa'pemmo	sa'peste	'seppero
	S₅	S₁	S₅	S₁	S₁	S₅

Table 4.7 -

The BS found in the persons 1ˢᵗ singular, 3ʳᵈ singular and 3ʳᵈ plural of the *Perfetto Semplice* often recurs also in the Past Participle. Table 4.8 provides some examples of this co-occurrence, again from the second conjugation:

LEXEME	1sg PERFETTO SEMPLICE	PAST PARTICIPLE
PRENDERE	*pres-i*	*pres-o*
SPENDERE	*spes-i*	*spes-o*
CHIUDERE	*chius-i*	*chius-o*
DECIDERE	*decis-i*	*decis-o*

Table 4.8 -

As revealed earlier, even the Future and Conditional of the second-conjugation verbs may display a distinctive BS. Notice that in this case, the BS is always one and the same in both the sub-paradigms at issue, and it is found to occur throughout these paradigm portions. Table 4.9 provides a couple of examples:

	1sg.	2 sg.	3 sg.	1pl.	2 pl.	3 pl.
TENERE 'hold'						
Future	ter'rɔ	ter'raj	ter'ra	ter'remo	ter'rete	ter'ranno
Conditional	ter'rɛj	ter'resti	ter'rebbe	ter'remmo	ter'reste	ter'rebbero
SAPERE 'know'						
Future	sa'prɔ	sa'praj	sa'pra	sa'premo	sa'prete	sa'pranno
Conditional	sa'prɛj	sa'presti	sa'prebbe	sa'premmo	sa'preste	sa'prebbero

Table 4.9 -

4.3.1.3 Third conjugation

The verbs of the third conjugation differ from those belonging to the second one, in that they display stem allomorphy only in the Present (Indicative and Subjunctive). In this regard, the verb VENIRE 'come' represents an exception, since it has distinctive BSs also in the *Perfetto Semplice* (according to PYTA) and in the Future and Conditional (e.g. 1ˢᵗ sg. *verr-ò* 'I will come' and *verre-i* 'I would come', respectively). However, since it is a *hapax* within the third conjugation, I will not regard this verb as representative. Aside from that, three verbs of the third conjugation are found to display stem allomorphy in the Present according to U-pattern (i.e. FUGGIRE 'flee', SALIRE 'go up', APPARIRE

'appear'), while two have stem allomorphy according to N-pattern (UDIRE 'hear', USCIRE 'go out'). Table 4.10 illustrates these verbs:

(a) U-pattern
FUGGIRE 'flee'

Pres. Ind.	fuggo	fuggi	fugge	fuggiamo	fuggite	fuggono
Pres. Subj.	fugga	fugga	fugga	fuggiamo	fuggiate	fuggano

SALIRE 'go up'

Pres. Ind.	salgo	sali	sale	saliamo	salite	salgono
Pres. Subj.	salga	salga	salga	saliamo	saliate	salgano

APPARIRE 'appear'

Pres. Ind.	appaio	appari	appare	appariamo	apparite	appaiono
Pres. Subj.	appaia	appaia	appaia	appariamo	appariate	appaiano

(b) N-pattern
UDIRE 'hear'

Pres. Ind.	òdo	òdi	òde	udiàmo	udìte	òdono
Pres. Subj.	òda	òda	òda	udiàmo	udìate	òdano

USCIRE 'go out'

Pres. Ind.	èsco	èsci	èsce	usciàmo	uscìte	èscono
Pres. Subj.	èsca	èsca	èsca	usciàmo	usciàte	èscano

Table 4.10

Since the third conjugation has about 470 verbs altogether, judging from the data above, it might be thought that this class resembles the first conjugation as for the (quasi) absence of stem allomorphy. Actually, the overwhelming majority of the third-conjugation verbs[32] displays distinctive stems in the Present, and those are distributed according to N-pattern. The point with these stems is that, differently from the basic stems I have been introducing in Ch.3, they have a shape which is predictable from the default stem S_1. By way of example, let us consider the Present Indicative and Subjunctive of the verb FINIRE 'finish, end':

FINIRE 'finish, end'

Pres. Ind.	finìsko	finìsci	finìsce	finiàmo	finìte	finìskono
Pres. Subj.	finìska	finìska	finìska	finiàmo	finiàte	finìskano

Table 4.11

Actually, the stems indexed as S_2 and S_3 (i.e. /finisk -/ and /finisc-/ in the schema above) can be analysed as nothing but the (default) stem S_1 (i.e. /fin-/) 'augmented' by the segment –isc- (cf. §4.1.3). As far as the third conjugation is concerned, thus, the following generalisations can be made: on one hand it is not predictable whether a given lexeme of this conjugation will have the segment –isc- in its inflection; on the other hand the possible presence of this augment is circumscribed to the verbs of this

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[32] About 450, according to Pirrelli and Battista (2000), i.e. about 96% of the total.

class, actually the overwhelming majority of them. Notice that the quantitative preponderance of the 'FINIRE type' verbs within the third conjugation makes this group particularly noteworthy in terms of 'system congruity' (cf. Wurzel (1989)). We have also seen that the presence of –isc- gives rise to a stem that may be formally analyzed as a function of the default stem, albeit one which is not constant[33] within the verbal system; Ch.6 will be concerned with this point too.

4.3.2 Stem allomorphy and conjugation: some diachronic evidence

The previous paragraph aimed to show that stem morphology, while having no active role in the identification of the inflection classes in a language, is not so 'blind' to conjugation as it might seem, actually. Each one of the three conjugations of Italian can be in fact described in terms of its displaying (or not) any stem allomorphy: while the first conjugation appears to be refractory to any kind of stem allomorphy, the other two classes are found to tolerate the presence of basic stems other than S_1, which especially affects the Present (Indicative and Subjunctive). In particular, each one of the conjugations other than the first one seems to "have a predilection" for one of the allomorphy patterns found in the system: the second conjugation mainly displays a U-shaped distribution of the BS in the Present, in addition to having stem allomorphy also in other paradigm portions (i.e. in the *Perfetto Semplice*, in the Past Participle as well as in the Future and Conditional); the third conjugation, in contrast, basically relegates stem allomorphy to the Present, according to a particular kind of N-shaped distribution, that instantiated by the verbs of the 'FINIRE type'.

The phenomenon of stem allomorphy, briefly surveyed in the previous paragraph, can be regarded as an innovation of the Italian verbal system compared to the Latin one. As pointed out by Maiden (2011), stem allomorphy in Latin "was restricted to a subset of mainly third conjugation verbs, and correlated with aspect": in particular, a distinctive stem distinguished the perfective tenses from the imperfective ones (see also Aronoff (1994, Ch.2)). In the transition from Latin to Italian, two major tendencies are observed: first, the relationship between stem allomorphy and the category of aspect fades; moreover, the possible presence of multiple basic stems in a paradigm spreads outside the descendents of the perfective tenses, and mainly catches on in the Present (Indicative and Subjunctive). In this regard, the variation possibly found in the

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[33] Ch. 3, §3.2.1.1.

Present stems originally arises in some verbs, as a result of some regular phonetic changes. In particular, the U-pattern can be considered as a result of two palatalization processes affecting stem-final consonants in some inflected forms of the verb; on the other hand, the N-pattern comes to light as the result of the regular phonological differentiation in quality between stressed and unstressed stem vowels. Let us inspect both cases,[34] some data at hand. Table 4.12 shows the U-pattern originally created in the Present by the palatalization of stem-final consonants triggered by following /e/ or /i/ in some word-forms of second- and third-conjugation verbs:

LÈGGERE 'read'

Pres. Ind.	leggo	leggi	legge	leggemo	leggete	leggono
Pres. Subj.	legga	legga	legga	leggiamo	leggiate	leggano

Table 4.12

Table 4.13 shows the N-pattern yielded by the diphthongization of stressed mid vowels as it appeared in Old Italian:

(a)

	SONÀRE 'play'					
Pres. Ind.	'swɔno	'swɔni	'swɔna	so'namo	so'nate	'swɔnano
Pres. Subj.	'swɔni	'swɔni	'swɔni	so'njamo	so'njate	'swɔnino
	NEGARE 'deny'					
Pres. Ind.	'njɛgo	'njɛgi	'njɛga	ne'gamo	ne'gate	'njɛgano
Pres. Sub.	'njɛgi	'njɛgi	'njɛgi	ne'gjamo	ne'gjate	'njɛgino
	SEDÉRE 'sit'					
Pres. Ind.	'sjɛdo	'sjɛdi	'sjɛde	se'demo	se'dete	'sjɛdono
Pres. Sub.	'sjɛda	'sjɛda	'sjɛda	se'djamo	se'djate	'sjɛdano
	MORÌRE 'die'					
Pres. Ind.	'mwɔjo	'mwɔri	'mwɔre	mo'rimo	mo'rite	'mwɔjono
Pres. Subj.	'mwɔja	'mwɔja	'mwɔja	mo'rjamo	mo'rjate	'mwɔjono

Table 4.13

As pointed out by Maiden (1992:293ff., 2011:201ff.), the alternations in stem quality which had originally arisen because of the 'impact' of regular phonological processes (which are actually still observable in Old Italian, as shown by the examples above) underwent two kinds of processes, both of which cannot be justified on phonological grounds: on one hand, the vocalic alternation due to stress was subject to considerable analogical levelling; on the other hand, the pattern of alternation originally created by palatalization was introduced into verbs in which it was phonologically unmotivated (according to what one might refer to as 'novel allomorphy'). Crucially, both of these further developments, during its realization, reveal sensitivity to the conjugation class

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[34] For a fuller account, see Maiden (1992: 290 ff.) and Maiden (2011: 216ff.), which also provide further bibliography on the subject.

of the verbs that they affect. In particular, the analogical levelling (whose main effect is that of disrupting the allomorphy due to stress) is found to operate mainly within the first conjugation; in contrast, the 'novel allomorphy' (which analogically reproduces and spreads some already existing allomorphy patterns) is found mainly to affect the conjugations other than the first one.

Table 4.14 provides some data from Modern Italian supporting this latter claim. The first-conjugation verbs SUONARE 'play' and NEGARE 'deny' undergo analogical levelling so as that the N-pattern is eliminated;[35] on the other hand, the third-conjugation verb FUGGIRE 'flee' is found to have acquired an unprecedented U-shaped allomorphy pattern (cf. (a) and (b)):

		SUONÀRE 'play'					
	Pres. Ind.	'swɔno	'swɔni	'swɔna	swo'namo	swo'nate	'swɔnano
	Pres. Subj.	'swɔni	'swɔni	'swɔni	swo'njamo	swo'njate	'swɔnino
		NEGÀRE 'deny'					
	Pres. Ind.	'nego	'negi	'nega	ne'gjamo	ne'gate	'negano
	Pres. Sub.	'negi	'negi	'negi	ne'gjamo	ne'gjate	'negino
		FUGGÌRE 'flee'	(Old Italian)				
(a)	Pres. Ind.	fuggio	fuggi	fugge	fuggimo	fuggite	fuggiono
	Pres. Subj.	fuggia	fuggia	fuggia	fuggiamo	fuggiate	fuggiano
		(Modern Italian)					
(b)	Pres. Ind.	fuggo	fuggi	fugge	fuggiamo	fuggite	fuggono
	Pres. Subj.	fugga	fugga	fugga	fuggiamo	fuggiate	fuggano

Table 4.14

With regard to the analogical spread of the U-pattern, Maiden (1992: 304) mentions few Italian varieties[36] in which the novel allomorphy is actually found to have penetrated even the first conjugation: these are treated by the scholar as "the exception that proves the rule".

The diachronic evidence I have been collecting in this paragraph should guarantee, if it were still needed, the psychological reality of the notion of 'conjugation'. We have seen that, in the course of the time, the membership in a given conjugation has effects in a verb's accepting (up to increasing) or else repelling any possible stem allomorphy. The situation observed in Modern Italian (with a characteristic stem invariance in the first conjugation and variance according to precise patterns elsewhere) is therefore not

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[35] Notice that the second-conjugation SEDERE 'sit' and the third-conjugation MORIRE 'die' of Table 4.13 retain the alternation in Modern Italian.

[36] In Tuscany and Campania.

simply attributable to the effect of 'blind' phonological processes. It is rather the instantiation of specific constraints on abstract paradigm structure, as much language-specific as they are purely morphological in nature.

4.4 Conclusion

This chapter was concerned with the conjugations of Italian. It has been shown that each of the three classes, besides being associated to a specific set of inflectional endings (which is in fact its defining property), also has a specific attitude towards the phenomenon of stem allomorphy, so as that multiple basic stems are notably found in the conjugations other than the first one. The inflectional classes of Italian have been claimed to be purely formal categories, with no motivation outside the morphological machinery of the language. Membership in one of the conjugations not only finds no justification in any other property of the verbs, be it phonological, syntactic or conceptual; it also does not have any implication to the syntax or the interpretation of the verbs. Accordingly, the information about the inflection class membership is supposed to be specified in the lexical entry for each verbal lexeme; moreover, it should be taken as purely morphological in nature, 'morphomic', in the terms of Aronoff (1994). In this regard, it is worth noting that the stem allomorphy patterns which have been reviewed in §4.3.1 are likewise purely morphological in nature: there is no way in which the 1st singular and 3rd plural persons of the Present Indicative, together with the singular and 3rd plural of the Present Subjunctive should be claimed to constitute a natural class, neither in morphosyntactic nor in phonological terms. In that sense, they are also morphomic (cf. Maiden 2011: 216ff.). As far as the Italian data are concerned, it seems as if speakers, faced with two purely morphological similar aspects of the Italian verb inflexion, have sought to link them as firmly as possible. Purely morphological tools, such as stem allomorphy patterns and conjugations, prove therefore to be much more than the epiphenomena they are often assumed to be in some other morphological frameworks. Rather than this, they look as active forces actually at work in imposing some order in the formal behaviour of Italian verbs.

Chapter five

The intramorphological signata *of thematic vowels*

5.1 Introduction

As repeatedly revealed earlier, this chapter is representing the core of the present work. Remember that in Ch.3 the thematic vowels of Italian verbs were promoted to the status of 'morphemes' in Aronoff's terms (1976): in particular, we saw that a thematic vowel can be claimed to be a morpheme, in that it is recognisable within a word-form; what makes it recognisable is its being linked to a specific "position" within the morphological structure of the word-form. Defining a morpheme as a recognisable unit, I claimed, is somehow suspending the judgment about its meaning.

The aim of this chapter is to show that the thematic vowels of the Italian verbal system do have a meaning ('*signatum*'), and even more than one ('*signata*'). The implication is that, by the end of the chapter, each thematic vowel will turn out to have both a form and a meaning, displaying an arbitrary association with each other.

It will not have gone unnoticed that the triad 'form, meaning, and arbitrary association between the two' is what defines the Saussurean sign: in fact, the main claim of this chapter is that thematic vowels are Saussurean signs.

Seemingly, that leads us back to the position of the Structuralist school, according to which words are made up by morphemes,[1] conceived as the smallest meaningful units in language. To be sure, my view of things differs from the position of the Structuralist school in some crucial respects. Before discussing the meanings of thematic vowels that I have in mind, thus, I would like to point out the differences between my view of the possible 'meanings' of sub-word units and the one proposed by American Structuralists. Next paragraph explains what I mean when I claim that linguistic units smaller than a word, under some conditions, may be endowed with a meaning.

5.2 On realisational meaning; the notions of 'signans' and 'signatum'

As pointed out in Ch.2, the morphological theory developed within the American Structualism was based on the notion of the morpheme, seen as a minimal meaningful unit, a 'Saussurean sign'. In this theory, the inflected forms of a language are assumed to be 'built up' from morphemes which are listed in the lexicon as independent entries, each one provided with its own meaning. Clearly, not all morphemes in the lexicon are

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[1] Therefore, they can be easily segmented into morphemes.

alike, since the most important difference between them are captured by the dichotomy 'lexical' vs. 'grammatical' morphemes (cf. Lyons (1968), Mel'čuk (1996)). Crucially, however, this difference is not in their substance: all morphemes, whether 'lexical' or 'grammatical', share the property of being meaningful lexical entries. In this view, the task of the linguist approaching word analysis is segmenting a word into its constituent morphemes and 'discovering' the meaning of each one of them, where this meaning is understood as something 'given a priori'.[2] Such an approach to morphology is traditionally referred to as 'morpheme-based';[3] in what follows, I will refer to the meaning of the morphemes of the Structuralist school as 'substantial', since it is assumed to be a property of morphemes themselves, i.e. independently of the word-analysis operation.

Another approach to the study of morphology, which, to some extent, constitutes a reaction to the former, is traditionally referred to as 'realisation-based', and was developed from Beard's Separation Hypothesis.[4] The key notion in this approach is that sub-word units (in particular, inflectional affixes), are not lexical entries with their own meaning; they are rather markers which are helpful in the creation of features. In this framework, an inflected form is assumed to come to light because of the association of an (abstract) lexeme with a particular set of (abstract) morphosyntactic properties; such an association would license the introduction of one (or more) inflectional marker(s), to regard as the 'exponents' of those morphosyntactic properties within the word-form. In that sense, in the operation of word-analysis, it is possible to say that a given inflectional marker "means" the feature which it is realising. It will be noted, however, that such a 'meaning' is different in nature from the meaning of the morphemes of the Structuralist school; in particular, the meaning(s) which may be attributed to a sub-word unit in the operation of word-analysis would not be an inherent property of the sub-word unit in itself; rather, it should have been paired with (or 'assigned to') the formal unit during the process of inflection, namely somehow *a posteriori*. In what follows, I will refer to the meaning of the sub-word units in the realisation-based approach as 'realisational'.

A good example by Matthews (1993: 51) will help to clarify the difference between those two positions about the meaning of sub-word units. Consider – says Matthews – the inflected form *cats*. That is to be analysed as the lexeme Cat plus the grammatical

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[2] See, for instance, Nida (1946).
[3] Cf. Bloch (1993: 21ff.).
[4] See Beard (1995, especially Ch. 1 and 3).

(i.e. morphosyntactic) property 'Plural'. According to the Structuralist school, this word would be 'made up' of two constituent morphemes, the lexical *cat* and the grammatical *–s*, each one being provided with a meaning of its own. In this view, 'Plurality' is seen as a property of the grammatical morpheme *–s* which, by virtue of being *–s* part of a word-form, somehow spreads ('percolates') to the whole word-form. According to the realisational approach, in contrast, 'Plurality' is primarily a property of the inflected form *cats* as a whole, since this latter is assumed to have arisen when the lexeme Cat acquired that morphosyntactic property. In addition to this, it may be claimed that the inflected form *cats* can be divided into *cat+s* and then, since the item *–s* appears as a consequence of the inflection of the lexeme Cat for plurality, *-s* is the 'exponent' or 'marker' or 'realisation' of 'Plural'. It should be clear, however, that in this case the relationship between *-s* and 'Plural' remains derived or secondary, i.e. something which is yielded *a posteriori* in the course of inflection. According to the terminology introduced above, the meaning of the sub-word unit *–s* in the structuralist view would be 'substantial', while in the other view that would be 'realisational'.

In the incoming analysis I am adopting a realisational (and inferential) morphology model (in the sense of Stump (2001: 1ff:)): in particular, I am assuming that the realisation of a given array of morphosyntactic values is primarily a property of a whole word-form, and not of one of its subparts; nevertheless, it is undeniable that, under some conditions, sub-word units tend to be associated with specific 'meaning-values' in the word-analysis process. In that sense, I will speak of the 'content' (or 'meaning') of sub-word units. In particular, following Carstairs-McCarthy (2002), I will suppose the relationship between the 'expression' (*signans*, pl. *signantia*) and the 'content' (*signatum*, pl. *signata*) of a morphological unit to be as follows:

```
(5.1)   If,  under  some  condition(s)  C  (possibly  null),  the
        morphological item A is always accompanied on some linguistic
        level or levels by characteristic B (that is, if A implies the
        presence of B), then, subject to C, A is a signans of B and B is
        a signatum of A.⁵
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Such a definition clearly plays on the notion of 'systematic association', which is at the base of the mechanism of logical implication. Notice also that, provided that a given characteristic B is regarded as the 'meaning' of the morphological item A, such a meaning is to understand as something 'assigned' to A *a posteriori*, rather than a

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[5] A. Carstairs-McCarthy (2002: 50).

property of A existing *a priori*. Accordingly, the inferential process described in (5.1) can be intended as a process of 'meaning assignation'.

5.2.1 An example: the signata *of the stems and inflectional affixes of the Italian verbs*

In this paragraph I will try to apply the definition in (5.1) to the word-forms of the Present Indicative of three Italian first-conjugation verbs (Amare 'sing', Cantare 'sing', Guardare 'watch'); my aim is to assign some meanings ('*signata*') to the stems and the inflectional endings of those word-forms. Table 5.1 shows the verbs at issue. To ease the exposition, the word-forms under analysis have already been segmented in order to keep stems and inflectional endings separated (cf. Ch.3). Notice that here I will deal neither with the item *–ia-* left over between the stem and the ending in the 1st person plural, nor with the thematic vowel of the 2nd person plural, on which I will go back in §5.4ff..

Present Indicative

	AMARE 'love'	CANTARE 'sing'	GUARDARE 'watch'
1sg	*am-o*	*cant-o*	*guard-o*
2sg	*am-i*	*cant-i*	*guard-i*
3sg	*am-a*	*cant-a*	*guard-a*
1pl	*am-ia-mo*	*cant-ia-mo*	*guard-ia-mo*
2pl	*am-a-te*	*cant-a-te*	*guard-a-te*
3pl	*am-ano*	*cant-ano*	*guard-ano*

Table 5.1 -

Let us consider the stems, first. We see that for each verb, all six word-forms display one and the same stem (actually, /am-/, /cant-/ and /sing-/, respectively). Remember that in Ch.1 I defined a 'Lexical Paradigm' as "the set of all the grammatically variant forms of a given lexeme". Accordingly, we can say that all the word-forms in a lexical paradigm represent (or 'are associated with') one and the same lexeme L, and that they share the information 'lexeme L'. At this point, the 'stem' they have in common, as a 'unit of expression', can reasonably be claimed to have 'lexeme L' as its informational 'content'. According to the definition in (5.1), thus, the information 'Lexeme L' would be the '*signatum*' of a verb's stem. In the rest of this chapter, I am referring to this kind of informational content as 'lexical (*signatum*)'.[6]

Let us turn now to inspect the horizontal similarities across the word-forms of Table 5.1, which involve the formal units other than the stems; as revealed earlier, for the

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[6] Cf. §5.2.2.

moment we will focus only on the inflectional endings,[7] trying to assign them a meaning. In this case we see that, for each paradigm cell, the three verbs under analysis display one and the same inflectional ending: for instance, we find *–o* in the first person singular, *-i* in the second person singular, and so on.

As it will be recalled from above, in assigning a meaning to the stems I appealed to the 'lexical paradigm'. Now I have to refer to the other sense of the 'paradigm' mentioned in Chapter 1, i.e. the 'morphosyntactic paradigm'.

My argument runs as follows: the three sub-paradigms in Table 5.1 clearly differ from one another as for the lexemes they represent; however, since all those lexemes belong to one and the same lexical category, i.e. Verb, they should have identical morphosyntactic paradigms (cf. Ch.1). As Lyons (1968) puts it, they would have "grammatically (i.e. morphosyntactically) equivalent" word-forms. Remember that in Ch.1 I assumed that Italian verbs inflect for four morphosyntactic categories, i.e. Tense, Mood, Person and Number. In particular, the structure of the Italian verbal paradigm is such as that the morphosyntatic properties for the categories of 'Tense' and 'Mood' are shared by all forms in a sub-paradigm, while the combination of values for the morphosyntactic categories of 'Person' and 'Number' varies in each paradigm cell (in such a way that each cell comes to be associated with a specific combination, '1st singular' for instance).

The picture we are presented is as follows: from a formal point of view, word-forms belonging to different verbs are found to inflect by identical inflectional endings; from the point of view of their content, they are grammatically (i.e. morphosyntactically) equivalent. In particular, each sub-paradigm turns out to have six word-forms differing from one another, as much in their inflectional endings as in the combination of values for the categories of Person and Number. Accordingly, it seems correct to regard the combination of morphosyntactic properties for the categories Person and Number as the 'informational content' of a verb's inflectional ending.[8] For instance, in the word-form *amo,* 'I love', the ending *–o* would 'realise' the morphosyntactic properties '1st singular'; according to Carstairs-McCarthy's definition in (5.1), this ending would be a sign having *-o* as its *signans* and '1st singular' as its '*signatum*'. Schematically, the analysis of this word-form would be as follows:

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[7] Excluding the segment *–ia-* of the 1st person plural, be it part of the stem or of the ending (see Ch.3, §3.3.1.5).

[8] In other words, the combination of values for the categories of Person and Number would be the '*signatum*', and the inflectional ending would be the '*signans*'.

(5.2)

STEM	ENDING	Structure
am-	*o*	*Signans*
LOVE	1st singular	*Signatum*

It might be objected that, under such a solution, the word-form at issue fails to have any formal element, specifically realising the properties 'Present' and 'Indicative'. This is, in fact, one of the classical challenges to the (structuralist) account of the word structure in terms of morphemes (i.e. meaningful 'building blocks'), to which the structuralist theorists answer by positing 'zero-morphs'. However, I claim that this is not a problem, once we recall the main assumption of the 'realisational' approach adopted here: the association of specific 'formal units' to specific 'content units' within a word-form would be a secondary, though possible, operation, since the primary form-meaning association is assumed to hold at the level of the word-form as a whole. In the realisational approach I am adopting here, the values '1st singular Present Indicative' are primarily assumed to be a property of the whole inflected form *amo*,[9] and the fact that the properties 'Present' and 'Indicative' fail to have something like a 'dedicated exponent' within the word-form does not prevent that form (as a whole) from realising them. Notice that, in any event, given that the properties 'Present' and 'Indicative' are shared by all and only the six word-forms of the sub-paradigm under discussion, the possible 'dedicated exponent' of these properties would be expected to be found in all and only these six word-forms, which is actually not the case with the Present Indicative.[10]

In the light of what has been said so far, the word-forms of the Present Indicative of the verb, say, Cantare 'sing' can be analysed as follows:

(5.3)

STEM	ENDING	STEM	THV	ENDING	STRUCTURE
cant-	*o*	*cant-*	*ia*	*mo*	*signans*
SING	1st singular	SING		1st plural	*signatum*
cant-	*i*	*cant-*	*a*	*te*	*signans*
SING	2nd singular	SING		2nd plural	*signatum*
cant-	*a*	*cant-*		*ano*	*signans*
SING	3rd singular	SING		3rd plural	*signatum*

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[9] Cf. Thornton (2005: 26-27).

[10] But consider the Imperfect Indicative and Subjunctive, having the 'dedicated' markers –v- and –ss- respectively (cf. Ch.6, §6.3).

5.2.2 On the level of interpretation of the signatum: *lexical and morphosyntactic meanings*

In the previous paragraph I showed the mechanism by which it is possible to assign a meaning to the stems and the inflectional endings of some word-forms of the Italian verbal system. In this paragraph I would like to say something about that meaning; in particular, I would like to point out in which level of linguistic analysis the meaning of a stem and the meaning of an inflectional ending should be interpreted. That will allow us to understand the meaning(s) of thematic vowels, by way of contrast.

It will be recalled that, when I discussed the meaning of stems, I labelled it 'lexical' (cf. §5.2.1); in fact, the meaning of a stem can be claimed to be lexical, in that it points towards the lexeme which a given word-form is meant to represent; as such, that should be assumed to be lexically specified: in fact, in Ch.3 we saw that the basic stems of a verbal lexeme would be listed in the lexical entry of that lexeme (cf. Montermini & Boyé (in press)).

On the other hand, I assume that the meaning of the inflectional endings is '(morpho)syntactic', in that it is what allows a word-form to be collocated in an utterance. In particular, the values for the categories of Person and Number, which I have argued to be the *signatum* of the inflectional affixes, would be relevant to the syntactic process of agreement. This kind of meaning, differently the lexical one, would not be specified in the lexical entry of a verb; it would rather be acquired by means of syntax during the process of inflection, and it would therefore be relevant to the syntactic level of linguistic analysis. Schematically, we would have:

(5.4)	STEM	ENDING	Structure
	lexical meaning	morphosyntactic meaning	Kind of meaning
	Lexicon	(Morpho)syntax	Level of interpretation

The morphosyntactic meaning, besides not being a property of a verbal lexeme, also differs from the lexical meaning in another way: it is defined in terms of a close system of oppositions, i.e. the (morpho)syntactic categories and properties that we know from Ch.1, §1.1.2.

The point is that a word-form, as a whole, has properties in multiple levels of linguistic analysis. It clearly has some lexical properties, given that it is assumed to be the manifestation of a lexeme; but it also has some syntactic properties, which allow it to be used in an utterance. According to the present analysis, the units of expression of these properties would be the Stem and the inflectional Ending respectively.

5.3 Problems with directly competing inflectional affixes

In the previous paragraphs I tried to assign a meaning to the stems and the inflectional endings of the Italian verbal system. I distinguished two kinds of meaning, i.e. the lexical one and the morphosyntactic one, depending on the level of interpretation, and I showed that both of those may be associated to a 'positional class' (in Stump's (2001) terms) within the morphological structure of a word-form: so the lexical meaning would be conveyed by the Stem, while the morphosyntactic meaning would be conveyed by the inflectional Ending.

Now, if both stems and inflectional endings turn out to have a meaning, so they can reasonably be regarded as Saussurean signs.

In this paragraph I will check whether the stems and the inflectional endings of the Italian verbal system, as signs, obey the principles known as 'Uniformity of Encoding' and 'Principle of Contrast'.[11] Briefly, the conclusions that I will draw are the following: firstly, both the stems and the endings of Italian verbs may (but need not) be uniform signs, in the sense required by the Principle of Uniformity; moreover, more crucially, the situation of allomorphy affecting both stems and endings in the Italian verbal system seems to challenge the Principle of Contrast. Following a suggestion made by Carstairs-McCarthy (1994), I will show that compliance with the Principle of Contrast may be achieved, provided that one is prepared to rethink his/her view of the 'meaning' of a morphological unit in order to include purely intramorphological information as well. Such a solution will be the key point for accommodating the inflectional facts of the Italian verbal system with the Principle of Contrast, and will be also of crucial relevance for what I will claim later about the meaning(s) of thematic vowels.

5.3.1 The Italian verbal system and the 'Uniformity of Encoding'

'Uniformity of Encoding' constitutes one of the parameters of Natural Morphology, by means of which the morphological signs may be classified as being more or less natural (cf. Meyerthaler (1981), Crocco Galèas (1998)). The principle underlying the parameter under discussion (which I will call the 'Principle of Uniformity') is traditionally phrased as 'one-meaning-one-form'. To put it simply, that claims that a sign is uniform

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[11] These principles are exposed in §5.3.1 and §5.3.2, respectively. Even though those have been stated independent of each other, it seems worthwhile considering them jointly, since both of them concern the relationship between *signans* and *signatum*.

whereas there is uniqueness of directionality from its *signatum* to its *signans*; in other words, within a system, a uniform sign is found if the expression of a given *signatum* is always achieved by means of a single *signans* (cf. Crocco Galèas (1998: 66)). It will be noted that, from a semiotic point of view, uniformity represents 'the best of all possible worlds', at least from the point of view of *signatum*.[12] However, that is not the only possibility realised within actual inflectional systems: the situation in which a *signatum* is expressed by means of more than one *signans* in a system does exist, and can be labelled either as 'semi-uniformity' or as 'lack of uniformity', according to a gradually distributed (i.e. scalar) sequence of options (cf. Crocco Galèas (1998: 67-68).

To go back to our purpose for this section, let us try to evaluate the degree of uniformity of some of the stems and inflectional endings of the Italian verbal system.

Provided that the meaning of a stem is 'lexeme L', then, in a condition of uniformity, each lexeme would be expected to be represented by one and the same stem throughout its (lexical) paradigm; likewise, since the content of an inflectional ending has been argued to be a given combination of values for the morphosyntactic categories of Person and Number, we would expect each paradigm cell, which is associated to one and the same combination of values for the relevant categories (for instance, '1st singular'), to be realised by one and the same inflectional ending throughout the system. As far as stem morphology is concerned, the 'ideal situation' outlined above is actually realised in the case in which no stem allomorphy is involved (cf. Crocco Galèas (1998: 66): we have seen that, by definition, a verb with no stem allomorphy has <u>one</u> stem throughout its lexical paradigm.[13] For the sake of completeness, let us consider a case involving non-uniform stems,[14] i.e. the Present Indicative of the verb Venire 'come': *vengo, vieni, viene, veniamo, venite, vengono*. In this case we are faced with three formally different stems (i.e. /veng-/, /vien-/, ven-/), all of which would realise the same lexical content, i.e. 'lexeme Venire'. Each of those stems, thus, while being a sign, cannot be claimed to be uniform within the system.

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[12] The parameter of 'Uniformity' is in fact said to rely on the semiotic concept of biuniqueness (or relational invariance), cf. Crocco Galèas (1998: 65).

[13] In Ch.4 we have seen that this is the normal situation for the first conjugation verbs, which is also the largest one in the system. Therefore, cmpliance with the uniformity principle is well represented in probabilistic terms, as far as the stem morphology of the Italian verbal system is concerned: many of the stems of the Italian verbs may actually be claimed to be uniform signs.

[14] The verbs in Table 5.1 do not provide instances of this kind, in that they do not have stem allomorphy (cf. Ch.4, §4.3).

Desinential facts are more complicated, since in this case the possible presence of uniform endings has to be evaluated on two dimensions, the intra- and the inter-paradigmatic ones. As it will be recalled from above, the inflectional endings of the Italian verbal system have been argued to have a given combination of values for the morphosyntactic categories of Person and Number as their *signatum*. Now, the first problem with this analysis, provided that it is correct, is that phonologically dissimilar realisations of the same property-combination for the categories of Person and Number are extremely common in the Italian verbal system. Recall that the actual combinations of values for the categories of Person and Number are six overall,[15] and happen to be systematically repeated in each sub-paradigm. A situation of uniformity would therefore imply that the pattern of inflectional endings was one and the same in each sub-paradigm, which is actually not the case with Italian. Consider, for instance, the endings realising the combination '3rd singular' in the sub-paradigms of the verb Amare 'love':

(5.5)	**Pres. Ind.**	**Impf. Ind.**	*Perfetto Semplice*	**Pres. Subj.**	**Impf. Subj.**
3rd sg.	*am-**a***	*amav-**a***	*am-ò*	*am-**i***	*amass-**e***

One might simply argue that in this case we are not in the presence of uniform signs: actually, one and the same *signatum* '3rd singular' finds itself being expressed by means of four different *signantia* (i.e. *–a, -ò, -i, -e*).

Another option[16] would be to assume that the *signatum* expressed by the endings under discussion is not the same; in particular, the realisation of the property-combination '3rd singular' would be sensitive to its grammatical environment (or 'context'). In the case at hand, I assume that the realisation of the values for the categories of Person and Number may be sensitive to the properties for the Mood and Tense categories. As noted earlier, the properties of the Mood and Tense categories may not have a 'dedicated exponent' in the word-form: this is the case with the word-forms of the Present Indicative, for instance. Starting from the idea that in a word-form like *ama* '(s)he loves' the properties 'Present Indicative' are present, even though they miss a dedicated exponent, I assume that those properties can somehow condition the form of the ending, which is still primarily associated to the expression of the properties '3rd singular'. In other words, I will assume that the *signatum* of an inflectional ending is primarily a given combination of values for the categories of Person and Number, but

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[15] I.e. 1st singular, 2nd singular, 3rd singular, 1st plural, 2nd plural, 3rd plural.
[16] Cf. Carstairs (1987: 150ff.).

that in the expression of that *signatum* the properties for the Tense and Mood categories can work as a conditioning context. So, for instance, I will speak of the *signata* '3rd singular (Present Indicative)', '3rd singular (Present Subjunctive)' and so on, signalling the conditioning properties in brackets. Notice that such conditioning properties are morphosyntactic in nature: therefore, we may say that the allomorphy in (5.5), namely the allomorphy observed in the inter-paradigmatic dimension, is morphosyntactically (or 'grammatically') conditioned.

A problem with this solution is that, as noted earlier, phonologically dissimilar realisations of the same property-combination are also observed in the comparison across lexemes. Consider, for instance, the data in (5.6):

(5.6) **Present Indicative**   AMARE   TEMERE

      3rd singular   *am*-**a**   *tem*-**e**

In this case the different inflectional behaviour of *ama* '(s)he loves' and *teme* '(s)he fears' cannot be claimed to rest upon a difference in the properties for the Tense and Mood categories, because the paradigm cell under comparison is exactly the same for both forms (i.e. '3rd singular (Present Indicative)'). What these data suggest is that there is more than one *signans* realising the very same *signatum*: inescapably, each one among the resulting signs cannot be said to be 'uniform' within the system.

Notice, however, that, in the framework of Natural Morphology, 'uniformity' is simply stated as one of the 'parameters of naturalness'; non-uniform signs, while being classified as less natural than uniform ones, are not prevented from occurring: thus both the endings of *am***a** '(she) loves' and *tem***e** '(s)he fears' can still be regarded as signs according to the parameter of Uniformity, although those signs realise the same *signatum* (i.e. '3rd singular (Present Indicative)') by means of different *signantia* (i.e. **–a** vs. **-e**); in other words, the two signs **–a** and **-e** should be assumed to be synonymous.

In the next paragraph I will discuss Clark's Principle of Contrast which, unlike the Principle of Uniformity, rejects the occurrence of synonymous signs in a system.

5.3.2 The Italian verbal system and the Principle of Contrast

The Principle of Contrast, as stated by Clark (1987: 2), claims that:

(5.7) Every two forms contrast in meaning.[17]

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[17] Another formulation of the principle is as follows: 'Speakers take every difference in form to mark a difference in meaning' (cf. Carstairs-McCarthy and Cameron-Faulkner 2000).

From a logical point of view, such a statement presupposes uniformity of encoding and therefore it might be thought of as a consequence of the 'one-meaning-one-form' principle discussed in the previous paragraph. This is not the case: the Principle of Contrast has been developed independently from the Uniformity Principle, notably in the field of lexical acquisition, where it is introduced as a pragmatic principle which should facilitate the task of children learning their mother tongue "by narrowing the range of likely meanings for a newly encountered word-form".[18] One of the predictions following from the Principle of Contrast is that true synonyms should not occur in a language (cf. Clark (1987: 3)). In general, that is accepted as far as lexical items are concerned: any two apparently synonymous terms, if carefully inspected, are normally found to contrast in meaning according to dialect choices (e.g. *autumn* (UK) vs. *fall* (Western UK and US)) or register choices (e.g. *to die* vs. *to pass away*), or else according to connotation (e.g. *skinny* vs. *slim*).[19] On the other hand, that seems not to be the case with the inflectional affixes of the Italian verbal system. In the comparison across lexemes, grammatically equivalent word-forms (i.e. forms occupying the same 'cell' in the paradigm) may display different inflectional material, which should therefore be assumed to realise the same (morphosyntactic) content. Consider once more the case of the third person singular of the Present Indicative, in the verbs Amare 'love', Temere 'fear', and Dormire 'sleep':

(5.8) **Present Indicative**   AMARE   TEMERE   DORMIRE

      3rd singular   *am*-**a**   *tem*-**e**   *dorm*-**e**

The comparison between the forms of the verbs TEMERE and DORMIRE poses no theoretical problems: actually, the same *signatum* (i.e. '3rd person singular (Present Indicative)') is found to be expressed by the same *signans* (i.e. **–e**), in compliance with the Uniformity Principle 'one-meaning-one-form'. The problem is with the verb AMARE: judging from the data in (5.8), the same morphosyntactic content '3rd person singular (Present Indicative)' should be realised by means of a different formal element in this case, i.e. *–a*. The same seems to be true for all other cases involving desinential allomorphy across lexemes. Table 5.2 reports the competing endings under discussion:

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[18] Carstairs-McCarthy (1994: 737).

[19] Clark (1987: 4). From a semantic point of view, such terms are said to have the same extension but different intension, which may mislead as far as their meaning differences are concerned.

	Imperative	Present Indicative	Present Subjunctive	*'weak' Perfetto Semplice*
1sg			**-i** ≈ **-a**	
2sg	**-a** ≈ **-i**		**-i** ≈ **-a**	
3sg		**-a** ≈ **-e**	**-i** ≈ **-a**	**-ò** ≈ **-è** ≈ **-ì**
1pl				
2pl				
3pl		**-a**no ≈ **-o**no	**-i**no ≈ **-o**no	

Table 5.2 – Competing desinences

Each one of the affix-pairs reported in Table 5.2 apparently involves exact synonymy: more than one *signans* is used to express the same morphosyntactic *signatum*, which runs against the prediction of the Principle of Contrast. Table 5.2 is also meant to show that, except for the third person singular of the weak *Perfetto Semplice*, the opposition under discussion always involves two terms.

A possible solution to the *impasse* posed by the data in (5.8) would be assuming that the Principle of Contrast only holds for lexical items and not for grammatical ones (i.e. inflectional). In other words, it should be assumed that the meanings of the inflectional affixes do not obey the same rules as the meanings of the lexical items: actually, the two affixes **–a** and **–e** under discussion would be free not to contrast in meaning, even though they contrast in form. However, as pointed out by Carstairs-McCarthy (1994: 738), "it is difficult to see any obvious reason for this restriction in terms of the pragmatics of language acquisition".[20] In addition to being clearly audible elements (and therefore distinguishable), the inflectional endings of the Italian verbal system have been assumed to realise values organised into a close system of oppositions (i.e. that represented by the morphosyntactic paradigm, cf. Ch.1, §1.1.2). Because of that, it would be fine for each one of those oppositions to be somehow formally signalled.

Another possibility, which would allow us to reconcile the Italian data in (5.8) with the Principle of Contrast, would be to admit that the formal difference between the **–a** of *ama* and the **–e** of *teme* and *dorme* really marks any difference in meaning.

A solution of this kind is suggested by Carstairs-McCarthy (1994). The key point in the scholar's argument is counting 'inflection class identification' as part of the meaning of an inflectional affix. Let us consider the problematic data of Italian – reported below - in the light of Carstairs-McCarthy's (1994) proposal.

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[20] See also Clark (1987: 19ff.), who discusses some possible consequences of the Principle of Contrast on the acquisition of morphology.

(5.9)   <u>AMARE   TEMERE   DORMIRE</u>

       3rd singular   *am*-**a**   *tem*-**e**   *dorm*-**e**

As it will be recalled from Ch.4, the three verbs in (5.9) belong to a different inflectional class: in particular, AMARE 'love', as a lexeme, belongs to the first conjugation, TEMERE 'fear' belongs to the second and DORMIRE 'sleep' to the third.

According to Carstairs-McCarthy's proposal, the ending **–a** characterising the verb Amare 'love' would mean not just '3rd singular (Present Indicative)', but '3rd singular (Present Indicative), first conjugation'. In the scholar's view, it is the additional 'meaning' about inflection class membership what accounts for the formal difference between the ending **–a** of the verbs of the first conjugation and the ending **–e** of the verbs of the other two inflection classes.

5.4 What kind of signatum *is 'inflection class X'? On the properties and interpretation of a rather unusual "meaning".*

Admittedly, an account such as the one proposed at the end of the previous paragraph is open to several objections. Here I am discussing just a couple of them. The first broadly concerns the kind of 'meaning' appealed to, and could be phrased as the question in the title of this section. The skeptical reader might say: "Provided that the ending **–a** of *am***a** '(s)he loves' really has 'First Conjugation' as part of its meaning, what kind of 'meaning' is that?". The fact is that a *signatum* such as 'inflection class X' is intuitively different from any other kind of meaning that we have been considering so far, whether lexical (like the one I have supposed to be realised by the Stem) or grammatical (like the one realised by the Ending). What makes the 'meaning' under discussion different from the traditionally recognised ones is that, as argued in Ch.4, the 'inflectional classes' of the Italian verbs, as categories of lexemes, have no extralinguistic justification at all; in that sense, I will say that 'inflection class identification' is an 'intralinguistic meaning'. Now, if the problem is simply with the label 'meaning' (because this term is normally understood as a relationship between a linguistic item and something outside the language system), that can be easily solved by using the label 'information content' instead (cf. Carstairs-McCarthy (1994: 741)). More crucially, we have seen that the classification into conjugations, in addition to being extralinguistically unmotivated, does not even have any implication for the behaviour of the verbs (for instance, at the syntactic level). For this reason, I claim that an information content such as 'inflection class membership' is not simply

'intralinguistic' but even 'intramorphological'. The Italian data in (5.9) can therefore be reconciled with Clark's Principle of Contrast, by claiming that the ending **–a** of *ama* '(s)he loves' has 'first conjugation' as part of its information content, where such a content should be 'intramorphological' in nature.

More strictly, the other possible objection mentioned above concerns the data in (5.9), and the account they are given under Carstairs-McCarthy's proposal. I have said that the ending **–a** of *ama* '(s)he loves' should be assumed to differ from the **–e** of *teme* '(s)he fears' and *dorme* '(s)he sleeps' because of a difference in terms of inflectional class. The idea is that the word-form *ama*, whose lexeme belongs to a given inflection class (the first conjugation), marks this property formally, being therefore distinguishable from the morphosyntactically equivalent word-forms of the other conjugations.

The trouble is that also *teme* and *dorme* differ from each other with respect to the inflectional class which they belong to (actually, *teme* belongs to the second conjugation, while *dorme* belongs to the third– cf. Ch.4). Now, whereas 'inflectional class identification' is really to count as part of the information content of at least some of the inflectional endings of the Italian verbal system, then why should the endings of *teme* and *dorme* be identical, in spite of the fact that those forms belong to different conjugations? Given this difference in inflection class, also the endings under discussion would be expected to be different one another.

The solution I am adopting here[21] is to understand the meaning 'Inflection Class Membership' as something which is only 'optionally' realised by an inflectional ending. In other words, an inflectional ending may (but need not) have 'Inflection Class Membership' as part of its content: that is, it may also fail to provide this information. To retour to the data in (5.9), the ending **–a** of *ama* '(s)he loves' would therefore be provided with the information about the inflection class, while the **–e** of both *teme* '(s)he fears' and *dorme* '(s)he sleeps' would simply miss it (i.e., it would be 'underspecified for that value').[22] This idea actually provides an explanation for the sameness of the endings of *teme* and *dorme*: those just convey some morphosyntactic

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[21] Cf. Carstairs-McCarthy (1994: 741).

[22] Another option is to assume that the meaning of the *–e* of *teme* and *dorme* is 'non-First Conjugation' or else 'Second or Third Conjugation'. The difficulty with this solution is that it involves a negative and a disjunctive meaning, respectively. Now, such meanings turn out to be banned both in the field of lexical semantics and in the field of morphosyntax (cf. Carstairs-McCarthy (1998)). By rejecting meanings like 'non-First Conjugation' and 'Second or Third Conjugation', I assume that the intramorphological meaning is subject to the same constraints as the lexical and the morphosyntactic meaning.

content, i.e. '3rd person singular (Present Indicative)', which is in fact the same for both forms.

Given the potential character of the meaning 'Inflection Class', it would be fine for us to find a way to distinguish the affixes which have this content from those which miss it. Carstairs-McCarthy (1994: 743) proposes the label 'class-identifier' for the affixes of the former kind and 'class-default' for those of the latter. The condition under which an inflectional affix may be claimed to be 'class-identifier' is that it "is uniquely associated with that inflection class".[23] So, the *–a* of *ama* would mean 'First Conjugation' because of its being uniquely associated with that conjugation.

Summing up so far, 'inflection class identification' has been claimed to count as part of the information content of some inflectional endings of the Italian verbal system. Such a kind of information is 'intramorphological' in nature, and has been argued to be only optionally realised. Accordingly, it is possible to classify the inflectional endings into two categories, depending on whether they are endowed with the meaning 'Inflectional Class'. We can define a Class-identifier (c.i.) affix as

(5.10a) an affix which provides information about inflection class membership, because of its being associated with one and only one inflection class;

and a Class-default (c.d.) affix as

(5.10b) an affix that does not include any mention of inflection class, because of its being not uniquely associated with a class.[24]

I claim that the two characteristic features of the *signatum* 'inflection class membership', which have been illustrated in this section (namely its intramorphological nature and its being only optionally realised), are more tightly linked to each other than what it might seem at first sight.

A meaning such as 'inflection class membership', even when it is actually realised by an affix, turns out to be useless for the interpretation of the word-form of which that affix is part. All that is needed for the interpretation of any word-form is some lexical content – which has been argued to be realised by the Stem – and some morphosyntactic content – which has been said to be encoded by the inflectional Ending. Compare, for instance, the word-form *teme* '(s)he fears', whose ending **–e**, according to my analysis, would not include any mention of inflection class, with *ama*

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[23] Carstairs-McCarthy (1994: 741).
[24] Cf. Carstairs-McCarthy (1994: 741-3).

'(s)he loves', whose ending **–a** can be labelled as 'class-identifier'. From the point of view of interpretation, those forms are perfectly equivalent: each one of them represents a given lexeme (Temere 'fear' and Amare 'love' respectively) besides some (morpho)syntactic content (i.e. '3rd person singular (Present Indicative)'), which is what allows the two lexemes to be inserted in a given syntactic and pragmatic context. In that sense, the additional, intramorphological information 'First Conjugation' conveyed by the ending **–a** of *ama* '(s)he loves', is of no avail: it is no use to the interpretation of the word-form; it only gives information about the inflection class of the lexeme, that is, about how to inflect the verb in other morphosyntactic bundles. Let us say that the lexical and the morphosyntactic content realised in a word-form (in the Stem and in the Ending, respectively) are relevant *in praesentia*, namely for the direct interpretation of the word-form; by contrast, the purely morphological content eventually realised by a word-form's ending would be relevant *in absentia*, namely to the inflection of the lexeme in other paradigm cells. In Saussurean terms, the *signatum* 'Conjugation' stands in a paradigmatic relationship to its *signans*.

Now, if a word-form poses no interpretation problems, even though it lacks any mention of the inflection class that it belongs to, then it is understandable that this kind of information may be missing.

In fact, an overall inspection of the Italian verbal system reveals that the word-forms with class-default affixes are the vast majority: notably, all endings which had been labelled 'superstable' (cf. Ch.3, §3.4) turn out to be class-default, in that, by definition, they appear with all verbs of the system, regardless of inflection class;[25] all other morphosyntactic bundles (seven overall, excluding the 3rd singular of the weak *Perfetto Semplice*, on which I will retour below) display two competing endings (cf. Table 5.2 in §5.3.2 above). Of these competing affixes, one turns out to be systematically associated with the first conjugation – being therefore promoted to the status of class-identifier – while the other is always found to be shared by the verbs of the second- and third-conjugation, deserving the label of class-default. Table 5.3 illustrates the inflectional endings of the Italian verbal system, distinguishing the class-identifiers from the class-defaults:[26]

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[25] For an overall survey of the superstable endings of the Italian verbal system, cf. Ch.3, §3.4, Schema 3.5.

[26] For ease of exposition the superstable endings, which have been claimed to be class-default, are reported in the centre of each column, without the label 'c.d.'.

Finite Forms					
	Indicative				
	Present	**Imperfect**	**Future**	**Strong** *Perfetto*	**Weak** *Perfetto*
1s	-o	-o	-ò		-i
2s	-i	-i	-ài	-sti	-sti
3s	c.i. –a ≈ c.d. -e	-a	-à		c.i. –ò ≈ c.i. –é ≈ c.i. -ì
1p	-mo		-émo	-mmo	-mmo
2p	-te		-éte	-ste	-ste
3p	c.i. –ano ≈ c.d. -ono	-ano	-ànno		-rono

	Imperative	**Subjunctive**		**Conditional**
		Present	**Imperfect**	
1s		c.i. –i ≈ c.d. -a	-i	-i
2s	c.i. –a ≈ c.d. -i	c.i. –i ≈ c.d. -a	-i	-sti
3s		c.i. –i ≈ c.d. -a	-e	-bbe
1p		-mo	-imo	-mmo
2p	-te	-te	-te	-ste
3p		c.i. –ino ≈ c.d. -ano	-ero	-bbero

Table 5.3 –

It will be noted that, according to the present analysis, the third person singular of the weak *Perfetto Semplice* turns out to be realised by class-identifier endings only.[27]

To end this paragraph, I would like to make a remark about the '*locus* of expression' of the intramorphological *signatum* 'Inflection Class'. According to my proposal, when the information on inflection class membership is realised, that would lie on a word-form's inflectional ending, where it should be cumulated with some morphosyntactic content. (5.11) shows the comparison of two word-forms of the Present Indicative of the verb Amare 'love', emphasising their morphological structure and the level of interpretation of the *signata* conveyed by the different units of analysis:

(5.11)   AMARE 'love' – Present Indicative

		STEM	ENDING		Structure
(a)	1st sg.	*am*	*o*	'I love'	
		Lexical	**Morphosyntactic**		**Level of Interpretation**
(b)	3rd sg.	*am*	*a*	'(s)he loves'	
		Lexical	**Morphosyntactic**		Level
			+		of
			Morphological		Interpretation

In both the word-forms in (5.11), the Stem /am-/ is assumed to realise the lexical meaning 'lexeme AMARE'. As far as the Ending is concerned, the two forms differ in the following: the class-default –*o* of *amo* 'I love' (in (a)) would only realise some

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[27] Remember that this 'paradigm cell' has been identified as the relevant one for the Inflection Class Economy Principle, (cf. Ch.4, §4.1.3). In the light of the notion of 'class-identifier ending', thus, what the Economy Principle requires is that, for at least one morphosyntactic bundle, all inflectional realisations should be class-identifiers (see Carstairs-McCarthy (1994: 754)).

morphosyntactic information content (i.e. '1st singular (Present Indicative)'), while the class-identifier –*a* of *ama* '(s)he loves' (in (b)) would realise some morphosyntactic content (i.e. '3rd singular (Present Indicative)') together with some intramorphological content (i.e. 'First Conjugation'). Remember that at the beginning of §5.2.2 the Ending, as a 'position class' within the morphological structure of a word-form, was claimed to represent the 'dedicated *locus*' for the expression of the morphosyntactic content. In this view, it seems as if the intramorphological *signatum* 'Inflection Class', when it is realised, has to 'borrow some room' from the expression unit of the morphosintactic content.

5.4.1.1 The intramorphological signatum of the thematic vowel on the paradigmatic dimension

In the previous paragraph the intramorphological *signatum* 'Inflection Class Identification' was introduced as a property of some of the inflectional endings of the Italian verbs. In this regard, I pointed out that, in the whole system, the class-identifier desinences are actually few in number: in fact, most of the endings turn out to be class-default, and, as far as class-identifier affixes are concerned, those normally characterise first-conjugation verbs only. To use Aronoff's (1994) terminology, the *signatum* 'Inflection Class' would be a discontinuous function, notably it would be a characteristic property of some first conjugation-endings. From this point of view, the 3rd person singular of the weak *Perfetto Semplice* represents an exception, having class-identifier affixes for the verbs of all conjugations.

I also showed that the *signatum* 'Inflection Class', when realised by an inflectional ending, should be cumulated with the extramorphological (morphosyntactic) content for the 'Person & Number' categories; as noted earlier, the Ending, as a 'position class' within a word-form, would represent the dedicated 'slot' for the expression of the morphosyntactic content: in that sense, it seems as if the intramorphological meaning, when it is present, has to 'share' some expression room with the morphosyntactic meaning, lacking in any 'dedicated position' within the structure of a word-form. Now, provided that the Stem is the dedicated slot for the expression of the lexical meaning, and that the Ending is the slot for the morphosyntactic content (as claimed in §5.2.2), therefore any word-form with the morphological structure 'Stem + Ending'[28] would have no dedicated morphological unit for the expression of the intramorphological *signatum*.

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[28] There is actually a good number of them in the system, see Ch.3, §3.4.

But what about the word-forms with thematic vowel? Let us explore the consequences of promoting the Thematic Vowel[29] to the status of the dedicated *locus* for the expression of the *signatum* 'Conjugation'. So, for instance, the word-form *amate* 'you (pl.) love',[30] would have the information content 'First Conjugation' realised in the thematic vowel. The overall analysis of this word-form would be therefore:

(5.12)	*am*	*a*	*te*	*Signans*
	LOVE	First Conjugation	2nd plural (Present Indicative)	*Signatum*
	Lexical	Morphological	Syntactic	Level of interpretation

Notice that, in this view, the 'pieces of information' provided by a word-form with class-identifier ending are exactly the same as those provided by a word-form with thematic vowel. Let us compare, for instance, the 2nd person plural of the Present Indicative *amate* 'you (pl.) love' – having the thematic vowel – with the 3rd person singular *ama* '(s)he loves' – having a class-identifier ending (cf. §5.4). The schema in (5.13) illustrates the comparison between these two word-forms:

(5.13)	(a) *amate* 'you(pl) love'	STEM	THEMATIC VOWEL	ENDING	Morphological Structure
		am	*a*	*te*	*Signans*
		LOVE	First Conjugation	2nd plural (Present Indicative)	*Signatum*
		Lexical	Morphological	Syntactic	Level of interpretation

	(b) *ama* '(s)he loves'	STEM		ENDING	Morphological Structure
		am		*a*	*Signans*
		LOVE		3rd singular (Present Indicative) + First Conjugation	*Signatum*
		Lexical		Syntactic + Morphological	Level of interpretation

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[29] To understand as a 'position class' within a word-form's morphological structure – hence the capitals.

[30] For the formal analysis of this form, cf. Ch.3, §3.2.2.

Crucially, both the word-forms include some information about the inflectional class of the lexeme (i.e. the verb) they represent; it is the way this kind of information is encoded that varies. In particular, in the case of *ama* '(s)he loves' (in (5.13b)), cumulation is involved: as pointed out above, the intramorphological *signatum* 'First Conjugation' would be realised by the ending, where it would be cumulated with the (morpho)syntactic content '3rd person singular (Present Indicative)'. The form *amate* 'you (pl.) love' (in (5.13a)), in contrast, would involve agglutination, in that the same intramorphological *signatum* 'First Conjugation' would lie in a 'dedicated slot', i.e. the thematic vowel.[31]

Therefore a word-form with thematic vowel may be intended as follows: the presence of information about inflection class membership, as a 'content-unit', would imply the presence of an additional form-unit (the thematic vowel), that would go to increase the morphological structure of the word-form.[32] So the intramorphological property 'member in the conjugation so and so' would find itself being represented ('realised') by a 'dedicated marker', which can therefore be claimed to have morphemic status, even in the more traditional (i.e., Saussurean) sense of the term. In that sense, I claim that the thematic vowels of Italian verbs are Saussurean signs: each of those is in fact provided with a form and a meaning, standing in an arbitrary association to one another.

The sign-relationship between the thematic vowels and the conjugations of Italian would be as follows:

(5.14) **Signans**　　　　**Signatum**
　　　　　a　　　　First Conjugation
　　　　　e　　　　Second Conjugation
　　　　　i　　　　Third Conjugation

Besides endowing the intramorphological *signatum* 'Inflection Class' with an inherent *locus* of expression, my interpretation of the thematic vowel also has another implication: it guarantees all verbs of the system to have such an intramorphological *signatum* realised in some of the word-forms of the paradigm. We have seen that the class-identifier endings seem to be a characteristic feature of the first-conjugation verbs, second- and third-conjugation verbs being associated only with class-default endings. But thematic vowels, which deserve the special label of 'inherently class-identifier',

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[31] Therefore, the thematic vowel should inherently be a 'class-identifier'.

[32] Remember that the Thematic Vowel, as a 'position slot' within the morphological structure of a word-form, had been claimed to be only optionally present (see Ch.3, §3.2.1).

occur in all verbs, at least in some of the word-forms of the paradigm: by means of the thematic vowel, thus, even a verb having class-default endings will be guaranteed to carry information only about its inflection class expressed in some of the word-forms of its paradigm.

It will have been noted that the title of this paragraph refers to a 'paradigmatic dimension'. That is reminiscent of what I said in the previous paragraph about the intramorphological *signatum* of the class-identifier affixes: knowing – either by the thematic vowel or by a class-identifier ending – that a verb is member in, say, the first conjugation allows that verb to be inflected for all the other morphosyntactic bundles of the paradigm. So, any thematic vowel points towards the complete set of inflectional endings by means of which the verb will be able to be correctly conjugated. In that sense, morphological information provided by the thematic vowel (as much as information provided by any class-identifier inflectional ending) is paradigmatic (in the Saussurean sense of the term): the thematic vowel stands in a paradigmatic relationship with the inflectional material that it is assumed to point towards: that is, it is relevant *in absentia*.

5.4.1.2 A glance at the literature (with hindsight)

In this section I would have a look back at the literature and comment on three passages which clearly reveal that the relationship between a verb's thematic vowel and that verb's inflection class has never gone unnoticed by scholars. It might be objected that only one of the passages that will be reviewed is concerned with the thematic vowels of Italian verbs; the other two, in fact, concern Spanish and Latin verbs. However, my claim is that this is irrelevant for the present purposes: as noticed in Ch. 1, thematic vowels were a characteristic feature of the Latin verb system, which was then inherited by the Romance languages; this allows us to regard the thematic vowels of Latin and the thematic vowels of Italian and Spanish as 'the same thing', in some sense; the implication is that what is being said about the thematic vowels of the Spanish and the Latin systems should hold for the thematic vowels of Italian too.

The first passage I am reviewing is that by Hockett (1947) on the thematic vowels of Spanish verbs, which we already know from Ch.2. The scholar claims that:

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Which [thematic] vowel [...] appears, depends on the stem
and on the ending: the infinitive ending r, for example,
requires á after a stem of the first conjugation, é after
one of the second, and í after one of the third. The three
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conjugations are classes of stems, in fact, based precisely
on this feature of behaviour.
The conjugation vowels have no meaning.
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Notice that in this passage the conjugations are defined as 'classes of stems', and the thematic vowel (which follows the stem in a word-form's structure) is claimed to be 'selected' on the base of the conjugation of the stem. In the light of what has been said in this chapter, it is also clear that, as long as a word-form is only assumed to convey some lexical and (morpho)syntactic content, then thematic vowels can reasonably be claimed to have "no meaning".

The next passage I would like to discuss, which is stated by Aronoff (1994 – yet 1992), concerns the thematic vowels of the Latin verbal system:

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In itself, [the thematic vowel][33] has no significance. It is
empty. Nonetheless, it is not useless. It has a use in the
language, but that use is purely morphophonological: the
theme vowel is the conjugation vowel, it serves to determine
the conjugation of the verb stem, or which inflectional
affixes will realize the various morphosyntactic properties
that the verb bears in a particular instance. […] the
function of the theme vowel is to select the verb endings.
In [some] paradigm members [i.e. 'word-forms'…] there is a
variety of ways in which the morphosyntactic property arrays
are realized morphophonologically (though they are always
realizes as suffixes, traditionally called verb endings).
The choice among these verb endings is determined by the
theme vowel.
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Crucially, Aronoff relates the information content expressed by a thematic vowel (its "use in the language") to the choice among 'rival' inflectional endings in a situation of desinential allomorphy ("where there is a variety of ways in which the morphosyntactic property arrays are realized morphophonologically"). In this way, the scholar captures the inherent meaning of the notion 'conjugation' (cf. Ch.4, §4.1.2).

Finally, let us consider a passage by Scalise (1990) on the thematic vowels of Italian verbs:

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[…] Il significato della vocale tematica è un significato
"grammaticale", anzi interamente morfologico. La vocale
tematica segnala l'appartenenza di un determinato radicale
verbale ad una data classe di coniugazione: a alla prima, e
alla seconda, i alla terza. La vocale tematica non ha alcun
tipo di rapporto con la 'sintassi' dei verbi: non segnala,
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[33] Aronoff actually uses the term 'theme vowel' to refer to what I call 'thematic vowel'. Yet that difference is purely terminological (Cf. Malkiel (1979)).

per esempio, se un verbo è transitivo o intransitivo (cfr. *ama(re) / vola(re)*, *teme(re) / ride(re)*, *senti(re) / nitri(re)*). La vocale tematica ha conseguenze solo per quel che riguarda la forma interna del verbo (cfr. *ascoltavamo*, *temevamo*, *sentivamo*) e non la sua sintassi "esterna".[34]

In the light of what has been said so far, I think Scalise's passage is clear enough to need no further comment.

5.4.2 The intramorphological signatum of the thematic vowel on the syntagmatic dimension

The plural *signata* in the title of this work suggests that the meanings of the thematic vowels of the Italian verbal system should be more than one. In the previous paragraph I introduced one of those meanings, i.e. 'Inflection Class Identification', which was argued to be 'paradigmatic'. This paragraph is concerned with the other *signatum* I am attributing to thematic vowels, which parallels the previous, in that it is intramorphological but differs from that, because it is 'syntagmatic' rather than 'paradigmatic'.

5.4.2.1 Theoretical premise on the syntagmatic sign-relationship

In his 1994 paper, not only Carstairs-McCarthy claims that "the *signatum* of a morphological sign need not be extramorphological" (cf. §5.4) but also, more crucially, that "a morphological *signatum* may stand in either a paradigmatic or a syntagmatic relationship to its *signans*".[35] In his works, Carstairs-McCarthy is mainly concerned with the meanings of affixes in inflectional languages. As for the syntagmatic *signatum*, he claims that: "under some conditions, a given inflectional affix may have a given stem alternant as its *signatum*".

Of course, this kind of information content should make sense only in those paradigms having more than one stem alternants (that is, in a situation of stem allomorphy, cf. Ch.3, §3.2.1.1). In the next paragraph, I will illustrate some relevant points of a paper by Carstairs-McCarthy & Cameron-Faulkner (2000), which defends the idea of assuming a given stem alternant as the intramorphological *signatum* of some endings in

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[34] The meaning of the thematic vowel is "grammatical", or even better, it is entirely morphological. The thematic vowel marks the membership of a given verb's root in a given conjugation class: so *a* signals membership in the first conjugation, *e* in the second, *i* in the third. The thematic vowel has no kind of relation with the 'syntax' of the verbs: it does not tell, for instance, whether a verb is transitive or intransitive […]. The thematic vowel only has implications for the internal form of the verb, and not for its "external" syntax – My translation.
[35] Both quotations are taken from Carstairs-McCarthy (2000: 50). On the existence of syntagmatic intramorphological *signata* for morphological signs, see also Lass (1990).

the system of Polish masculine nouns. It is a *signatum* of that kind that, following Maiden (2000), I will confer to some inflectional endings of the Italian strong *Perfetto Semplice* (§5.4.2.3) as well as to thematic vowels (§5.4.2.4).

5.4.2.2 A Polish phenomenon (Cameron-Faulkner & Carstairs-McCarthy 2000)

Polish nouns inflect for the morphosyntactic categories of Number (possible values being Singular and Plural) and Case.[36] In the Singular, three Genders are found, i.e. Masculine, Feminine, and Neuter. Cameron-Faulkner & Carstairs-McCarthy's paper analyses a phenomenon concerning masculine singular nouns. Briefly, in the inflection of these nouns for Locative and Vocative Case, two 'rival' endings are found, i.e. *–u* and *–e*. Table 5.4 illustrates the inflectional behaviour of three masculine singular nouns, each one of which is found to have a different pair of endings for the two cells under discussion:

		KRAJ 'country'	PAN 'mister'	DWÓR 'manor'
Sg.	**Nom.**	kraj	pan-	dwór
	Gen.	kraj-u	pan-a	dwor-u
	Dat.	kraj-owi	pan-u	dwor-owi
	Instr.	kraj-em	pan-em	dwor-em
	Loc.	kraj-**u**	pan-**u**	dworz-**e**
	Voc.	kraj-**u**	pani-**e**	dworz-**e**

Table 5.4 -

As shown by the data in the table, some nouns (in the sense of 'lexemes') have *–u* in both the Locative and the Vocative (e.g. Kraj 'country'), some others have *–e* in both Cases (e.g. Dwór 'manor'), still others have *–u* in the Locative and *–e* in the Vocative (e.g. Pan 'mister'). What matters for the present purpose is that in both the Locative and the Vocative cells we are faced with two rival, apparently synonymous, affixes, contrary to what is predicted by Clark's Principle of Contrast (see §5.3.2):

(5.15) Loc. **-u** ≈ **-e**
        Voc. **-u** ≈ **-e**

This picture is being complicated also by the fact that the formal difference between the two endings cannot be related to a difference in inflection class: although the actual number of inflection classes for Polish masculine singular nouns is controversial, the

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[36] Possible values being Nominative, Accusative, Genitive, Dative, Instrumental, Locative and Vocative.

authors' claim is that any possible classification of the nouns into inflection classes is basically independent of the distribution of the two endings under discussion.[37]

The problem takes on a different complexion, however, if we take account of the stem alternant which accompanies either of the 'rival' endings –*e* and -*u*; notice that, in observing any stem, one can focus either on its shape or on its paradigmatic distribution. As far as the stemshape of the nouns at issue is concerned, the traditional description distinguishes, on phonological grounds, 'palatal-type' and 'nonpalatal' stems, depending on the quality of the stem-final consonant.[38] With regard to the data in Table 5.4, expalatal stems are /kraj-/, /pani-/ and /dworz-/, allo f the other ones are nonpalatal stems. From this point of view, that is, focusing on stemshape alone, it may be observed that the ending –*e* always co-occurs with stems ending with palatal consonants; one could then appeal to a phonological trigger (by a palatal-type stem alternant) to account for the choice of –*e* over –*u* in the Locative and Vocative. However, the inflection of Kraj 'country' (in Table 5.4) seems to provide evidence to the contrary: in that case a palatal-type stem is found to have the ending –*u* for both the cells at issue.

The solution suggested by Cameron-Faulkner & Carstairs-McCarthy to account for the distribution of the Locative and Vocative endings –*e* and –*u* has actually to do with the co-occurring stem alternant:, in that the two endings are finally claimed to be distinguished because of their co-occurring with different stem alternants. However, what really matters about those stem alternants is not their 'shape' ('palatal type' vs. 'nonpalatal'), but their paradigmatic distribution instead: a wise inspection of the data in Table 5.4 reveals that where –*e* occurs as an inflectional marker of Locative or Vocative, the stem alternant that accompanies it is always a minor alternant within the paradigm, namely a stem alternant, peculiar to the Vocative and possibly also the Locative. On the other hand – as logically expected, given that we are in the presence of a two-terms opposition – in the word-forms where the –*u* occurs, the stem alternant is the same as what is normally found elsewhere in the singular paradigm.[39]

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[37] For a brief outline of the number of inflection classes in Polish nouns, cf. Cameron-Faulkner & Carstairs-McCarthy (2000: 819).

[38] See Cameron-Faulkner & Carstairs-McCarthy (2000: 821) for a classification of Polish consonants distinguishing 'palatal-type' from 'nonpalatal' for the purpose of differentiating noun-stems.

[39] Notice that the presence of a 'minority stem alternant' in a verb's paradigm implies that any stem alternation is actually found; on the other hand, the stem which is classified as occurring 'elsewhere in the paradigm' might turn out to be the only one within the paradigm. In other words, from the point of view of the possible stem alternation (allomorphy) in the paradigm,

With regard to the information content (the '*signatum*') of the two endings under discussion, the scholars claim that "-*u* can be thought of as the default exponent […] realizing merely [the (morpho)syntactic content] 'Locative-' (or 'Vocative-Case'), whereas –*e* is more specific, realizing 'Locative (or 'Vocative'), minority stem alternant'".[40] I think the reader will be familiar enough with the general framework adopted here to see that the additional information content which has been attributed to the ending –*e*, i.e. 'minority stem alternant', is intramorphological in nature: knowing that a stem alternant has a given paradigmatic distribution is, in fact, of no help for the interpretation (nor even for the syntactic or pragmatic use) of the word-form of which that stem alternant is part.

Summing up so far, the 'rival' endings –*u* and –*e* under discussion are equivalent with regard to the morphosyntactic content which they realise (i.e. 'Locative (or Vocative) singular') and with regard to the information content about membership in one of the inflectional classes of the system.[41] What makes them different instead is a difference in the paradigmatic distribution of the stem alternants which co-occur with either of them.

According to Cameron-Faulkner and Carstairs-McCarthy, the additional *signatum* 'minority stem alternant' attributed to the ending –*e* which occurs in the Locative and Vocative singular inflection of some nouns would be syntagmatic, "in that what the affix […] points towards is not a pattern of affixal realization in *other* cells of the paradigm (i.e. an inflection class), but rather the shape of the stem that co-occurs with it in *the same* cell. At the same time, [this *signatum*] is paradigmatic, in that the aspect of stemshape, that is crucial, is distributional rather than phonological: what matters is not that the stem [has a given shape, to be described in phonological terms (for instance, 'palatalized')], but rather that the same stemshape does not occur in most of the other cells."[42]

5.4.2.3 A sintagmatic signatum *for some inflectional endings of Italian (Maiden 2000)*

Maiden (2000) confers an intramorphological *signatum* on the lines of what was introduced in the last section to some inflectional endings of the Italian strong *Perfetto*

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the 'minority stem alternant' would have the feature [+ allomorphy], while the 'elsewhere stem' would be the default, that is, it should be assumed to be underspecified for that feature.

[40] Cameron-Faulkner & Carstairs-McCarthy (2000: 823).

[41] Actually, they do not provide any information of this kind, being both 'class-default' (cf. Cameron-Faulkner & Carstairs-McCarthy (2000: 825).

[42] Carstairs-McCarthy & Cameron-Faulkner (2000: 832).

Semplice. This inflectional pattern, labelled 'Pyta', was illustrated in Ch.4 as one of the allomorphy patterns of the Italian verbal system; here we will pay greater attention to its inflectional desinences. For ease of legibility, the inflectional pattern under discussion is being reported below, both in its abstract look (5.16) and as it appears in the second-conjugation verb Mettere 'put' (5.17):

(5.16)   PYTA-pattern

	1st singular	2nd singular	3rd singular	1st plural	2nd plural	3rd plural
Perfetto Semplice	S_{PYTA}-**i**	S_1	S_{PYTA}-**e**	S_1	S_1	S_{PYTA}-**ero**

(5.17)   METTERE 'put'

	1st singular	2nd singular	3rd singular	1st plural	2nd plural	3rd plural
Perfetto Semplice	'misi	met'testi	'mise	met'temmo	met'teste	'misero

As pointed out by Maiden (2000), the allomorph shared by the persons 1st singular, 3rd singular and 3rd plural of the verbs conforming to the Pyta pattern is, in many cases, the continuant of a 'perfective stem', which in the Latin system characterised the Perfect (Indicative and Subjunctive), the Pluperfect (Indicative and Subjunctive) as well as the Future Perfect (cf. Aronoff (1994:31ff.)). In Latin, the presence of the perfective stem correlated with perfective aspect, in such a way that the *signatum* of that stem may be reasonably claimed to be 'Perfective aspect'.[43] Yet this is not the case with the Italian Pyta stem: as argued by Maiden, the presence of that stem does not correlate with any aspectual property of the inflected form; in the domain of the *Perfetto Semplice*, the Pyta stem rather characterises stem-stressed forms. In this regard, Maiden (2000) claims that, in the transition from Latin to Italoromance, the Pyta allomorphs characterising the Italian strong *Perfetto Semplice* would have been reanalysed, as being inherently stressed. Accordingly, the fact that in Italian the Pyta stem alternant is found only in the *Perfetto Semplice* would be an accident, due to the fact that in Modern Italian the *Perfetto Semplice* is the only sub-paradigm coming from the Latin perfective system which retains some stem-stressed forms.

In the second part of his paper, Maiden focuses on the relationship between the Pyta stem alternant and the inflectional endings that accompany it. In the *Perfetto Semplice* domain - the scholar points out - the presence of the Pyta stem always presupposes unstressed endings and the other way round. According to Maiden's analysis, in the

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[43] Notice that this is an extramorphological (in particular, (morpho)syntactic) *signatum*, in that aspect is relevant to the syntax of verbs.

Perfetto Semplice there would exist a syntagmatic sign-relationship between the Pyta stem alternant and the unstressed endings which co-occur with it. In particular, the Pyta stem should be regarded as the *signatum* of those unstressed endings. It is undeniable that the co-occurrence of the Pyta stem alternant with unstressed endings is systematic in the *Perfetto Semplice*, and this fact could reasonably have triggered the mechanism of 'meaning assignation', making the Pyta stem the *signatum* of those endings.[44] Furthermore, this kind of analysis crucially allows us to avoid a situation of desinential synonymy, in compliance with the Principle of Contrast. Facts are as follows. We know from Ch.3 that the Italian *Perfetto Semplice* has two patterns of inflection, the 'strong' one and the 'weak' one. Consider, for instance, the two verb-pairs METTERE 'put' and BATTERE 'beat' on one hand and VENIRE 'come' and DORMIRE 'sleep' on the other. Table (5.5) illustrates the *Perfetto Semplice* of these verbs:

		1sg.	2sg.	3sg.	1pl.	2pl.	3pl.
Second	S **Mettere**	*mìsi*	*mettésti*	*mìse*	*mettémmo*	*mettéste*	*mìsero*
Conjugation	W **Battere**	*battéi*	*battésti*	*batté*	*battémmo*	*battéste*	*battérono*
Third	S **Venire**	*vènni*	*venìsti*	*vènne*	*venìmmo*	*venìste*	*vènnero*
Conjugation	W **Dormire**	*dormìi*	*dormìsti*	*dormì*	*dormìmmo*	*dormìste*	*dormìrono*

Table 5.5 -

As pointed out by Maiden, the problem with these pairs is that, as far as the inflectional endings of the persons 1st singular, 3rd singular and 3rd plural are concerned, they seem to involve desinential synonymy: for instance, the unstressed *–i* of *misi* 'I put' seems to be synonymous with the stressed *–éi* of *battéi* 'I beat' in that, as long as morphosyntactic content is considered, both of those endings should 'mean' '1st person singular (*Perfetto Semplice*)'. The same is true for the endings of the pair *vènni* / *dormìi*, and for all other forms shaded in Table 5.5. Notice also that in this case the factor 'Inflection Class' seems to have no role in the choice of one ending over the other: in fact, Mettere 'put' and Battere 'beat' both belong to the second conjugation, while Venire 'come' and Dormire 'sleep' both belong to the third.

What differentiates the *Perfetto* endings, say, *–i* ≈ *-éi* of the pair *misi* 'I put' / *battéi* 'I beat', is the paradigmatic distribution of the stem alternant that co-occurs with either: in particular, the stem alternant co-occurring with the unstressed *–i* is the 'minority alternant Pyta', peculiar to the persons 1st singular, 3rd singular and 3rd plural of the *Perfetto Semplice*; on the other hand, the stem alternant co-occurring with the stressed

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[44] Cf. the definition of *signans* and *signatum*, in §5.2.

ending –*éi* is the default one or, as Cameron-Faulkner and Carstairs-McCarthy would put it, "the same as the one generally found elsewhere in the paradigm". The same is true for all other apparently synonymous ending-pairs found in the *Perfetto Semplice*, i.e. *-e ≈ -é*, *-ero ≈ -érono* for the second conjugation, and *–i ≈ -ìi*, *-e ≈ -ì*, *-ero ≈ -ìrono* for the third conjugation (cf. Table 5.5). According to Cameron-Faulkner & Carstairs-McCarthy's analysis, the unstressed *–i* of *misi* 'I put' would create the content '1st person singular (*Perfetto Semplice*), minority stem alternant', while the stressed ending *–éi* of *battéi* 'I beat' should be intended as creating the content '1st person singular (*Perfetto Semplice*), default stem alternant'.

In these terms, the 'rival' endings characterising some forms of the Italian *Perfetto Semplice* of second- and third-conjugation[45] verbs are no longer synonymous, therefore obeying the Principle of Contrast.

Notice that, if this analysis is correct, the 'information content bundle' attributed to the rival *Perfetto Semplice* endings would contain two parts, a (morpho)syntactic one (i.e., the values for the categories 'Person and Number'), and an intramorphological one (i.e. the value for the category which I am calling 'Kind of Stem' - cf. §5.5). Schema (5.18) illustrates the morphological analysis of the word-form *misi* 'I put', where the informational content at issue is assumed to be cumulated in the ending:

(5.18) *misi* I put	STEM	ENDING	Morphological Structure
	mis	*i*	*Signans*
	PUT	1st singular + PYTA Stem	*Signatum*
	Lexical	Morphological + Syntactic	Level of interpretation

5.4.2.4 *The syntagmatic intramorphological signatum of the thematic vowel*

In this paragraph I am bringing together the two strands of the previous sections, to show that the thematic vowels of the Italian verbal system also have a *signatum* on the syntagmatic dimension. In order to do so, I am focusing first on the 'stressed endings' which, according to Maiden's (2000) analysis, would characterise the persons 1st singular, 3rd singular and 3rd plural of the Italian weak *Perfetto Semplice*, i.e. *–éi, -é, -érono*

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[45] Notice that in the third conjugation only one verb exhibits the strong *Perfetto*, i.e. VENIRE 'come'.

for second-conjugation verbs, and *–ìi, -ì, -ìrono* for third-conjugation verbs (cf. Table 5.5 above). Aside from the 3ʳᵈ singular endings *–é* and *-ì* which, according to my own analysis (cf. Ch.3, §3.3.1.3), deserve the label 'inflection proper', all other desinences under discussion would be linearly complex: in particular, they should consist **in** the 'inflection proper' added to a stressed thematic vowel.[46] As far as their content is concerned, they have been claimed to create a given combination of values for the (morpho)syntactic categories of Person and Number, together with the (intramorphological) information 'default stem alternant'.

In my view, in those complex endings, it is the thematic vowel what realises the informational content 'default stem alternant', the 'inflection proper' creating the (morpho)syntactic content alone. Accordingly, the morphological analysis of the word-form *battéi* 'I beat' would be:

(5.19)	STEM	ThV	ENDING	Morphological structure
	batt	é	i	*Signans*
	BEAT	Default Stem	1ˢᵗ person singular	*Signatum*
	Lexical	Morphological	Syntactic	Level of interpretation

Let us now compare the word-form *battéi* 'I beat', displaying thematic vowel and default stem, with *misi* 'I put', without thematic vowel and with Pyta stem. Schematically:

(5.20)	(a) *battéi* 'I beat'	STEM	THEMATIC VOWEL	ENDING	Morphological Structure
		batt	*é*	*i*	*Signans*
		BEAT	Default Stem	1ˢᵗ singular	*Signatum*
		Lexical	Morphological	Syntactic	Level of interpretation
	(b) *misi* I put	STEM		ENDING	Morphological Structure
		mis		*i*	*Signans*
		PUT		1ˢᵗ singular + PYTA Stem	*Signatum*
		Lexical		Syntactic + Morphological	Level of interpretation

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[46] Maschi (2005: 99) label such complex endings 'thematic', just because of the presence of the thematic vowel in them; see also Vanelli (2007: 1803).

As it will be probably recalled, a similar schema was drawn for the other kind of intramorphological *signatum* attributed to the thematic vowel, i.e. 'Inflection Class' (see §5.4.1.1, (5.13b)); in that case, I compared the word-form *amate* 'you (pl.) love' with *ama* '(s)he loves', the former having the inherently class-identifier thematic vowel and the latter having a class-identifier inflectional ending: crucially, the intramorphological *signatum* 'First Conjugation' was claimed to lie in two different units of analysis: the thematic vowel in *amate* and the inflectional ending in *ama*. I claim that the comparison between *battéi* 'I beat' and *misi* 'I put' parallels the one between *amate* 'you (pl.) love' and *ama* '(s)he loves', in that an intramorphological *signatum* should lie in the thematic vowel, in one case, and in an inflectional ending (cumulated with some (morpho)syntactic content) in the other. However, there is at least one difference in the analysis of those two pairs: while in the pair *amate*, *ama* the relevant intramorphological *signatum* is exactly the same (actually, we have the same value, 'First', for the same morphological category 'Conjugation'), in the case of *battéi* and *misi* the 'category' is the same (call it 'Kind of Stem', or simply 'Stem') but the values are different and mutually excluding, being 'Default' for the thematic vowel of *battéi* and 'Pyta' for the inflectional ending of *misi*.

5.4.2.5 'Default Stem' is not the same as 'stem-default'

At this point, it is worth noticing that the intramorphological meaning 'Default Stem' should not be conceived of as the syntagmatic counterpart of the 'class-default' value, which was attributed to some of the inflectional endings of the Italian system in §5.4. As it will be probably recalled, in that paragraph I claimed that the value '(class-)default' should be understood as 'underspecified for the category Inflection Class'. In other words, an affix labelled as 'class-default' would not contain any mention of inflection class. In contrast, claiming that the *signatum* of the thematic vowel on the syntagmatic dimension is 'Default Stem' does not mean that the thematic vowel is underspecified for the category 'Kind of Stem'. The 'Default Stem' signalled by the thematic vowel is in fact a specific stem of the paradigm. Remember that one of my problems in Ch.3 was just identifying the 'Default Stem' in a paradigm; finally, Pirrelli and Battista's Overall Distribution Schema provided me a way to anchor the 'Default Stem' to a given set of cells in the paradigm, defined in terms of morphosyntactic properties; what I have said in this section about the syntagmatic meaning of thematic vowels allows me to say that a stem is the default in a paradigm simply because it

stands before the thematic vowel in a word-form, with no mention of the morphosyntactic properties that form expresses.

5.4.3 The cumulation of intramorphological signata *in the thematic vowel*

Judging from both the Polish nominal endings surveyed in §5.4.2.2, and the Italian unstressed endings of the strong *Perfetto* discussed in §5.4.2.3, it seems as if the syntagmatic intramorphological *signatum* 'Kind of Stem' is mutually incompatible with the paradigmatic *signatum* 'Inflection Class'. In fact, both the Polish Locative and Vocative nominal endings *–e* and *–u* and the Italian *Perfetto Semplice* verbal endings *–i*, *-e*, *-ero*, while having been argued to have an intramorphological *signatum* on the syntagmatic dimension, have turned out to be underspecified for the *signatum* 'Inflectional Class' - according to our terminology, they are 'class-default'. A possible conclusion would be that the syntagmatic *signatum* 'Kind of Stem' should be invoked just in those cases in which a formal difference between two grammatically equivalent affixes cannot be related to a difference in terms of inflectional class. In other words, the syntagmatic *signatum* 'Kind of Stem' seems to be a sort of 'last resort', to be appealed to just in those cases in which the paradigmatic *signatum* 'Inflection Class' cannot be of help for the purpose of differentiating two grammatically equivalent inflectional affixes.

Yet thematic vowels seem to provide evidence to the contrary. In §5.4.1.1 and §5.4.2.4 I treated the thematic vowel as the 'dedicated *locus*' for the realisation of a given *signatum* of intramorphological kind, whether paradigmatic or syntagmatic. What I would like to emphasise here is that the two *signata* attributed to thematic vowels are not mutually incompatible: in particular, the thematic vowel of *battéi* 'I beat', which had been argued to have the *signatum* 'Default Stem' on the syntagmatic dimension, should be thought of as displaying the paradigmatic *signatum* 'Second Conjugation' as well. As argued earlier, those *signata* are both intramorphological, and should be cumulated with each other in the thematic vowel. Schematically, the whole analysis of the word-form *battéi* 'I beat' would be therefore:

(5.21)	STEM	THEMATIC VOWEL	ENDING	Morphological Structure
	batt	*é*	*i*	*Signans*
	BEAT	Default Stem + Second Conjugation	1st singular	*Signatum*
	Lexical	Morphological	Syntactic	Level of interpretation

Notice that the cumulation of intramorphological *signata* discussed in this chapter would not be a characteristic property of the thematic vowels of the *Perfetto Semplice* alone, but would characterise all thematic vowels in the system. So, as the thematic vowel of *battéi* 'I beat' should be assumed to have the (paradigmatic) meaning 'Second Conjugation' cumulated with the (syntagmatic) meaning 'Default Stem', likewise the thematic vowel of *amàte* 'you (pl.) love' – to use the same example of §5.4.1.1 - should have the meaning 'Default Stem' in addition to the meaning 'First Conjugation'.

From what has been said in this paragraph, the thematic vowels of the Italian verbal system turn out to be synonymous as far as the value for the category 'Kind of Stem' is concerned (since they all signal the Default Stem on the syntagmatic dimension). What differentiates them is their meaning on the paradigmatic dimension, i.e. a given value for the category 'Inflection Class', which can guarantee that the Principle of Contrast is met.

5.4.3.1 Aronoff (1994): the thematic vowel as a property of a stem

In discussing the stems of the Latin verbal system, Aronoff (1994) repeatedly claims that any thematic vowel[47] should be intended as being "associated directly with stems of lexemes rather than with entire lexemes".[48] Latin verbs are traditionally classified into four conjugations, according to the thematic vowel which shows up in the Present Active Infinitive.[49]

Moreover, three basic stems (cf. Ch.3, §3.2.1.1) are normally recognised for each verb, labelled 'Present Stem', 'Perfect Stem' and 'Third Stem'.[50] Among these three stems – the scholar claims – only the Present Stem is consistently found to be accompanied by the thematic vowel across conjugations. For that reason, the thematic vowel should be seen as "firmly rooted only in the present stem of verbs", that is – as far as I can see - as

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[47] Called 'theme vowel' by the scholar, see fn. 33.
[48] Aronoff (1994: 49).
[49] Taken from Aronoff (1994: 45).
[50] On the label 'third stem', see Aronoff (1994: 37ff.).

an actual property of the Present Stem alone. As far as the co-occurrence of the thematic vowel with nonpresent stems is concerned, that is consistently observed only in first- and fourth-conjugation verbs, but Aronoff claims that this should be seen as "a secondary phenomenon".

Although I am claiming that thematic vowels (both those of the Italian verbal system and those of the Latin verbal system) are a property of lexemes rather than of stems[51], it is still true that they consistently co-occur only with the Present Stem of Latin verbs, as pointed out by Aronoff. I claim that those views are not so incompatible as they might seem, however, provided that one is prepared to understand the fact that the thematic vowel consistently co-occurs only with the Present Stem as evidence for the fact that a given stem may constitute the *signatum* of the thematic vowel, on the syntagmatic dimension. In Aronoff's view, thus, the thematic vowels of Italian should be seen as 'firmly rooted only in the Default Stem of verbs'. Notice that this is in line with diachronic evidence, since the Italian Default Stem would derive from the Latin Present Stem, indeed.

5.5 Summary and conclusion

We saw in Ch.2 that the main trouble with thematic vowels in the Structuralist framework concerned their being apparently meaningless, 'empty'. On one hand, a thematic vowel can easily be isolated as a formal unit within at least some of the word-forms in a verb's paradigm, opening the door to the intuition that it is a morpheme; on the other hand, its lack of any patent meaning actually prevents us from identifying it as a morpheme in the sense of Saussurean sign. Crucially, the existence of items such as thematic vowels challenges the Structuralist assumption that words in a language may be accounted in its entirety in terms of morphemes.

Nevertheless, if thematic vowels could be attributed any meaning, we would be able to claim that those are morphemes, Saussurean signs.

In this chapter I have tried to show that, once intramorphological information such as 'inflection class identification' or 'stem identification' is taken into account as part of the content of a given morphological unit, then the thematic vowels of Italian verbs may actually be given a meaning ('*signatum*') or even more than one ('*signata*'). The

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[51] See also Taylor (2008: 234, fn. 4), commenting on Aronoff (1994) as follows: "Nevertheless, it is still useful to be able to refer to verbs [i.e. entire lexemes] by conjugation class" (my emphasis).

implication is that thematic vowels may be considered as Saussurean signs, or morphemes, in the classical sense of the term.

In particular, the thematic vowels of the Italian verbal system have been claimed to have two meanings: on one hand, they signal the inflection class that the verb belongs to; on the other hand, they signal that the stem with which they co-occur is the Default Stem in the paradigm.

Both of those meanings are 'intramorphological', in the sense that they serve nothing but the morphological machinery of the language. Knowing that a verb belongs to a given conjugation, or that a given stem is the default one in a verb's paradigm, is admittedly of no help for the language communicative purposes. In fact, all information needed for a word-form to be correctly interpreted is provided by items, other than the thematic vowel: so the stem, encoding the lexical meaning, signals the lexeme that the word-form represents, and the inflectional ending, carrying the (morpho)syntactic content, allows the word-form to be correctly collocated in a phrase. Nevertheless, the *signata* of a thematic vowel can be claimed to be of great importance for cognitive purposes, notably for the development of the 'morphological competence' in language-learning children. From this point of view, knowing that a verb belongs to a given conjugation will lead the choice of the endings to be used for the inflection of the verb in all paradigm cells. As far as the other intramorphological *signatum* of the thematic vowel is concerned, one might be led to believe that the identification of the default stem in a verb's paradigm is of no interest, even from the point of view of the possible implications on language acquisition. In this regard, I would say that identifying the default stem in a paradigm is important because it is the stem involved in the formation of regular complex stems, namely all the stems which are not included in a verb's lexical representation. In the next chapter, I will discuss a couple of cases in which the privileged relationship between the thematic vowel and the 'Default Stem' have been exploited by the Italian verbal system in diachrony.

In §5.2.2 I was concerned with 'lexical' and 'grammatical' meaning; I associated the former with the stems of Italian verbs, and the latter with the inflectional endings. Now I claim that the intramorphological *signata* attributed to thematic vowels share some characteristic features with lexical meaning and some others with grammatical meaning: they resemble the lexical meaning, in that they are properties of a word-form which have to be specified in a verb's lexical entry, instead of being acquired in the

course of the inflection process, by way of the syntax; on the other hand, they also resemble grammatical meaning, because they are organised into a close system of oppositions, which may be described in terms of categories and properties: so the intramorphological *signatum* of a thematic vowel on the paradigmatic dimension could be understood as a given value ('property', in the terminology of Matthews (1972)) for the category 'Inflection Class'; likewise, the intramorphological *signatum* on the syntagmatic dimension could be seen as a given value for the category 'Kind of Stem'. The relevant Categories and Properties for the intramorphological *signata* which have been introduced in this chapter are schematised above:

(5.22) **MORPHOLOGICAL CATEGORIES**   **MORPHOLOGICAL PROPERTIES**

Inflectional Class	First, Second, Third
Kind of Stem	N-pattern, U-pattern, PYTA-pattern

Both the intramorphological meanings under discussion have been shown to be realised not only by thematic vowels, but also by some inflectional endings of the Italian verbal system: in particular, some endings in the Present (Indicative and Subjunctive) of the first-conjugation verbs share the property of being 'class-identifiers' with thematic vowels. In a similar way, some desinences of the strong *Perfetto Semplice* of second- and third-conjugation verbs share the property of identifying the stem which co-occurs with them.[52] What differentiates thematic vowels from the inflectional endings having some intramorphological *signatum* is that, in the case of the endings, the intramorphological content would always be cumulated with some (morpho)syntactic content (namely a combination of values for the categories of Person and Number), while in the case of the thematic vowels the intramorphological content would be the only one being realised. That makes the Thematic Vowel (as a slot in a word-form's morphological structure) look like the 'dedicated *locus*' for the realisation of the intramorphological content in a word-form.

To conclude this chapter, and to pave the way to what I will discuss in the next chapter about the sign-relationship between the thematic vowel and the Default Stem, I would like to say something more about the characteristic features of the 'Default Stem', notably about the informational content that this should be assumed to realise. In §5.4.2.5 I pointed out that the label 'Default Stem' should not be seen as the

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[52] Remember that in this case, contrary to the former, the present information content of the thematic vowel and of the ending is not quite the same: actually, the thematic vowel signals the 'Default Stem', while the endings point towards the 'Pyta Stem'.

syntagmatic counterpart of the 'class-default' value which was attributed to some endings of the system (cf. §5.4): on one hand, the Default Stem towards which the thematic vowel points is a specific stem in the paradigm (so the thematic vowel cannot be said to be underspecified for the category 'Kind of Stem' as much as a class-default affix was claimed to be underspecified for the category 'Inflectional Class'); on the other hand, it is the Default Stem which seems to be underspecified for something: compared to all other stems of the paradigm, the Default Stem would be underspecified as for its paradigmatic distribution.

Carstairs-McCarthy concludes his 2002 paper by suggesting that, under some conditions, a given paradigmatic distribution should be counted as the intramorphological *signatum* of a stem. The examples used by the scholar to support that claim are the stem allomorphy patterns characterising some Italian verbs, that we know from Ch.4 (§4.3).

Consider, for instance, the second-conjugation verbs SPEGNERE 'turn off' and METTERE 'put', as they appear in their inflection for the Present Indicative and Subjunctive:

	1sg.	2sg.	3sg.	1pl.	2pl.	3pl.
SPEGNERE 'turn off'	speng-o	spegn-i	spegn-e	spegn-(a)mo	spegn-e-te	speng-ono
	speng-a	spegn-a	spegn-a	spegn-(a)mo	spegn-(a)te	speng-ano
METTERE 'put'	mett-o	mett-i	mett-e	mett-(i)amo	mett-e-te	mett-ono
	mett-a	mett-a	mett-a	mett-(i)amo	mett-(i)ate	mett-ano

Table 5.6 -

As will be noted, the minority stem alternant /speng-/ of Spegnere 'turn off' cannot be claimed to constitute the *signatum* of the endings that co-occur with it, because the same endings are used also in the inflection of the verb Mettere 'put', which displays no stem alternation.

According to Carstairs-McCarthy (2002: 54-55), in this case the stem alternant /speng-/ would not be the *signatum* of the endings which co-occur with it; it would rather be a *signans*, having its own distribution as a *signatum*. In particular, it would have the *signatum* 'Appears in the cells 1st singular and 3rd plural Present Indicative, as well as in the singular and 3rd plural Present Subjunctive'.[53]

Now, in §5.2.2 I said that a verbal stem primarily realises a lexical content (call it 'Lexeme X'). It follows that, in a stem like /speng-/, the intramorphological *signatum* 'U-pattern' should be supposed to be realised in cumulation with the lexical content.

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[53] As will probably be recalled from Ch.4, §4.3, this paradigmatic pattern is labelled 'U-pattern'.

Schematically, the representation of a word-form having the minority stem alternant /speng-/ would be:

(5.23)	STEM	ENDING	Morphological Structure
	speng	*o*	*Signans*
	TURN OFF + 'U-pattern'	1st singular (Present Indicative)	*Signatum*
	Lexical + Morphological	Syntactic	Level of interpretation

Going back to the issue of how to define a 'Default Stem' I claim that, as far as its informational content is concerned, a 'Default Stem' should realise some lexical meaning alone, with no mention of its distribution in the paradigm. In other words, the 'Default Stem' would be underspecified as for its paradigmatic distribution. Evidence for this claim is that the Default Stem, unlike the minority stem alternants appearing in the relevant allomorphy patterns of the Italian verbal system, is found not to have a consistent paradigmatic distribution across verbs: in the so-called 'regular verbs' the Default Stem is, in fact, the only one, and it has the widest conceivable paradigmatic distribution – simply, it is used throughout the paradigm. In less regular verbs, namely in verbs with more than one stem alternant, the distribution of the Default Stem is not that wide: in particular, the more stem alternants a given verb has, the less wide paradigmatic distribution its 'Default Stem' will have.

Therefore, what the thematic vowel would signal, on the syntagmatic dimension, is that the stem which co-occurs with it only has some lexical meaning, being underspecified as for its paradigmatic distribution.

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Chapter Six

A case of exaptation in the evolution of the Italian verbal system

6.1 Introduction

This chapter deals with the diachronic development of a peculiar inflectional pattern of the Italian verb system, involving a thematic vowel which originally had a different use in the language. In Lass's (1990) terms, this should be understood as an instance of linguistic 'exaptation', i.e. "the opportunistic co-optation of a feature whose origin is unrelated or marginally related to its later use".[1]

6.2 Again on the N-pattern

The label 'N-pattern' (cf. Maiden (2003, 2004, 2011) designates a recurrent pattern of alternation in the inflectional paradigm of most Romance verbs such that "the present tense first, second and third persons singular, the second person singular imperative, and the third person plural share a [common element, mostly a] root distinct from that of the remainder of the paradigm".[2] The Italian third-conjugation verbs (i.e. those with 'thematic vowel' /i/), show several instances of N-pattern. Consider, for example, the verbs MORIRE 'die' and USCIRE 'go out':

	MORIRE 'die'		USCIRE 'go out'	
	Present Indicative	**Present Subjunctive**	**Present Indicative**	**Present Subjunctive**
1sg.	*muoi-o*	*muoi-a*	*esc-o*	*esc-a*
2sg.	*muor-i*	*muoi-a*	*esc-i*	*esc-a*
3sg.	*muor-e*	*muoi-a*	*esc-e*	*esc-a*
1pl.	*mor-iamo*	*mor-iamo*	*usc-iamo*	*usc-iamo*
2pl.	*mor-ite*	*mor-iate*	*usc-ite*	*usc-iate*
3pl.	*muoi-ono*	*muoi-ano*	*esc-ono*	*esc-ano*

Table 6.1 – N-pattern

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[1] Lass (1990: 80). Notice that this view of exaptation has been modified in Lass (1997). De Cuypere suggests to broad the definition of exaptation as follows: "[exaptation is] a language change in which a non-functional language structure becomes functional or in which a functional language structure is reused for a different function".
[2] Maiden (2011: 241).

As Table 6.1 shows, these two verbs are inflectionally equivalent and both exhibit allomorphy in their lexical roots.[3] Notice that, although the phonetic substance of their alternations is different, the alternation pattern is one and the same.

The N-pattern is generally regarded as a manifestation of a morphome (in the terms of Aronoff (1994)). A definition of the morphome is certainly outside the scope of the present work;[4] for the present purposes this can be conceived as a morphologically abstract function, grouping together some of the cells of a paradigm and marking the word-forms in those cells as sharing a formal element (cf. O'Neill (2011: 70)). Aronoff (1994), who first acknowledged morphomic structures in the inflectional paradigm, claims that morphomes are endowed with psychological reality, i.e., they are part of a native speaker's competence. In this sense, morphomes can prove the existence of an autonomously morphological level of linguistic analysis: going back to the N-pattern above, it is easy to see that the paradigm cells of the singular and third plural of the Present Indicative and Subjunctive do not constitute a natural class in morphosyntactic or semantic terms.

It is traditionally recognised that the principal source of the N-pattern is the historical differentiation in quality between stressed and unstressed vowels (cf. Maiden (2011)). Actually, as Table 6.1 shows, the word forms of the present tense singular and third plural are stressed on the root ('rhizotonic'), while the remainder of the paradigm has word forms stressed elsewhere ('arrhizotonic'). Indeed, a phonetic differentiation between stressed and unstressed vowels can easily account for the alternation observed in the verb MORIRE 'die' above: in the earlier stages of Italian, the vowel /o/ diphthongised to [wo] in stressed position, yielding the alternation *muòio / morìte* (cf., for instance, Loporcaro (2011)). Although the diphthongization rule is no longer active in Modern Italian, it could be claimed that it left a residual mark which speakers simply memorised as a lexical idiosyncrasy of the verb at issue, without any distributional generalisation at the paradigmatic level.

However, this is not the case with the verb USCIRE 'go out', since no phonological rule - neither synchronic nor diachronic - could account for the alternation between /esc-/ and /usc-/. Rather, Maiden (1995b) accounts for that alternation in terms of a

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[3] Following Aski (1995), the present analysis only deals with alternation in root-vowels. Consonantal alternations (in MORIRE mwo/mo[r]] – mwo[j] and in USCIRE u/e[ʃʃ] – e[sk]) are not taken into account.

[4] On the notion of morphome, cf. O'Neill (2011).

suppletive conflation of two distinct etyma, i.e. the verb *exire* (OIt. *escire* 'go out'), and the noun *uscio* 'threshold'.[5] Clearly, the idea that the N-pattern can serve as a distributional template guiding a suppletive replacement supports the claim that this morpheme is endowed with psychological reality.[6]

It is true that suppletive verbs such as USCIRE 'go out' are few and far between in Italian. Accordingly, even though it seems plausible that the N-pattern might have played some kind of role in the paradigmatic arrangement of the root-alternants of USCIRE, it could still be objected that this template just lends itself to the accommodation of a few sporadic lexical exceptions.

But consider now the verb FINIRE 'end, finish', again from the Italian third conjugation:

	FINIRE 'end, finish'	
	Present Indicative	**Present Subjunctive**
1sg.	*fin-isc-o*	*fin-isc-a*
2sg.	*fin-isc-i*	*fin-isc-a*
3sg.	*fin-isc-e*	*fin-isc-a*
1pl.	*fin-iamo*	*fin-iamo*
2pl.	*fin-ite*	*fin-iate*
3pl.	*fin-isc-ono*	*fin-isc-ano*

Table 6.2

In this verb, the N-pattern manifests itself through a segment *–isc-* occurring between the (invariant) root and the (regular) inflectional endings. Here again, an account on phonological grounds seems implausible: to my knowledge, there is no natural phonological rule which could add (or delete) a segment like *–isc-* whenever a given context is met.

It would be also hard to claim that the segment *–isc-* is a lexical idiosyncrasy of the verb under discussion. In fact, a close inspection of the Italian third conjugation reveals that the vast majority of verbs in this class exhibits this characteristic feature: out of 450 basic third-conjugation verbs, only 19 to have *–isc-* in their inflection.[7] Notice also that this segment turns out to be involved in the inflection of all third-conjugation verbs productively derived from adjectives or nouns (such as *chairire* 'explain, make clear',

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[5] On the origin of the verb USCIRE 'go out' see also Tekavčić (1983).

[6] As pointed out by Smith (2011: 294), although the N-pattern is not the only morphomic structure identified in the Italian verb system, it is actually the only one which can serve as a template for suppletive alternations.

[7] The list of these verbs will be provided below. For the moment, notice that MORIRE 'die' and USCIRE 'go out' (whose paradigms are illustrated in Table 6.1) are two of those.

from *chiaro* 'clear'; *ingiallire* 'yellow, make yellow', from *giallo* 'yellow'). This extremely high type-frequency suggests that *–isc-* should be more than a simple root-extender, helping to characterise a given alternant in a given pattern of allomorphy: rather, *-isc-* seems to be part of an actual, though peculiar, pattern of inflection. Henceforth, I will use the label 'FINIRE-type' to refer to this peculiar inflectional pattern, including not only the regular third-conjugation endings, but also the segment *–isc-* in the relevant paradigm cells. Once it was demonstrated that the N-pattern played a role in the diachronic development of the FINIRE-type, this morpheme could no longer be associated with isolated idiosyncrasies in the verbal system.

In this view, I will investigate the origin of the FINIRE-type, taking Early Latin as a starting point and focussing on the development of its characteristic segment *–isc-*. This topic is certainly not new: in one interesting paper, Ramat (1992) points out the rise of the FINIRE-type as an instance of degrammaticalisation.[8] After losing its original function the suffix *–SC-* - which in the Latin verbal system was involved in a derivational pattern creating new verbs from verbs, adjectives and nouns – is thought to have been incorporated into the inflectional system of Italian as a relic, an "empty morph". This analysis, though convincing, cannot account for the fact that the suffix, in its development from Latin to Italian, also undergoes a significant paradigmatic re-distribution. In fact, while in the Latin verbal system *–SC-* is found to characterise all the forms of the *infectum* tenses, its Italian reflex is restricted ("downgraded", as Ramat puts it) to the singular and third plural of the present tenses. Following Maiden (2003, 2004, 2011), I will suggest that this paradigmatic re-distribution should be an instance of the attractive force of the 'N-pattern'.

A more innovative aspect of this work is the analysis of the vowel preceding *–sc-*. While in Italian this vowel is only *–i-*, in Latin, as we will see, it could vary among *–a-*, *-e-* and *–i-*. My claim is that in its development from Latin to Italian, the *–i-* of the Italian *–isc-* was reanalysed as a 'thematic vowel', namely the vowel identifying, among other things, the verbal conjugation. We will see that this reanalysis process should be the key point in the integration of *–isc-* into the inflectional system.

After an analysis of *–isc-* in a synchronic perspective (§6.3), I will deal with the diachronic development of the segment (§§6.4 and 6.5). This includes the loss of its original derivational function, its paradigmatic redistribution according to the N-

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[8] See also Allen (1995: 1).

pattern, as well as the reanalysis of the vowel before –sc- as a thematic vowel. This reanalysis, in turn, would trigger the shift of –isc- to the domain of inflection, making the FINIRE-type a true inflectional pattern. In §6.6 I will discuss the advantages of this new inflectional pattern, which can account for its productivity in the system.

6.3 The Italian word-forms with –isc-: synchronic analysis

As will be recalled from Ch.3, I assume that all word forms of the Italian verb system have to conform to the canonical structure (6.1):

(6.1)   ROOT   (**THEMATIC VOWEL**)   (FORMATIVE)   ENDING

In this structure, the brackets mark the units which can be missing without compromising the well-formedness of the resulting word-form. In other words, according to structure (6.1) each word-form of the Italian verb system has to be provided with a ROOT and an ENDING; in addition, it may (but need not) have a THEMATIC VOWEL and a FORMATIVE. Finally, the part in bold indicates that the stress has to fall on the thematic vowel, if there is one.[9]

With structure (6.1) in mind, let us try to analyse two word forms of the paradigm of FINIRE 'end, finish', i.e. the first singular present indicative *finisco* 'I finish', involving the sequence –isc- under discussion, and the first singular imperfect indicative *finivo* 'I finished / was finishing', without –isc-. The first step in the analysis, segmentation, is illustrated in (6.2):

(6.2)		**ROOT**	**THV**	**FORMATIVE**	**ENDING**
	a.	*fin*	*ì*	*sc*	*o*
	b.	*fin*	*ì*	*v*	*o*

According to this analysis, the two forms at issue are supposed to have one and the same morphological structure.

The analysis of the form *finivo* outlined in (6.2b) is quite traditional and uncontroversial (cf. Vincent (1987), Maiden (1995), Pirrelli (2000) amongst others). The informational content expressed by each of the four units can be illustrated as follows:

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[9] On the link between thematic vowels and stress in the Italian verb system, see Meinshafer (2011: 58).

(6.3)	ROOT	**THV**	FORMATIVE	ENDING	**Structure**
	fin	*i*	*v*	*o*	**Form**
	Lexeme	Conjugation	Tense & Mood	Person & Number	**Categories**
	'FINISH, END'	Third	Imperfect Indicative	First Singular	**Content**

In contrast, an analysis of the form *finisco* 'I finish' like that in (6.2a), treating the segment –is*c*- as a morphologically significant sequence 'THEMATIC VOWEL + FORMATIVE', is rather unusual and certainly open to several objections. To begin with, we have seen that in the Italian verb system the first person singular of the Present Indicative is generally found to have a structure 'ROOT + ENDING', i.e. a structure without any THEMATIC VOWEL or FORMATIVE (e.g. *àm-o* 'I love', *tèm-o* 'I fear', *dòrm-o* 'I sleep' – cf. Ch.3). In a system where the morphological structure of a word form seems to be directly associated with the paradigm cell which the form occupies - that is where word forms occupying the same paradigm cell are usually found to exhibit one and the same structure (cf. Ch.3, §3.4) - the analysis in (6.2a.), if correct, has the disadvantage of making a form like *finisco* "irregular" with respect to all others in the system.[10]

Another problem regards the treatment of –*sc*- as a FORMATIVE. In the analysis of the form *finìvo* above (cf. (6.3)), the FORMATIVE –*v*- was associated with the expression of the grammatical categories of Tense and Mood, i.e. Imperfect Indicative. This analysis is supported by the fact that this item appears in all and only the word forms of the sub-paradigm Imperfect Indicative: *finìvo, finìvi, finìva, finivàmo, finivàte, finìvano*. Notice that the same is true for all other formatives of the system. Table 6.3 shows the formatives of the Italian verbal system (cf. Ch.3, §3.2.1.1), together with the sub-paradigms in which they occur:

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[10] Notice that this 'structural irregularity' affects not only the first person singular present indicative but, more generally, all the other word forms with –*isc*-.

Complex Stem			Ending	
Lexical Stem	ThV	Stem Formative		Subparadigm
fin	*i*	*v*	*o*	Impf. Indicative
fin	*i*	*ss*	*i*	Impf. Subjunctive
fin		*(i)r*	*ò*	Future
fin		*(i)re*	*i*	Conditional
fin	*i*	*re*		Infinitive
fin	*i*	*t*	*o*	Perfect Participle

Table 6.3 – Stem Formatives

Following the line of argument of Ch.5, I claim that the 'meaning' of the stem formatives collected in Table 6.3 (their *signatum*, to use the terminology of Ch.5) should be a given property-combination for the categories of Mood and Tense; I also claim that such a *signatum* is (morpho)syntactic, in that it is relevant to syntax, notably to the phenomenon traditionally known as *consecutio temporum*.

Once formatives have been assigned a meaning, we may claim that each item of the canonical structure, as a position class, conveys a kind of meaning to be interpreted in a specific level of linguistic analysis. Schematically:

(6.4)   STEM   (THV)   (STEM FORMATIVE)   ENDING | **Structure**

      Lexical   Morphological   Morphosyntactic   Morphosyntactic | **Level of analysis**

Clearly, the –*sc*- of the segment –*isc*- looks problematic: as a formative, it cannot be associated with a specific sub-paradigm, in that it appears only in few forms of two distinct sub-paradigms, i.e. Present Indicative and Present Subjunctive.

Although all evidence suggests that a morphological analysis of the segment –*isc*- as 'THEMATIC VOWEL + FORMATIVE' is to be rejected, one of the aims of this chapter is actually to defend it, by showing its advantages.

6.4 The evolution of the suffix –SC- in the Latin verbal system

As discussed earlier, the –*sc*- appearing in the inflection of the Italian FINIRE-type verbs is traditionally acknowledged as the continuant of a Latin suffix –SC-.

In Early Latin, where the present analysis begins, this suffix is found to be involved in a derivational pattern whereby new verbs (henceforth referred to as *sco*-verbs)[11] are formed from verbs, adjectives or nouns. In a *sco*-verb paradigm, the suffix –SC- is found only in the forms of the so-called *infectum* tenses[12] where it occupies the position before

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[11] Cf. Haverling (2000).
[12] I.e. the forms built on Aronoff's (1994) Present Stem – cf. Aronoff (1994: 33ff.)..

the inflectional endings. Table 6.4 shows the relevant paradigm portion of the Latin verb *sentisco* 'become aware of', derived from the verb *sentio* 'feel, perceive':

	INDICATIVE			SUBJUNCTIVE	
	Present	**Imperfect**	**Future**	**Present**	**Imperfect**
1sg	*sentisco*	*sentiscēbam*	*sentiscam*	*sentiscam*	*sentiscĕrem*
2sg	*sentiscis*	*sentiscēbas*	*sentisces*	*sentiscas*	*sentiscĕres*
3sg	*sentiscit*	*sentiscēbat*	*sentiscet*	*sentiscat*	*sentiscĕret*
1pl	*sentiscĭmus*	*sentiscebāmus*	*sentiscēmus*	*sentiscāmus*	*sentiscerēmus*
2pl	*sentiscĭtis*	*sentiscebātis*	*sentiscētis*	*sentiscātis*	*sentiscerētis*
3pl	*sentiscunt*	*sentiscēbant*	*sentiscent*	*sentiscant*	*sentiscĕrent*

Table 6.4 -

A closer look at the *sco*-verbs of Early Latin reveals that the vowel before –SC- can vary among –a-, -e-, and –i-. In the *sco*-verbs derived from verbs the vowel before –SC- varies depending on the conjugation of the base verb (we have, for instance, *amasco* 'fall in love', from the first-conjugation *amo* 'love', *augesco* 'increase, grow', from the second-conjugation *augeo* 'increase, intensify', *vivesco* 'come to life, grow stronger', from the third-conjugation *vivo* ''be alive, live' and *sentisco* 'become aware of', from the fourth-conjugation *sentio* 'feel, perceive'). This suggests that in a *sco*-verb of deverbal kind, the vowel before –SC- should be analysed as the 'thematic vowel' of the base verb. In this view, the derivational strategy involving –SC- seems to require that this suffix be added to the STEM (i.e. the sequence ROOT + THEMATIC VOWEL) of the base verb, the morphological structure of, for instance, *sentisco*, being therefore (6.5):

(6.5) **Structure** ROOT-THV SUFFIX ENDING

  Example *sent-i* *sc* *o*

However, the label 'thematic vowel' for the *sc*-preceding vowel in a form like *sentisco* might be misleading. It should be clear from the above that a thematic vowel - as a unit in the morphological structure of a verb form - has to do with inflection: by signalling conjugation, the thematic vowel can be used for inflecting a verb correctly (cf. Aronoff 1994: 45ff.). On the contrary, the 'thematic vowel' that we are faced with here should rather have a "derivational value": in the form *sentisco*, going back to the example above, the –i- before –SC- signals the inflection class of *sentio*, i.e. the verb from which *sentisco* derives, and not the inflection class of *sentisco* itself. Inflectionally, all Latin *sco*-forms belong to only one conjugation, i.e. the third.

The *sco*-verbs derived from adjectives or nouns, in contrast, only display the vowel –e- before –SC- (e.g. *crudesco* 'become row, fierce or savage', from *crudus* 'uncooked, raw',

rough, unripe', *arboresco* 'grow into wood, become wooden', from *arbor* 'tree'). This vowel cannot be analysed as the 'thematic vowel' of the base.[13] Rather, it is plausible to suppose that this might be segmented along with –SC-, being interpreted as the "onset" of the derivational suffix.[14] (6.6) illustrates the morphological structure of *crudesco*:

(6.6)   ROOT   SUFFIX   ENDING
        crud   *esc*   *o*

Generally, the *sco*-verbs are intransitive and have dynamic value. When the base is a verb, the *sco*-verb matches its base in the opposition intransitive vs. transitive (e.g. *augeo, -ēre* 'increase, intensify' vs. *augesco, -ěre* 'increase, grow'; *frango, -ěre* 'break, smash' vs. *fragesco, -ěre* 'become subdued or tractable') or, more frequently, in the opposition dynamic vs. non-dynamic (e.g. *amo –Are* 'love, be in love' vs. *amAsco, -ěre* 'fall in love'; *sileo, -Ēre* 'be silent' vs. *silEsco, -ěre* 'grow more silent'; *vivo, -Ěre* 'be alive, live' vs. *vivEsco, -ěre* 'come to life, grow stronger'; *scio, -Īre* 'know, be aware of' vs. *scIsco, -ěre* 'try to get to know, find out about'; *sentio, -Īre* 'be aware of, hear, perceive' vs. *sentIsco, -ěre* 'be becoming aware of'; *dormio, -Īre* 'be asleep, sleep' vs. *(con)dormIsco, -ěre* 'fall asleep'). When the base is an adjective or a noun, the *sco*-verb usually expresses the acquisition of the quality denoted by the base: e.g. *macresco* 'become thinner, waste away', from *macer* 'thin, meagre'; *herbesco* 'become covered with grass, spring up', from *herba* 'grass'.

In some cases, *sco*-verbs related to adjectives or nouns are found to have verbal counterparts: Tables 6.5a. and 6.5b. show the two largest families of this kind, i.e. intransitive *sco*-verbs corresponding with transitive verbs of the first conjugation, and dynamic *sco*-verbs corresponding with stative verbs of the second conjugation:[15]

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[13] Here I assume that nouns and adjectives, contrary to verbs, do not have any thematic vowel. For a different position, cf. Scalise (1984).

[14] In this view, -e- should be taken as a "default" vowel in the position before –SC-. On the grammaticalisation of –esc- as an inchoative morpheme see Allen (1995: 3-4).

[15] Data from Haverling (2000).

Base adjective or noun	Verb (Transitive)	Sco-Verb (Intransitive)
ferus 'wild'	*effero, -āre* 'make wild'	*efferasco, -ĕre* 'become wild'
gravis 'heavy'	*aggravo, -āre* 'weigh down'	*aggravasco, -ĕre* 'become heavier'
integer 'untouched, whole'	*integro, -Are* 'restore to a former condition'	*intagrAsco, -ĕre* 'begin anew, break out afresh'
maturus 'ripe, mature'	*maturo, -āre* 'make mature'	*maturasco, -ĕre* 'become ripe, ripen, mature'
genus 'birth, origin, kind'	*genero, -āre* 'beget, create'	*generasco, -ĕre* 'come to birth'
purpura 'purple dye'	*purpuro, -āre* 'make purple, make rosy or bright'	*purpurasco ,-āre* 'become stronger'
robur 'an-oak tree, firmness, strength'	*roboro, āre* 'make stronger, give strenght'	*roborasco, -ĕre* 'become stronger'
unus 'one'	*unio, -Īre*	*unIsco, -ĕre* 'grow into one'

Table 6.5 a.

Base adjective or noun	Verb (Non-dynamic)	Sco-Verb (Dynamic)
aeger 'sick, ill'	*aegreo* 'be ill or sick'	*agresco* 'become physically ill, sicken, grow worse'
albus 'white'	*albeo* 'be white, light, pale'	*albesco* 'grow white, pale, be growing white'
canus 'white'	*caneo* 'be white'	*canesco* 'grow white'
calvus 'bald, bare'	*calveo* 'be bald'	*calvesco* 'lose one's hair, grow bald'
clarus 'clear'	*clareo* 'be clear'	*claresco* 'become bright, shine, clear'
flaccus 'drooping, floppy'	*flacceo* 'have no strength, languish'	*flaccesco* 'lose strength'
flavus 'yellow'	*flaveo* 'be yellow'	*flavesco* 'grow golden, yellow'
hebes 'blunt, obtuse, weak'	*hebeo* 'be dull, feeble'	*hebesco* 'grow blunt or faint'
lentus 'flexible, clinging'	*lenteo* 'be slow'	*lentesco'* become slow, sticky'
mucus 'mucus, snot'	*muceo* 'be mouldy'	*mucesco* 'become mouldy'
niger 'black'	*nigreo* 'be dark'	*nigresco* 'grow dark, blacken'
piger 'lazy, slow'	*pigreo* 'be reluctant'	*pigresco* 'grow sluggish'
putris 'decomposed, rotten'	*putreo* 'be in a state of decay'	*putresco* 'grow rotten'
ruber 'red'	*rubeo* 'be red'	*rubesco* 'grow red'
senex 'old'	*seneo* 'be old'	*senesce* 'grow older, age'
anus 'old woman'	*aneo* 'be an old woman'	*anesco* 'grow older'
ignis 'fire'	*igneo* 'be on fire'	*ignesco* 'catch fire'
lac, lactis 'milk'	*lacteo* 'be full of milk or juice'	*lactesco* 'become milk, gradually develop into milk'
pubes 'the age or condition of puberty'	*pubeo* 'be physically mature'	*pubesco* 'grow towards, physical maturity'
tabes 'wasting away, decay, corruption'	*tabeo* 'be in a state of decay, rot away'	*tabesco* 'waste or dwindle away'

Table 6.5b.

As pointed out by Haverling (2000: 178), in such cases it can be difficult to decide whether the *sco*-verb is derived "directly" from the adjective, or else from a verb which is in its turn derived from the adjective. The vowel before –SC- can be a cue in this sense: a verb like *integrasco*, for instance, displaying –a- before –SC-, will reasonably derive from the first-conjugation verb *integro*.[16] But what about *rubesco*? Is it derived from *rubeo*, or directly from the adjective *ruber*? Given the "default" character of the vowel –e-, it is actually impossible to decide. Clearly, both the verbs *rubeo* and *rubesco* are related to the adjective *ruber*, and *rubesco* can be seen as the "dynamic counterpart" of the (stative) *rubeo*. Nonetheless, *rubesco* is admittedly open to a twofold interpretation.

In one of the most detailed studies on the diachronic development of the Latin *sco*-verbs, Haverling (2000) shows that the system of Early Latin described above - where it was possible to derive *sco*-verbs from other verbs - disappears over time. In the diachronic development from Early to Late Latin, the semantic relationship between the *sco*-verbs and their base verbs becomes blurred: in the latest periods of Latin, we find several *sco*-verbs used in a non-dynamic sense (e.g. *paresco* 'be clear, visible', *placesco* 'please', *pollesco* 'be powerful', *caresco* 'lack, be without', *lippesco* 'be red-eyed') , as well as new *sco*-verbs formed from dynamic verbs from which they do not differ semantically (e.g. *cadesco* = *cado* 'fall', *labiscor* = *labor* 'fall', *fluesco* = *fluo* 'flow, melt', *frendesco* = *frendo* 'grind one's teeth'). This suggests that the suffix –SC- gradually ceases being seen as a mark of a derivation from a verb to another, losing its original derivational function. Notice that this has a significant consequence on the analysis of the vowel before –SC-. In Late Latin, several *sco*-verbs are found in which the vowel before –SC- does not correspond to the thematic vowel of the original base-verb, for instance *obsopesco* 'put or lull to sleep' (originally derived from *obsopio, -īre*), *gemisco* 'sigh' (originally from *gemo, ĕre*), *lippesco* 'be red eyed' (from *lippio, -īre*). As will be recalled from the above, in the system of Early Latin this vowel had been analysed as the thematic vowel of the verb from which a given *sco*-verb derives (cf. the structure (6.5) above). Clearly, such an analysis makes sense only in a system where a *sco*-verb is understood as a secondary formation from another verb. But when the semantic

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[16] Here the derivational path should involve two steps: step one, whereby a "simple" verb is derived from an adjective or noun (so, *integro, -āre* 'restore to a former condition' from *integer* 'untouched, whole'), and step two, whereby a *sco*-verb is derived from the erstwhile verb (so, *integrasco, -ĕre* from *integro, -āre*).

relationship between a *sco*-verb and its original base-verb becomes blurred, the formal relationship between the two gets compromised too: to take one of the examples above, whereas *obsopesco* is no longer understood as a secondary formation from *obsopio*, the analysis of the vowel before –SC- as the thematic vowel of *obsopio* simply becomes pointless. For this reason, it is plausible to suppose that, when the original derivational system breaks down, the vowel before –SC- might be included in the –SC- formation, losing its original morphological autonomy and becoming the "onset" of the suffix (cf. Rudes (1980), Aronoff & Fudeman (2010: 88)).

Such a reanalysis fits into the type that Haspelmath (1995: 8 ff.) labels s e c r e t i o n ,[17] and can be illustrated as in (6.7):

(6.7)

STEM	AFFIX	ENDING
obsop-**i**	**sc**	o

$$\Downarrow$$

obsop	**esc**	o

In a verb like *obsopesco*, the whole segment *–esc-* seems to be reanalysed as a simple root-extender, performing no particular derivational function. Notice that in the course of time, *sco*-verbs of this kind gradually disappear from the system.

In the light of this change, let us consider the development of the *sco*-verbs that we know from Table 6.5, namely those related to verbs which are themselves derived from an adjective or a noun. A verb like *albesco* 'become white', for instance, naturally lends itself to a twofold interpretation: it can be seen as a formation from the second-conjugation verb *albeo, -ēre* 'be white', but can also be related directly to the adjective *albus* 'white'. Clearly, that implies a different analysis of the vowel before –SC-: whereas *albesco* is seen as a deverbal formation from *albeo*, the vowel before –SC- will be analysed as the thematic vowel of the base verb, as shown by (6.8):

(6.8)

ROOT-THV	SUFFIX	ENDING
albe	*sc*	*o*

Whereas the *sco*-verb is interpreted as a deadjectival formation from *albus*, on the contrary, the vowel before –SC- can no longer be treated as a thematic vowel.

It is probable that, when the original derivational system creating *sco*-verbs from verbs breaks down, a verb like *albesco* ceases being regarded as a deverbal formation from

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[17] I.e. the incorporation of a stem element by a stem-following affix.

albeo. However, it can be retained in the system as a deadjectival formation from *albus*, as the other interpretation is available. In this reanalysis, the vowel before –SC- ceases being regarded as the thematic vowel of the base verb, and is taken as the onset of a derivational suffix –*esc*-, whereby *sco*-verbs are derived from adjectives or nouns.

Here several 'parallel forms' attested in Haverling's corpus come into play, i.e. pairs of *sco*-verbs meaning the same but displaying different vowels before –SC-, e.g. *corporasco / corporesco* 'take body, become physical', *gelasco / gelesco* 'freeze, coagulate', *maturasco / maturesco* 'become ripe, ripen, mature', *unisco* 'grow into one' / *unesco* 'be in agreement with', *callesco / callisco* 'acquire a thick skin', *pauperasco / pauperesco* 'become poor, lose wealth'.

In the verb-pair *gelasco / gelesco*, to take one of the examples above, *gelasco* can be analysed as a formation from the first-conjugation verb *gelo, -āre*,[18] while *gelesco*, displaying –e- before –SC-, should derive "directly" from the noun *gelu* 'cold'. (6.9) and (6.10) illustrates the morphological structures of the forms under discussion:

(6.9)   ROOT-THV   SUFFIX   ENDING
   gela   *sc*   *o*

(6.10)   ROOT   SUFFIX   ENDING
    gel *esc*   *o*

Summing up so far, while in the system of Early Latin the suffix –SC- had been involved in the derivation of verbs from verbs, adjectives or nouns, in Late Latin the possibility of creating *sco*-verbs from existing verbs is gradually lost. As a consequence, the vowel before –SC-, which in the deverbal formations had been analysed as the 'thematic vowel' of the base verb, completely loses its morphological autonomy, and is systematically segmented along with –SC-. The whole suffix –*esc*-, where –*e*- is to be interpreted as a "suffix-onset", survives in Late Latin as a mark of a derivational strategy forming verbs from adjectives or nouns.

6.5 On the subsequent adaptation of –esc-

6.5.1 A blending process

The derivational strategy involving the suffix –*esc*-, whereby new verbs are formed from adjectives or nouns, is not the only one available for this purpose in Latin. Indeed, verbs derived from adjectives or nouns via conversion are found in the first, the second

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[18] Cf. Haverling (2000: 407).

and the fourth conjugation of Latin.[19] Among these formations, Maurer (1951: 138) draws particular attention to a group of four-conjugation verbs (with thematic vowel –i-) which, according to the scholar, would be extremely close to the *sco*-verbs under discussion for two reasons, at least: in addition to being themselves derived from adjectives or nouns, those verbs likewise denote a change of state. So in Late Latin we would have two closely related derivational types: *sco*-verbs expressing a change of state with medial action (e.g. *grandesco* 'I become large'), and fourth-conjugation verbs expressing a change of state with causative value (e.g. *grandio* 'I increase'). According to Maurer, the closeness of these derivational processes is proved by the fact that several adjectives and nouns are found to give rise to derivatives in both classes (e.g. *mollesco* 'become soft or yielding' and *molliō, īre* 'make softer', both from *mollis* 'soft'; *inanesco* 'become empty, be emptied, decrease' and *inaniō, -īre* 'make empty', both from *inanis* 'empty, hollow'; *grandesco* 'increase in size, grow, swell' and *grandio* 'increase').

It is Maurer's claim that this formal and semantic compatibility between the denominative verbs in–*esco* –*escere* and those in –*io* –*ire* should have resulted in a blending between the two types, yielding a paradigm like that illustrated in Table 6.6:

	Present Indicative	Present Subjunctive	Imperative
1sg.	*grandēscō*	*grandēscam*	
2sg.	*grandēscis*	*grandēscas*	*grandēsce*
3sg.	*grandēscit*	*grandēscat*	
1pl.	*grandīmus*	*grandiāmus*	
2pl.	*grandītis*	*grandiātis*	*grandīte*
3pl.	*grandēscunt*	*grandēscant*	

Table 6.6

In this 'mixed' paradigm - to be understood as the antecedent of the Italian FINIRE-type - the present tense singular and third plural should come from the *grandesco* type, the remainder of the paradigm being substituted by the forms of the *grandio* type.

In my opinion, a weak point in Maurer's analysis is the way he accounts for the paradigmatic distribution of the forms of the *grandesco* type in the 'mixed' paradigm of Table 6.6. According to the scholar, the presence of these forms only in a few cells of the present tense should depend on a gradual shrinking of their use. Over the course of time, as Maurer claims, the forms of the *sco*-type would become "limited in their use almost entirely to the present tense". That seems an *ex post facto* explanation,

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[19] Cf. Dressler (2002: 98 -99).

unsupported by any independent evidence: after all, as the scholar himself admits, the *sco*-formations show great vitality in the latest periods of Latin, so that such a shrinking in use seems quite improbable. The paradigm of the *grandesco*-type had a paradigmatic shrinking, actually, the segment *–esc-* appearing only in the forms of the *infectum* tenses (cf. §6.4). However, this leads us to suppose the presence of a mixed paradigm with the forms of the *grandesco*-type throughout the *infectum* tenses and the forms of the *grandio*-type elsewhere.

In sum, although Maurer's idea of a blending process between the *grandesco-* and *grandio*-type sounds interesting, his account of the paradigmatic arrangement of the forms involved looks quite unsatisfactory.

It is plausible to suppose that the blending process claimed by Maurer might be an instance of attraction by the N-pattern: in the resulting paradigm, the forms of the *grandesco*-type display the well-known N-shaped distribution, while the remainder of the paradigm has forms of the *grandio*-type.

Indeed, the idea that the N-pattern might have guided the blending process illustrated above should not be excessively striking: after all, we know that this very template in the history of Italian could shape suppletive alternations as well, as in the case of the conflation of the etyma *escire* 'go out' and *uscio* 'threshold' yielding the paradigm of the Modern Italian USCIRE 'go out' (cf. §6.2). In this framework, a blending between the paradigms of the verbs *grandesco* and *grandio* should be conceived as something close to the suppletive conflation of *uscio* and *escire*, except that here the items involved are not two distinct etyma, but rather two secondary verbs derived from the same adjective.

Admittedly, however, such a solution leaves some questions open. These concern: 1) the phonological content of the vowel before *–sc-*: in the 'mixed' paradigm of Table 6.6, the forms of the *grandesco*-type exhibit *–e-* in the position before *–sc-*, while in Italian we always find *–i-* (i.e. *finìsco*, *finìsci* etc., and not **finésco*, **finésci* etc.);[20] 2) the great productivity of the resulting type. As shown earlier (cf. §6.2), in Italian the FINIRE-type characterises the vast majority of third-conjugation verbs, including not only derivational formations from adjectives or nouns, but also a large number of 'basic' (i.e. non-derived) verbs. True, the verb-pair *grandesco* and *grandio* considered above is not the only one lending itself to a blending process like that illustrated in Table 6.6, since

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[20] But consider the Romanian *a citi* 'read', whose Present Indicative retains the peculiar alternation *e -i*: *citesc, citeşti, citeşte, citim, citiţi, citesc.*

we know that verb-pairs like *grandesco* / *grandio* are several in Late Latin; nonetheless, the great productivity of the FINIRE-type in 'basic' verbs still needs to be further justified.

In the rest of this section, I will try to account for this further step in the development of the FINIRE-type, showing how a proper inflectional-type could arise from a paradigm like that of Table 6.6 above. We will see that a key point in this process is the reanalysis, stemming from paradigmatic pressure, of the word forms of the *grandesco*-type, whereby the vowel before *–sc-* was reinterpreted as a thematic vowel.

6.5.2. The reanalysis of the vowel before –sc-

As will have probably been noticed, the 'mixed' paradigm illustrated in Table 6.6 has a striking peculiarity: it exhibits 'columnar' or 'vertical' stress on the root-following syllable throughout the present tenses. In Latin, such a stress pattern is unprecedented as Latin verbs are generally characterised by stress alternation in the present. In fact, stress falls on the root in the singular and third plural (rhizotonic forms) and after the root in the first and second plural (arrhizotonic forms). A different stress pattern is exhibited by the Latin third conjugation, in which the root is stressed throughout the present tenses; here again, the stress falls on the root, and not after it.

An important effect of this exceptional 'columnar' stress is that it can trigger a reanalysis of the word forms of the *grandesco*-type. To see this process, let us focus on the Present Indicative of the 'mixed' paradigm, as shown in Table (6.7):

	Present Indicative		
1sg	*grand*	**e**	*sco*
2sg	*grand*	**e**	*scis*
3sg	*grand*	**e**	*scit*
1pl	*grand*	**ī**	*mus*
2pl	*grand*	**ī**	*tis*
3pl	*grand*	**e**	*scunt*

Table 6.7 -

As the table shows, the aligned stress increases the contrast between the vowel –e- occurring after the root in the forms of the singular and third plural, and the –i- occurring in the first and second plural.

Notice that despite their 'structural compatibility' these vowels have a quite different morphological status: the –i- of the first and second plural is the thematic vowel for Latin fourth-conjugation verbs, while the –e- before –sc- has no morphological

autonomy (cf. §6.4). That is, while in the morphological structure of a form like *grandītis* 'you (pl.) become bigger', the tonic –i- should occupy a dedicated slot (as shown in (6.11) below), the tonic –e- of, for instance, *grandesco* 'I become bigger' would have no dedicated position, as it is part of a "derived root" (6.12):

(6.11) ROOT   THV   ENDING
        grand   *ī*   *te*

(6.12)   ROOT   ENDING
        ┌─────────────┐
        │ ROOT   SUFFIX │
        └─────────────┘
        grand   *esc*   *o*

I claim that the contrast between the thematic vowel –i- and the –e- of –*esc*-, which in the Present Indicative of the 'mixed' paradigm is increased by their stressed position, should have caused the reanalysis of the vowel before –*sc*- as a thematic vowel, and its subsequent shift to –i-. This shift can be regarded as a sort of 'analogical levelling': once the vowel before –*sc*- is identified as a thematic vowel, its phonological content tends to conform to that of the thematic vowel found elsewhere in the paradigm.[21]

In this view, the segment –*esc*- would be re-analysed as a morphologically significant structure 'THEMATIC VOWEL + sc'. Whether this step is correct or not, it is undeniable that in Italian the segment characterising the FINIRE-type verbs is –*isc*-, and not –*esc*-, and that the FINIRE-type is a subclass (indeed, the largest one) of the conjugation with thematic vowel *i*.

Remember that I have assumed that all word forms of the Italian verbal system have to conform to the canonical structure 'ROOT + **THEMATIC VOWEL** + FORMATIVE + ENDING'. Now, a form like *grandìsco* 'I become bigger', having the tonic –i- analysed as a THEMATIC VOWEL and the final –*o* analysed as an ENDING, can clearly fit into the canonical structure above providing that the segment –*sc*- is analysed as a FORMATIVE. Schematically, the reanalysis of the erstwhile suffix would be (6.13):

(6.13)   *esc*

                 ↓

        THV   FORMATIVE
        -i-   *-sc-*

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[21] In the words of Maurer (1951: 143) "in a paradigm where the overwhelming majority of the endings were characterized by the vowel ī, the vowel ē of –ēscō must have sounded strange".

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The reanalysis of the vowel before –*sc*- as a thematic vowel should be the key point for the integration of the sequence –*isc*- into the inflectional system.[22]

To understand this point, let us look back once more to our canonical structure 'ROOT + (**THEMATIC VOWEL**) + (FORMATIVE) + ENDING', focussing on the thematic vowel. This structure requires that the thematic vowel, if there is one, should occur between the ROOT and the FORMATIVE; if there is no FORMATIVE, the thematic vowel should stand between the ROOT and the ENDING.

We have probably grown accustomed to thinking of roots as 'lexical' items and endings as 'inflectional' items. As far as formatives are concerned, I showed in §6.3 that the formatives of the Italian verbal system generally express a given property combination for the categories of Tense and Mood, to be understood as morphosyntactic. For this reason, I claim that formatives should be regarded too as part of a verb's inflection, and that in a word form displaying a formative, the distinction between 'lexicon' and 'grammar' should be as shown in (6.14):

(6.14) | ROOT | (THV) | (FORMATIVE) | ENDING | **Structure** |
|---|---|---|---|---|
| Lexical | | Grammatical | Grammatical | **Level of interpretation** |

Because of its position, the thematic vowel seems to mark the boundary between the 'lexical' and the 'inflectional' (or, 'grammatical') portion of a word form. Once these premises have been set, the idea that the identification of the vowel before –*sc*- as a thematic vowel might have triggered the incorporation of the sequences –*ìsco*, -*ìsci* etc. into the inflectional system becomes more understandable.

That the sequences –*ìsco*, -*ìsci* etc. are really seen as an inflectional pattern is also proved by the fact that this pattern was used to integrate a large number of new verbs in the system. The theorists of the Natural Morphology (cf. Dressler (2002: 94)) have drawn a list of the verb categories which can prove the productivity of an inflectional type. Actually, the FINIRE-type turns out to include verbs from all of these categories i.e.:[23]

a) loans with adaptation of unfitting properties (i.e. the thematic vowel *i*). E.g. *arrostire* 'roast' < Frankish *raustjan*; *guarire* 'recover' < Longobard **warjan*.

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[22] Cf. Ramat (1992), Allen (1995), as well as Blaylock (1975: 444) who, commenting on the origin of the FINIRE-type in Romance, claims that "Though we have grown accustomed to speaking of stem augments, we should perhaps think more in terms of desinence-augments."
[23] A list of the Italian verbs following the FINIRE-type is given in the Appendix.

b) loans with already fitting properties (i.e. the thematic vowel *i*). E.g. *accudire* 'look after' < Spanish *acudir*; *trasalire* 'flinch' < old French *tressaillir*.

c) conversions (including verbs created by parasynthesis). E.g. *chiarire* 'make clear' < *chiaro* 'clear'; *colpire* 'strike' < *colpo* 'stroke'; *addolcire* 'sweeten' < *dolce* 'sweet'; *arrugginire* 'rustV' < *ruggine* 'rustN'.

d) verbs which have undergone a class shift from Latin second or third conjugation. E.g. *abolire* 'abolish' < *abolēre*; *capire* 'understand' < *capĕre*.

It will have been noticed that the FINIRE-type, as an inflectional pattern of the Italian verb system, turns out to be doubly irregular with respect to all others: in fact, it preserves the peculiar 'columnar' stress after the root throughout the present tenses and, in addition, it exhibits the thematic vowel in the present tense singular and third plural, while Italian verbs generally have forms with the structure 'ROOT + ENDING' in these paradigm cells (cf. §6.3).

Therefore, in terms of language specific system-congruity (cf. Wurzel (1989)), the FINIRE-type seems to be doubly disadvantageous. Should we conclude that this peculiar inflectional pattern, being productive, simply spreads irregularity in the system?

Despite its irregular character, the FINIRE-type admittedly has a great advantage, as it prevents allomorphy in the lexical part of the word form. In a system where root-allomorphy in the present can arise just because of the differentiation in quality between stressed and unstressed vowels (cf. §6.2), an inflectional pattern avoiding the typical alternation between rhyzotonic and arrhizotonic forms can in principle guarantee root-invariance.

6.6. On the advantages of the FINIRE-type

A paradigm having multiple root-alternants (i.e. the phenomenon known as root-allomorphy) is definitely more complex than one exhibiting one root, both in terms of word-production (in that all root-alternants have to be stored in the verb's lexical entry) and in terms of word-analysis (root-allomorphy notoriously contravenes the ideal 'one-meaning-one-form' principle).[24]

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[24] Cf. Crocco-Galèas (1998). Notice that Corbett (2007) explicitly states root-invariance as one of the characteristic features of a 'canonical paradigm'.

As will be recalled from the above, the characteristic alternating stress-positions in the present is the major source of root-allomorphy in the Italian verb paradigm, in that rhizotonic and arrhizotonic forms can be subject to a different phonetic treatment (cf. the paradigm of the verb MORIRE 'die', in §6.2).

As noticed in Ch.4,[25] in the Italian verbal system the phenomenon of root-allomorphy, whatever its source, appears to be conjugation dependent. In particular, first-conjugation verbs, while retaining the characteristic alternating stress-pattern of their Latin antecedents, have been showing a tendency from the beginning of their history to eliminate root allomorphy. Accordingly, even those first-conjugation verbs which happen to have any form of root alternation due to stress, are found to restore invariant roots in the course of their diachronic development.[26]

Yet we saw that there is no sign of this phenomenon in the third conjugation: indeed, this class not only preserves root-allomorphy patterns arisen because of stress alternation, but also introduces root-variation into originally invariant paradigms (as in the case of FUGGIRE 'flee', cf. Ch.4, §4.3.2).

In a conjugation showing no inherent tendency towards root-invariance, any device helping to contrast stress alternation (i.e., the major source of root-allomorphy) should therefore be welcome. It is easy to see that the peculiar 'columnar' stress of the FINIRE-type appears to be particularly apt for this purpose: by fixing stress immediately after the verbal root, this novel inflectional pattern can prevent the latter from undergoing any differentiation in shape due to the characteristic stressed / unstressed alternation.

Actually, the correlation between the peculiar stress pattern of the FINIRE-type and the avoidance of root-allomorphy has not gone unnoticed. Various linguists have even tried to account for the origin of the FINIRE-type in these terms, according to the so-called "anti-allomorphic approaches" (cf. Maiden (2004: 34)). Those scholars see the introduction of the segment –isc- in the paradigm of the FINIRE-type verbs as a device to have stress aligned in the present tenses. In turn, stress alignment should guarantee an identical phonological treatment of the root throughout the paradigm.

Although the peculiar stress pattern of the FINIRE-type is undoubtedly advantageous in terms of 'root-allomorphy avoidance', I think that the "anti-allomorphic approaches" tend to confuse cause and effect.

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[25] See also Maiden (1996), (2011: 211ff.).
[26] Cf. also Aski (1995: 411).

In the present analysis, the peculiar stress alignment of the FINIRE-type arises as a consequence of a blending between two formally and semantically compatible derivational types, i.e. those exemplified above by the verbs *grandesco* and *grandio* (cf. Table 6.6, §6.5.1). This blending is guided by the N-pattern and there is nothing teleological in it. True, the resulting paradigm turns out to be particularly advantageous in terms of 'root-allomorphy avoidance', since its peculiar columnar stress can prevent the root from undergoing any variation in shape. Nonetheless, the origin of this paradigm is nothing but a fortuitous effect of the (independent) attractive force of the N-pattern.

Notice that there is a clear correlation in Italian between the avoidance of root-allomorphy on the one hand and the productivity of an inflectional type on the other: the first conjugation, with its peculiar tendency toward root-invariance, is notoriously the most productive inflection class in the system. However, we have seen that the FINIRE-type too with its peculiar "anti-allomorphic" stress, shows great productivity in the history of Italian.

Interestingly enough, the FINIRE-type as an innovation of the Italian verb system does not manage to attract the Latin 'base verbs' with thematic vowel –i-.[27] In other words, all verbs which have kept the same conjugation in the passage from Latin to Italian – i.e. that with thematic vowel –i- - significantly avoid taking –isc- as part of their inflection. These are: *aprire* 'open', *coprire* 'cover', *cucire* 'sew', *dire* 'say', *dormire* 'sleep', *empire* 'fill', *fuggire* 'flee', *inghiottire* 'swallow', *morire* 'die', *offrire* 'offer', *partire* 'leave', *salire* 'rise', *seguire* 'follow', *sentire* 'feel, hear, perceive', *servire* 'serve', *soffrire* 'suffer', *udire* 'hear', *uscire* 'exit' and *venire* 'come'.

It is true that the FINIRE-type cannot be claimed to represent the best of all possible solutions: while the ideal situation is for a paradigm to have no allomorphy at all, the presence of –isc- only in some word forms is, actually, a kind of allomorphy. However, the kind of allomorphy that we are faced with here has the advantage of leaving the lexical portion of the word form, i.e. the root, untouched.

All considered, the FINIRE-type seems to have a twofold advantage: on the one hand, its peculiar 'columnar' stress pattern can prevent the lexical root from undergoing any alternation due to stress; on the other, the N-shaped distribution of its inflectional

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[27] By 'base verb' I mean verbs which are neither derived from adjectives or nouns, nor of onomatopoeic origin.

segment *–isc-* is in line with the tendency of the Italian third conjugation toward allomorphy.

6.7 Conclusion

Some scholars[28] have seen the evolution of the segment *–isc-* as an instance of linguistic 'exaptation'. Etymologically, the segment would be a 'linguistic left-over' (in Lass's (1990) terms, 'junk') which, having lost its original function,[29] is reused as a morphologically significant structure 'thematic vowel + formative' by virtue of a chain of reanalysis processes.[30]

It could be observed that, in the development from Latin to Italian, there is some continuity in the 'function' of the vowel before *–sc-*:[31]

Here I would just like to point out that the thematic vowel of the segment *–isc-*, while being the result of a reanalysis process, seems to have exactly the same *signata* as the thematic vowel found elsewhere in the paradigm: on the syntagmatic dimension, it can signal that the string which precedes it is the 'Default Stem'; on the paradigmatic dimension, it can signal the conjugation of the verb.

Admittedly, the thematic vowel of the segment *–isc-* differs from all others in that it introduces asymmetry in the system. In Ch.3 I argued that the presence of a thematic vowel in the morphological structure of a word-form seems to be a property of a paradigm cell in the abstract sense; so, for instance, we can say that the second person singular Present Indicative involves a thematic vowel. But what about the FINIRE-type? As noted earlier, no other verb of the Italian verb system is found to have a thematic vowel in the forms of the N-pattern.

All considered, I think that the vowel *i* appearing in the segment *–isc-* should be regarded as a thematic vowel. Its asymmetry could be explained as it represents a case of linguistic 'exaptation'.

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[28] Cf. Rudes (1980) and Aronoff & Fudeman (2010).

[29] De Cuypere (2005: 15) claims that the recognition of non-functional elements is a necessary step in any exaptation process, since "all functional traits have been non-functional at one point". Notice also that Lass originally accounted for the exaptation involving non-functional material only, and recognised the possibility for some functional material to be exapted in a later work (cf. Lass 1997).

[30] On the relationship between "exaptation" and "reanalysis", see Narrog (2007).

[31] Cf. Smith (2011: 314ff.).

Conclusion

The fact that morphology is not necessary is certainly nothing new.[32] As pointed out by Aronoff (1994: 165), "there are languages that do without it". Definetly, Italian is not one of these language. For historical reasons, the Italian verbal system is characterized by great morphological irregularity, both in the lexical and the inflectional (i.e. "grammatical") portion of word forms. If the central claim of this work is correct, thematic vowels can help find an order within this apparent chaos.

We saw that the main feature that has been attributed to thematic vowels throughout morphological literature is that they do not behave as classical Saussurean signs, in that they are meaningless. Even within the structuralist, 'morpheme-based' framework, in which sub-word units, such as stems and endings, are simply assumed to have a meaning, thematic vowels cannot be assigned any meaning at all, and therefore they constitute a theoretical problem, for which a solution is provided by the assumption of the category 'empty morphs'.[33]

This work developed the claim that the thematic vowels of Italian verbs are, in fact, Saussurean signs in that they can be attributed a 'meaning' ('*signatum*'), or even more than one ('*signata*'). But the meanings that were appealed to are somehow different from those which have traditionally been attributed to other sub-word units, be they stems or endings: in particular, these meanings would not be relevant to the interpretation of a word form; rather, they would be relevant at the 'purely morphological' ('morphomic', in Aronoff's (1994) terms) level of linguistic analysis. They are thus labelled 'intramorphological', remarking that they serve nothing but the morphological machinery of the language.

The 'purely morphological' phenomena where thematic vowels come to be involved as signs, are two: the organisation of lexemes into inflectional classes, which implies the existence of rival inflectional realisations for morphosyntactically equivalent word forms (i.e. 'desinential allomorphy'), and the occurrence of stem allomorphy, namely the presence of different, unpredictable stems within the paradigm of a verb.

Thematic vowels, as signs, were claimed to have two basic 'meanings': on the one hand, by signalling the conjugation of the verb in which they are found, they are useful to predict the entire set of endings by means of which that verb

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[32] Cf. Aronoff (1994: 165ff.).
[33] Cf. Hockett (1947).

will be inflected. On the other hand, the thematic vowel is an index that the stem with which it co-occurs is the default one within the verb paradigm.

It is true that the default stem can also be identified as the one on which the Imperfect Indicative and Subjunctive are constructed;[34] the advantage of identifying the default stem by means of the thematic vowel, however, is that it is a purely formal strategy: the thematic vowel allows speakers to identify the default stem in a word form even if nothing is known about the morphosyntactic properties which that form realises.

More generally, the very interest of identifying the default stem in the paradigm of a verb might be not so clear. From a practical point of view, the default stem is the one which is used as a base in the formation of regular complex stems, namely all the stems which are not included in a verb's lexical entry. Under a more formal morphological perspective, the default stem may be identified as the verbal root, whose characteristic feature is being morphologically unanalyzable. The default stem (i.e., the root), bears no morphological (that is, distributional) information: it only conveys some lexical meaning. In this sense, a thematic vowel may be also claimed to mark the boundary between the "lexical" and the "grammatical" portion of a word form.

It has recently been suggested[35] that Carstairs-McCarthy's work on inflectional classes and stem alternation (cf. Ch.5) has to do with the phenomenon of linguistic exaptation (cf. Ch.6), with speakers' desire of assigning new roles to inflectional contrasts whose original purpose has been lost. The same might be true for thematic vowels. It is perfectly plausible that thematic vowels (and, more generally, the inflectional classes of the Italian verbal system) might have had some "more concrete" meaning (or "function") in an earlier stage of the language. Whatever their original function, they seem to have lost it over the course of time, being left in the system as formal units with no content. At this point, they reasonably took on a new function: by signalling the verbal conjugation, thematic vowels make it easier for speakers to learn and to master an inflectional system as much complex as that of Italian verbs.

The recognition of 'intramorphological *signata*' for morphological signs strongly supports the claim about the autonomy of morphology within the grammar. It is the purely morphological (i.e. Aronoff's 'morphomic') level where meanings such as 'First Conjugation' or 'Default Stem' are analysed. To be sure, the intramorphological

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[34] Cf. Pirrelli and Battista (2000).
[35] Aronoff & Fudeman (2011: 87).

meanings under discussion were shown to be realised not only by thematic vowels, but also by some inflectional endings of the system. What differentiates thematic vowels from the inflectional endings having some intramorphological *signatum* is that in the case of the thematic vowels the intramorphological content would be the only one being realised. That makes the Thematic Vowel (as a slot in a word-form's morphological structure) look like the 'dedicated *locus*' for the realisation of the intramorphological content in a word-form.

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Appendix 1

FINIRE-type verbs: **Loans** with adaptation of unfitting properties (i.e. thematic vowel *i*).

LEMMA	ORIGIN
arrostire 'roast'	Frankish *raustjan*
attecchire 'take root'	Gothic *(ga)theihan*
bandire 'publish, banish'	Gothic **bandwjan*
candire 'candy'	Arabic *qandī*
forbire 'furbish'	Frankish **furbjan*
ghermire 'claw, grab'	Lombard **krimjan*
gremire 'fill (up), cram'	Lombard *kramman*
gualcire 'crease, crumple'	Lombard **walkan*
guarire 'recover'	Lombard **warjan*
guarnire 'decorate, garnish'	Lombard **warnjan*
schermire 'protect, shield'	Lombard **skirmjan*
schernire 'mock'	Franconian *skernjan*
smaltire 'digest, work off'	Gothic *smaltjan*
stormire 'rustle'	Frankish *stormjan*

Appendix 2

FINIRE-type verbs: **Loans** with already fitting properties (i.e. thematic vowel *i*).

LEMMA	ORIGIN
accudire 'attend (to), look after'	Sp. *acudir*
agire 'act, behave'	Fr. *agir* < Lat. *agĕre*
ardire 'dare'	Fr. *hardir* < Frank. *hardjan*
bramire 'bell, growl, bellow'	O. Fr. *bramir* < Got. **bramōn*
brunire 'burnish, tarnish'	O. Fr. *brunir* < Frank. **brūnjan*
deperire 'lose strength, wither'	Fr. *dépérir* < Lat. *de + perire*
evoluire 'manoeuvre'	Fr. *évoluer*
farcire 'stuff, fill'	Fr. *farcir* < Lat. *farcire*
fornire 'furnish, provide'	O. Fr. *fornir*
garantire 'pledge, vouch for'	Fr. *garantir*
gioire 'be glad'	O. Fr. *joir* < Vulg. Lat. **gaudire*
imbastire 'tack, baste'	Northern dialects *bastire* < Germ. *bastan*
imbottire 'stuff, fill'	sp. *embutir*
imbutire 'draw'	Fr. *emboutir*
interferire 'interfere'	Fr. *interférer* < Lat. *interferre*
sortire 'achieve, be drawn'	Fr. *sortir* < Lat. *sortire*
trasalire 'start, be startled'	O. Fr. *tressaillir*

Appendix 3

FINIRE-type verbs: **Conversions** (sample).

<div align="center">
subclass A – conversion from adjectives
involving parasynthesis
</div>

LEMMA	BASE
addolcire 'sweeten'	*dolce* 'sweet'
arrossire 'turn red'	*rosso* 'red'
incuriosire 'make curious'	*curioso* 'curious'
indebolire 'weaken'	*debole* 'weak'
ingiallire 'yellow, make yellow'	*giallo* 'yellow'
irrancidire 'go rancid'	*rancido* 'rancid'
schiarire 'make clear'	*chiaro* 'clear'

<div align="center">
subclass B - conversion from nouns
involving parasynthesis
</div>

appuntire 'sharpen, point'	*punta* 'point'
arrugginire 'rust'	*ruggine* 'rust'
impaurire 'frighten'	*paura* 'fear'
impietrire 'petrify, be turned to stone'	*pietra* 'stone'
insaporire 'flavour, make tasty'	*sapore* 'taste, flavour'

<div align="center">
subclass C - conversion from adjectives
</div>

chiarire 'explain, make clear'	*chiaro* 'clear'
sveltire 'quicken'	*svelto* 'quick'

<div align="center">
subclass D – conversion from nouns
</div>

colpire 'strike'	*colpo* 'stroke'
finire 'finish, end'	*fine* 'end'

Appendix 4

FINIRE-type verbs – verbs which are undergone **class shift** from Latin second or third conjugation.

LEMMA	LATIN ANTECEDENT
abolire 'abolish'	ABOLĒRE
aderire 'adhere, stick'	ADHAERĒRE
affluire 'flow, crowd'	AFFLUĔRE
aggredire 'assail'	AGGRĔDI
annuire 'nod (in assent)'	ANNUĔRE
attribuire 'attribute'	ATTRIBUĔRE
capire 'understand'	CAPĔRE
comparire 'appear'	COMPARĒRE
compatire 'pity'	COMPĂTI
conferire 'confer, award'	CONFERRE
costituire 'constitute'	COSTITUĔRE
costruire 'build'	CONSTRUĔRE
digerire 'digest'	DIGERĔRE
diluire 'dilute'	DILUĔRE
diminuire 'reduce, diminish'	DIMINUĔRE
esibire 'exhibit'	EXHIBĒRE
fluire 'flow'	FLUĔRE
influire 'influence'	INFLUĔRE
inserire 'insert'	INSERĔRE
istruire 'teach, instruct'	INSTRUĔRE
marcire 'rot, go bad'	MARCĒRE
ostruire 'obstruct'	OBSTRUĔRE
percepire 'perceive'	PERCIPĔRE
preferire 'prefer'	PRAEFERRE
proibire 'forbid, prohibit'	PROHIBĒRE
rapire 'kidnap'	RAPĔRE
regredire 'go backwards, regress'	REGRĔDI
scandire 'scan'	SCANDĔRE
scolpire 'sculpt, carve'	SCULPĔRE
sostituire 'replace, substitute'	SUBSTITUĔRE
stupire 'astonish'	STUPĒRE
suggerire 'suggest'	SUBGERĔRE
tradire 'betray, be unfaithful to (s.o., sthg.)'	TRADĔRE