

An Element-Based Analysis of Italian Nominal Inflection

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1. Introduction¹

This contribution explores the possibility of disentangling the information fused in the Italian nominal inflectional endings to the extent that a one-to-one correspondence between morphosyntactic information and phonological exponents can be established². To do so a theoretical assumption is in order: the internal structure of segments must be represented by means of elements rather than features and final empty nuclei must be allowed for. Word-final empty nuclei in phonological representation have been proposed by a number of scholars working in a traditional generative background (Anderson 1982; Spencer 1986; Kiparsky 1991; Burzio 1994). In the case at hand, however, Government Phonology (Kaye *et al.* 1985, 1990) frameworks are particularly suitable because they employ both elements and final empty nuclei as theoretical tools. Among them, CVCV (Lowenstamm 1996; Scheer 2004) is used here reflecting my own preference. Accordingly, section 2 of this article introduces some of the key features of CVCV and the theory of Elements (Kaye *et al.* 1985, Harris & Lindsey 1995, among others). Section 3 describes the Italian inflectional class system and illustrates the analysis proposed. Section 4 recapitulates the main features of the analysis and discusses the implications of the proposal regarding the representation of morphosyntactic information on lexemes. Section 5 is dedicated to some final remarks.

2. Theoretical assumptions

This section is devoted to the illustration of the main features of CVCV, the framework in which this study is couched. 2.1 briefly sketches the theoretical presupposals of CVCV concerning constituent structure, whereas 2.2 introduces the assumptions about subsegmental structure.

2.1. Constituent structure

According to Scheer's (2004) definition, CVCV is a syntagmatic or lateral theory of phonology. These definitions refer to the fact that in CVCV phonological constituent structure reduces to a sequence of consonantal and vocalic positions and that all syllabic effects are derived from a network of lateral relations entertained by segments, namely Government and Licensing. The lack of branching constituents and of arboreal structure entails that syllabic structure in CVCV is entirely flat³.

In CVCV the minimal structural unit that can be manipulated by phonology is a CV unit, namely an onset-nucleus sequence: the presence of the former entails the presence of the latter, and *viceversa* (Scheer 2004: 1). The absence of branching constituents in the phonological representation implies the proliferation of empty structures, as shown in (1), where is illustrated the representation of some common phonological objects in CVCV:

¹ I am indebted to Anna M. Thornton, Tobias Scheer, Fabio Montermini and an anonymous reviewer who have helped me to greatly improve both the form and the content of this contribution. All usual disclaimers apply.

² While working on this topic I have been alerted by a colleague that work in progress by N. Lampitelli of Paris 7 was on the same track as mine. Since then I realized that part of the ideas developed in this talk were in fact circulating in Paris 7 (Kihm 2005 also proposes a floating I as a marker of Italian plurals).

³ According to Scheer (2004: xliv, 239) the difference in structure between phonology and syntax (flat vs. arboreal) explains why recursion, which characterizes syntax, is unknown in phonology. Recursion presupposes an arboreal structure because in a recursive structure a given node dominates a node of the same kind. Flat, linear structure, as a consequence, may never be recursive.

(1)	closed syllable: <i>tar</i>	geminate: <i>tt</i>	long vowel: <i>a:</i>	word-final C: <i>t#</i>	branching onset: <i>tra</i>
	C V C V	C V C V	C V C V	C V	C V C V
		\ /	\ /		
	t a r	t	a	t	t r a

As in standard Government Phonology (Kaye *et al.* 1985, 1990), in CVCV the presence of empty nuclei is not arbitrary but regulated by the Empty Category Principle (ECP). The ECP version proposed by Scheer (2004: 67) is illustrated in (2):

(2) Empty Category Principle (ECP)

A nucleus may remain empty iff:

- a. properly governed
- b. enclosed in a domain of Infrasegmental Government
- c. word final

Proper Government, in CVCV is a regressive lateral force that inhibits segmental expression. Word-internally Government can only be exerted by full nuclei. As for final empty nuclei, their governing ability is a matter of parametric variation. An empty nucleus then, must necessarily be followed by a phonetically expressed nucleus or by a final empty nucleus able to govern.

In addition nuclei enclosed in a domain of Infrasegmental Government remain empty because of the Government relationship existing between the two consonants that surround them. Infrasegmental Government covers all the functions traditionally attributed to a branching onset with some minor differences not relevant for this discussion (cf. Scheer 2004: 72).

Proper Government and Infrasegmental Government are lateral regressive forces that inhibit segmental expression of nuclei. Licensing, on the other hand, is a lateral force that enhances the melodic content of a segment. According to Scheer (forthcoming: 713f), Government and Licensing do not act independently of one another and they cannot target the same constituent. As a consequence, they are hierarchically ranked, so that Government applies over Licensing in the cases in which they could in principle apply simultaneously. By default those forces apply from nuclei towards their own onsets. Other nuclei are targeted either in the cases where an empty nucleus requires governing or licensing or when Government has applied to the onset, which cannot be simultaneously licensed. In this case the licensing ability is exhausted on the preceding nucleus. Government and Licensing, lateral regressive antagonistic forces, are solely responsible of the effects commonly attributed to syllabic structure and their existence accounts for empirical data concerning crosslinguistic phonological phenomena like lenition/fortition phenomena and vowel/zero alternations, among others.

2.2. Subsegmental structure

The internal structure of segments in all versions of Government Phonology is represented in a privative manner by means of subsegmental monovalent primes called elements (Kaye *et al.* 1985, Harris & Lindsey 1995). The main difference between elements and features, alternatively employed to represent subsegmental structure, is that the former enjoy autonomous phonetic interpretability. Elements are not to be intended as formal representation of articulatory instructions but as pure cognitive units to which listeners appeal to parse the speech sounds and to which speakers refer to articulate them. In the internal structure of segments elements entertain an asymmetric relation: among the primes that participate in the representation of a segment, dominant elements, heads, may be distinguished from those that are dominated, operators. Obviously, heads contribute more than operators to the makeup of a segment.

In an element-based representation of the internal structure of vowels, with which this study is

mostly concerned, there are primitive vowels, which contain only one prime, namely the cardinal vowels /a/, /i/, /u/, respectively represented as A, I, U. Other vowels, such as the high-mid vowels /e/ and /o/, are compounds of such primes and their internal structure is respectively represented as in (3):

- (3) /a/ =A
 /e/= IA
 /i/= I
 /o/= UA
 /u/= U

Low-mid vowels are distinguished by means of the ATR element and rounded vowels, in vocalic systems where roundness is not predictable, are represented with a B element indicating roundness (Scheer 1996).

Having introduced the theoretical assumptions on which this contribution is based, next section introduces the data on the Italian inflection and proposes a possible analysis.

3. Italian nominal inflection

3.1. Italian nominal inflectional classes

The Italian native lexicon consists of words ending in a vowel. Apart from a group of words whose final vowel is part of the root, word-final vowels are the usual *locus* of inflection. Nowadays the Italian lexicon, as a result of massive borrowing also includes uninflected words ending in a consonant.

The table in (4), adapted from D’Achille & Thornton (2003), illustrates the Italian nominal inflectional classes. D’Achille & Thornton’s (2003) Class 5 (*uovo* ‘egg.MASC.SING’ *uova* ‘egg.FEM.PL’) has been omitted, following the argumentation of Acquaviva (2002) according to which *-a* plurals are not inflectional plurals. On the basis of morphosyntactic and semantic evidence, Acquaviva casts doubts on the common assumption that *-a* is one way in which Italian inflection expresses the plural feature. He convincingly argues that *-a* plurals in Italian are lexemes characterized by plural as an inherent property. Accordingly, D’Achille & Thornton’s (2003) Class 6, which groups words that do not undergo inflection, becomes here Class 5.

(4)

Class	form (sg./pl.)	example	prevalent gender	Remarks
1	-o/-i	libro/libri ‘book(s)’	m	mano/mani f
2	-a/-e	casa/case ‘house(s)’	f	
3	-e/-i	fiore/fiori ‘flower(s)’ siepe/siepi ‘hedge(s)’ cantante/cantanti ‘singer(s)’	m/f	44,4% m / 43,4% f / 12% ambigeneric (data from BDVDB) ⁴
4	-a/-i	poeta/poeti ‘poet(s)’	m	ala/ali f, arma/armi f
uninflected	various; invariables	re ‘king’ gru ‘crane’ città ‘city’ specie ‘species’ crisi ‘crisis’ foto ‘photo’ gol ‘goal’	m, f	48,6% m / 51,4% f (data from BDVDB)

⁴ A database for the Italian basic vocabulary consisting of 7000 entries.

After presenting general data concerning Italian nominal inflection, the next section will advance a proposal concerning how such data can be analysed in a way that questions common assumptions concerning the degree of fusion of Italian inflectional morphs. It will be shown that, notwithstanding cumulative exponence, by looking at the internal melodic structure of inflectional morphs, a one to one relation between morphosyntactic information and phonological exponents may be established in Italian nominal inflection.

3.2. *Decomposition of Italian inflectional suffixes in subsegmental primes*

In this section the subsegmental structure of the phonological exponents of inflectional suffixes will be decomposed in order to examine their internal structure. Given the representation of vowels illustrated in (3), repeated in (5) for the sake of clarity, it can be observed that the A element is present in the melody of the Italian singular suffixes of all the inflectional classes, shown in table (4), whereas I is present in all plural suffixes. This is illustrated in (6) where the elements heading the phonological expressions are underscored as customary:

(5) *Representation of Italian vowels in unstressed syllables by means of elements*

/a/ = A
 /e/ = IA
 /i/ = I
 /o/ = UA
 /u/ = U

(6) *The vowels of nominal inflectional suffixes all contain A in the singular and I in the plural*

Class 1 sing /o/ = AU pl /i/ = I
 Class 2 sing /a/ = A pl. /e/ = IA
 Class 3 sing /e/ = AI pl. /i/ = I
 Class 4 sing /a/ = A pl. /i/ = I

If A and I are not accidentally present respectively in singular and plural nominal suffixes, then they must be exponents of the number category. If this latter hypothesis is pursued it becomes apparent that also inflectional class information displays a phonological correlate: U, surfacing in the singular of Class 1, can be regarded as the exponent of Class 1; A, appearing in the plural of Class 2 and absorbed in the singular, can be considered the exponent of Class 2; I, present in the singular and absorbed in the plural, can be regarded as the exponent of Class 3. In class 4, where only the number exponents are present, the class exponent must be \emptyset .

The fusion of the phonological Class exponents, namely, A, U, I and \emptyset with those of number, A and I, in fact, yields the attested pattern of Italian inflection for nominals, as shown in the table in (7).

(7)

	singular			plural			attested forms
	class	number	merging	class	number	merging	
1	U	A	UA=/o/	U	I	UI=/i/	libro / libri
2	A		A=/a/	A		AI=/e/	casa / case
3	I		IA=/e/	I		I=/i/	fiore / fiori
4	\emptyset		A=/a/	\emptyset		I=/i/	poeta / poeti
uninfl.		none			none		sport, re

At this point of the discussion, a comment on the outcome of the combination of I and U taking place in class 1 plurals, namely /i/ is in order. According to Scheer (1996), the combination of I and U is not allowed in any language as in his representation those elements respectively indicate Palatality and

Velarity, roundness being represented as B, which, however, does not enjoy autonomous existence in languages where back vowels are always rounded. According to Kaye *et al.* (1985) and Harris & Lindsey (1995), on the other hand, in languages where a front rounded vowel /y/ lacks from the phonological inventory, the autosegmental tiers where U and I reside are conflated and that prevents the fusion of the two elements. In other words, the impossibility of the coexistence of I and U in languages such as Italian is something all theories of elements agree on. It remains to understand the reason why, when an underlying combination of I and U occurs, I surfaces over U. As observed above, /y/ lacks from the inventory of Italian and, according to Paradis and Prunet (2000), the more frequent outcome of /y/ in languages lacking front rounded vowels, having both /i/ and /u/ in their phonological inventory is /i/, as exemplified in (8) with some French borrowings in Kinyarwanda, a Bantu language spoken primarily in Rwanda but also in southern Uganda and in the east of Democratic Republic of Congo:

(8)	<i>French</i>	<i>Kinyarwanda (Rose 1995)</i>
	député “Member of Parliament”	depite
	reçu “received”	rosi

Thus the surfacing of /i/ when I and U combine in Italian does not constitute an obstacle for the analysis proposed⁵.

3.3. The structure of Italian nominal inflectional morphs

This section explores issues concerning the structural representation of Italian inflectional suffixes. In the preceding section the melody of the Italian inflectional suffixes has been decomposed, showing that subsegmental primes may be analysed as carriers of morphosyntactic information. This section will investigate the relation between the melody and the skeletal position of an inflectional morph, a relation that, in an autosegmental framework, need not be one-to-one. The relation between the skeletal structure (CV templates) and the melody of inflectional exponents, according to Lowenstamm’s (2000) analysis of Chaha feminine singular formation, may be resumed as in (9):

(9) *Relation between structure and melody in inflection (Lowenstamm 2000)*

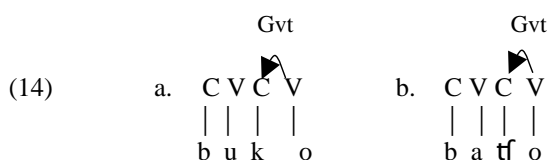
An inflectional exponent may enjoy

- a. *Full templatic support*: the template guarantees its associated material total autonomous deployment
- b. *No templatic support*: a segment enjoying no templatic support simply must float
- c. *Lame templatic support*: the CV is too short to support the realisation of the morpheme, which seeks association to another stem-internal position.

The lame templatic support hypothesis does not fit Italian as there is no evidence of inflectional morphs associating in different stem-internal positions, like in Chaha. It remains to explore whether the melody of Italian suffixes is associated to a CV template, the minimal phonological unit, or whether it floats, as illustrated in (10):

⁵ The adaptation of French and German /y/ as /u/ in Italian is probably influenced by the orthography and the presence of /u/ in corresponding Italian words (i.e. Fr. *lune*-It. *luna* ‘moon’, Germ. *zucker* It. *zucchero* ‘sugar’). Generally the outcome of French /y/ in French lexifier creoles and of German /y/ in German dialects spoken in Pomerania is /i/. Leaving aside evidence coming from loanword adaptation, it is also possible that in Italian the conflict between the surfacing of /i/ and the surfacing of /u/ is resolved in favour of the less marked segment, namely /i/, one of the epenthetic segments of the language.

stem and suffix, the docking of the floating suffix on the stem-final empty nucleus takes place, and the configurations that induce lenition arise. This is illustrated in (14):



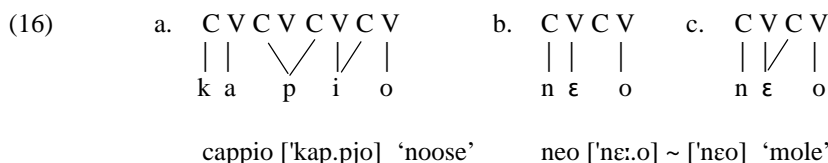
Evidence from Italian lenition phenomena, then, points to a representation of the melody of inflectional suffixes as floating. There is no suffix template and inflection takes place on the stem-final empty nucleus, the empty-final position of the stem CVCV template. That is the only templatic space available where the floating elements may link and they fuse, yielding cumulative exponence, precisely because no template supports their independent realization.

3.4. The phonological representation of Italian stems

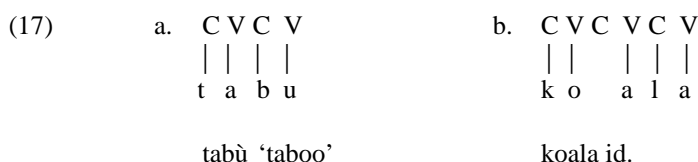
In the previous section evidence has been brought grounding a representation of Italian inflectional suffixes as floating. On the basis of this evidence the phonological representation of the stems of all inflecting words, in Italian, must feature a final empty nucleus that accommodates the melody of inflectional morphs. This applies to both stems ending in a consonant and to stems ending in a vowel, as illustrated in (15):



Because in CVCV a C position implies a V position and *viceversa*, a stem-final consonant, like that of *riso*, entails a final empty vocalic position whereas the stem-final vowel of an inflecting word like *neo*, entails a whole empty final CV. The final vowel of this empty CV accommodates the melody of inflectional suffixes while the empty consonantal position may be colonized by the melody of the preceding vowel, which branches on it giving rise to an onglide. This happens either compulsorily or optionally, as respectively illustrated in (16a) and (16b,c):



Invariables like the ones exemplified in (17) end in a fully expressed nucleus, which is part of the root. The stem-final fully expressed nucleus may be stressed or unstressed, as respectively shown in (17 a and b):



Vowel-ending invariables and inflecting words have a different phonological representation. The former lack a final empty nucleus where the inflectional exponents may dock and do not undergo

inflection. However they may undergo other kinds of suffixation where the behaviour of their final nuclei is far from uniform, as shown in Montermini (2003).

So far it has been proposed that in Italian all noun-stems of words undergoing inflection are to be represented with a final empty nucleus where nominal inflectional exponents, which enjoy no templatic support, are accommodated, and that invariables ending in a vowel do not have structural space for inflection to take place. The introduction of loanwords ending in a consonant, breaching a well-established phonotactic constraint of Italian according to which lexical words must end in a vowel, also disrupts the equivalence between presence/absence of a final empty nucleus and presence/absence of inflection. A final empty nucleus in the representation nowadays does not automatically imply that the word undergoes inflection: Class 5 loanwords and acronyms ending in a consonant (*format*, *FIAT*) are invariables although their CVCV representation features a final empty nucleus, as illustrated in (18):

(18) C V C V C V C V
 | | | | | |
 f o r m a t

In nowadays Italian then, as opposed to Old Italian (Repetti 1993), loanwords ending in a consonant are not assigned to an inflectional class: they are invariable also when the final empty nucleus is vocalized by means of an epenthetic vowel in substandard varieties, as shown in (19):

(19)	a.	lo sport	gli sport	<i>Modern Italian</i>
		det:M:SG sport	det:M:PL sport	
	b.	lo sporte	gli sporte	<i>Substandard varieties of Italian</i>
		det:M:SG sport	det:M:PL sport	
	c.	l'alambicco < al anbiq	gli alambicchi	<i>Old Italian</i> (Repetti 1993)
		det:M:SG alembic	det:M:PL alembic	

3.5. Summary

In the above section a proposal has been put forward according to which, by representing stems as characterized by a final empty nucleus and inflectional suffixes as floating, the melody of suffixes can be decomposed as to reveal two distinct morphs corresponding to number and class. The decomposition of the melody of the inflectional suffixes is only possible, as stressed above, if subsegmental structure is represented by means of elements. Given that elements enjoy full phonetic interpretability, the identification of two distinct morphs corresponding to number and class hinges upon the absence of the constituent structure of suffixes in the lexicon and on the presence of empty nuclei in stem-final position. This is because when concatenation of the nominal stem and the inflectional suffix takes place, no merging of the two elements would occur if each of them enjoyed templatic support. They would surface in sequence, contrarily to fact. Besides, if no final empty nuclei were allowed for, the elements would not have a place to anchor and inflection could not take place, as it happens with invariables ending in a vowel.

4. The representation of morphosyntactic information in Italian nouns

In the analysis conducted so far the phonological content of the Italian inflectional morphs has been decomposed as to reveal that their melody may be understood as being the result of the fusion of two distinct morphs corresponding to number and class. The number feature in Italian can assume the singular and plural values, respectively corresponding in this model to A and I. Class, on the other hand, corresponds in this model to four different exponents, namely U, A, I and Ø, but is single valued lexeme-internally.

By correlating it to a specific phonological exponent, the abstract morphological feature class has

been given a more concrete substance. This, however, is not to say that the morphological notion of class, as defined in Aronoff (1994: 64), may be dispensed with. The above proposal agrees with current works on the representation of morphosyntactic information in Italian nouns (Dressler & Thornton 1996; D'Achille & Thornton 2003; Thornton 2003; Acquaviva this volume) in attributing to the feature class a paramount importance in order to describe the existing Italian nominal inflectional system. As the next section will show in more detail, in this proposal the linking of a given stem to one of the phonological exponents of class cannot always be derived by other morphosyntactic information and the notion of class is essential to obtain the right pattern of stem inflection in Italian nouns.

4.1. Gender and class

The relation between class, a purely morphological feature, and gender, relevant for syntax, is never fully straightforward, as crosslinguistic data reveal. However, rules of mapping between class and gender and *viceversa* can largely be identified (Aronoff 1994: 71-72; Corbett 1991, Fraser & Corbett 1995). In Italian, as illustrated in table (4), Classes 1, 2 and 4, except for a handful of exceptions, predict gender univocally. Classes 1 and 4 contain masculine nouns whereas Class 2 contains feminine nouns. Class 3, on the other hand, contains feminine and masculine nouns in almost equal amount. Consequently, I will now discuss how rules relating gender and class can be expressed in the model proposed.

In current works on the representation of morphosyntactic information on Italian lexemes (Thornton 2003) the information about class is derived from the phonological information about the word-final vowel and the syntactic information about gender. According to Thornton (2003: 216), Class 4 is a noteworthy exception because it needs to be specified diacritically on the lexemes and masculine gender obtains by means of a class to gender rule.

In the present model Classes 2 and 4, both characterized by *-a* as the word-final vowel in the singular but containing nouns of opposite gender, can be set apart on the basis of the class exponents, namely A and Ø. By referring to the class phonological exponent, in the classes that predict gender univocally, rules connecting gender and class may be expressed without the need of appealing to extra information i.e. information about the word-final vowel. As for Classes 1 and 2, both a class to gender and a gender to class rule are compatible with the analysis proposed, leaving aside the case of *mano* that needs diacritic specification of both gender and class: in Classes 1 and 2 gender only could be represented on lexemes and the representation of masculine and feminine gender on stems could respectively assign Class A and U by rule. It would also be possible an “inverted” derivation from Class A and U to respectively feminine and masculine gender. Class 4 mark, namely Ø, could derive gender by default except in the cases of *ala* and *arma*, where the feminine gender must be represented together with the class. The opposite scenario where class is derived from the gender feature is not possible for Class 4 lexemes. In Class 3, on the other hand, no derivational relation can be established between gender and class and both features need to be listed, at least in feminine stems. The representation of I, a class mark, on Class 3 stems blocks the gender to class rules in a gender to class model and, *viceversa*, the representation of gender in stems blocks the class to gender rules in the opposite model.

The relation that gender and class entertain in Classes 1 and 2, as opposed to Classes 3 and 4 is exemplified in (21a) where it is shown that determiners, typical agreement targets, only belong to Classes 1 and 2. Evaluative suffixes, that inherit gender from the base, belong to Classes 1 and 2⁶ too, as illustrated in (21b). (21c) shows that motion only exploits Classes 1 and 2, in order to respectively derive masculine or feminine nouns referring to humans. Substandard forms are also attested where abstract nouns, ambigeneric in the standard, undergo motion when referring to humans. Present participles, in diacritically marked expressions, are also subject to motion when agreeing with feminine controllers or when referring to human females, as shown in (21d):

(21) illustrates how A and U, namely the exponents of Classes 2 and 1, as opposed to I, the exponent of Class 3, behave as gender markers and indicate respectively feminine and masculine.

⁶ *-one* is a noteworthy exception, as it belongs to Class 3.

(21) *A and U but not I mark gender in*

- a. *Determiners*
- | | | | | |
|-----------------------|--------------------------|----------------------|-------------------------|------|
| la | lo ⁷ , | questa | questo | etc. |
| DEF.ART:F:SG | DEF.ART:M:SG | this:F:SG | this:M:SG | |
| la/questa casa | la/questa tigre | lo/questo zio | lo/questo sciame | |
| the/this house | the/this tiger | the/this uncle | the/this swarm | |
- b. *Evaluative*
- | | | | |
|-------------|----------------|--------------|-----------------|
| casa | casetta | tigre | tigretta |
| house | house-DIM:F:SG | tiger-F.SG:3 | tiger:DIM:F:SG |
| zio | zietto | seme | semino |
| uncle:M-SG | uncle:DIM:M:SG | seed M-SG3 | seed DIM:M:SG |
- c. *Nouns undergoing motion* (Thornton 2004)
- | | |
|--------------------------------------------------------|----------------------------|
| ministra *ministre ‘female minister’ | < ministro ‘minister’ |
| infermiera *infermiere ‘nurse (woman)’ | < infermiere ‘nurse (man)’ |
| nuoro *nuore ‘partner of a male homosexual son’ | < nuora ‘daughter-in-law’ |
| mammo *mamme ‘father behaving like a mother’ | < mamma ‘mum’ |
- d. *Substandard motions that enforce feminine gender in:*
- 1) *masculine abstract nouns ambigeneric when referring to humans*
- | | | |
|---------------|---------|------------------------|
| amora | *amore | < amore m. ‘love’ |
| tesora | *tesore | < tesoro m. ‘treasure’ |
- 2) *ambigeneric adjectives originating from participles*
- | | |
|---------------------------------------|------------------------|
| ignoranta *ignorante | < ignorante ‘ignorant’ |
| (la TV) deficiente *deficiente | < deficiente ‘idiot’ |

So far both class to gender rules and gender to class rules have been shown to be able to depict how the storage of morphosyntactic information might work for Classes 1, 2, 3 whereas a class to gender rule best represents the situation of Class 4. Symmetry and economy reasons would then suggest a description of the system where the same rule is at work and derives gender from class information. A model in which gender is derived from class, however, is described by Aronoff (1994:74) as more peculiar than the opposite sort because gender, being syntactic, is prior to inflectional class, which is morphological. Rules deriving gender from class are dubbed by Aronoff (1994: 74) “inverted rules”, although he admits their universal availability, as his analysis on the Arapesh data show.

In the model proposed, as pointed out above, the relation between class and gender may be successfully expressed by both class to gender rules and gender to class rules. Although symmetry reasons suggest to employ the former, the findings and observations of Thornton (2001) indicate that the latter are more system-adequate for Italian. Thornton shows that in Italian gender assignment must precede inflectional class assignment: information about gender in items lacking such a feature like loanwords is needed quite soon because of agreement with articles and modifiers. On the other hand,

⁷ *il* is underlyingly /ilo/ (Larsen 1998: 94). The alternating vowels /i/ and /o/ are either silenced by the government exerted by a following full nucleus or surface when an empty nucleus follows, so that the ECP is satisfied. Es. *Il cane* ‘the dog’ (/o/ is governed and silenced by /a/), vs. *lo sport* ‘the sport’ (/o/ surfaces because the empty nucleus between /s/ and /p/ may not govern. /o/ then governs the preceding /i/).

the surfacing of the plural forms of such items is less frequent than the surfacing of singular forms in contexts in which they trigger agreement on targets that have overt gender marking. The allocation of loanwords to an inflectional class may therefore be safely postponed. The gender feature assigned to an item lacking such feature is then exploited for the insertion in one of the inflectional classes. It is therefore gender assignment that drives inflectional class assignment and not *viceversa*.

A realistic picture of the representation of morphosyntactic information on Italian lexemes would then be one where Classes 1 and 2, the U and A classes, are derived from gender and Classes 3 and 4, the I and zero class, are listed. Gender in Class 4 derives from class by default whereas in Class 3, at least the feminine gender that cannot be obtained by default, must be represented together with class. Classes 1 and 2 are open and productive classes, whereas Classes 3 and 4 are closed and non-productive, exception made for a number of derivational suffixes. A model in which the latter are listed and the former can be derived by rule (Dressler & Thornton 1996; D'Achille & Thornton 2003) is a plausible picture of the competence of Italian speakers (Thornton 2003: 219; Acquaviva this volume)

4.1.1. Number

The present model assumes that the two values that the number feature can assume in Italian have a phonological correlate that does not vary across inflectional classes. Under such a model the absence of inflecting words ending in /u/ and /i/ from the Italian lexicon may be accounted for by the obligatory presence of the A element in singular words undergoing inflection.

A is absent from the representation of /u/ = U and /i/ = I-final words. The final vowels of such words, as a consequence, do not display the singular exponent and are accordingly not analysed as inflectional vowels but as part of the root.

(22) */i/ and /u/ final (loan)words are invariable*

Sing	Pl.		
tofu	tofu	*tofi	id.
guru	guru	*guri	id.
hutu	hutu	*huti	id.
safari	safari		id.
bikini	bikini		id.
crisi	crisi		'crisis'

The presence of A in the final segment of uninflected words, such as the ones illustrated in (23) where A is not interpreted as a number exponent does not constitute a flaw of the analysis as in those cases other factors are at play as to drive interpretation of the A bearing segment as part of the root.

(23)

	Sing.	Pl.		
a.	re	re	'king'	e = AI
b.	città	città	'city'	a = A
c.	lama	lama	'llama'	a = A
d.	ukulele	ukulele		e = AI

In the case of monosyllables (23a), the subminimality of the word forces an interpretation of the final vowel as part of the root: the presence of a monoconsonantal native lexical stem is highly implausible in Italian, given its phonotactic restrictions. In the case of oxytonic words (23b) the final vowel is arguably part of the root bearing the word main-stress. In the cases of unstressed /a/ ending words, as Thornton (2009) has extensively shown, semantic factors which are dominant over phonological ones (Corbett 1991:52) drive masculine gender assignment. Given that Class 4, containing /a/ ending masculines, is a closed class (Dressler & Thornton 1996; D'Achille & Thornton 2003), /a/ cannot be analyzed as an inflectional ending and it is accordingly interpreted as part of the root: the analysis of /a/ as an inflectional ending would imply feminine gender, in contrast with the gender feature assigned by

semantics.

The interpretation of *-e* as part of the root and the allocation of /e/ ending loanwords in the class of invariables, also derives from the fact that class 3 is closed (Thornton 2001: 9).

5. Final remarks

This contribution has argued for the floating nature of the Italian nominal inflectional suffixes and has illustrated the possibility to disentangle the morphosyntactic information corresponding to class and number fused in such suffixes. Floating inflectional suffixes (also proposed among many others by Lowenstamm 2000 for Chaha; Zikova 2007 for Czech; Faust 2007 for modern Hebrew; Thornton 1999; Boyé 2000 for Italian) have their melodic content specified but lack templatic support: they are not linked to any structural position. Their lexical storage is not at stake but their surfacing hinges upon the availability of empty structural space on the stem to which they may anchor.

According to this analysis Italian nominal inflectional endings are *portmanteau* suffixes that display not only the fusion of the class and number abstract meanings but actually the fusion of the class and number concrete forms.

By disentangling a *signifiant* corresponding to inflectional class and one corresponding to each number feature value nominal inflectional suffixes, representations of Italian nouns where class and number are functional heads may be implemented (Kihm 2008; Picallo 2008; Lampitelli forthcoming) and an elegant account of Italian nominal inflection can be provided in line with minimalists assumptions about the syntax/phonology interface.

References

- Acquaviva, Paolo. 2002. Il plurale in *-a* come derivazione lessicale. *Lingue e Linguaggio* 2: 295-326.
- Anderson, Stephen. 1982. The analysis of French schwa: or, how to get something for nothing. *Language* 58: 534-573.
- Aronoff, Mark. 1994. *Morphology by Itself*. Cambridge, Ma.: MIT Press.
- BDVDB = Thornton, Anna M., Claudio Iacobini and Cristina Burani. 1997. *BDVDB. Una base di dati per il vocabolario di base della lingua italiana*. 2nd edition. Roma: Bulzoni.
- Boyé, Gilles 2000. *Problèmes de morpho-phonologie verbale en français, en espagnol et en italien*. Ph.D dissertation. University of Paris 7.
- Burzio, Luigi. 1994. *Principles of English Stress*. Cambridge: Cambridge University Press.
- Corbett, Greville. 1991. *Gender*. Cambridge: Cambridge University Press.
- D'Achille, Paolo and Anna M. Thornton. 2003. *La flessione del nome dall'italiano antico all'italiano contemporaneo*. In N. Maraschio and T. Poggi Salani, eds. *Italia linguistica anno Mille – Italia linguistica anno Duemila. Atti del XXXIV Congresso internazionale di studi della Società di Linguistica Italiana*. Roma: Bulzoni. 211-230.
- Dressler, Wolfgang U. and Anna M. Thornton. 1996. Italian nominal inflection. *Wiener Linguistische Gazette* 57-59: 1-26.
- Faust, Noam. 2007. In a position to spell out: The syntactic structure of vocalic patterns in Hebrew. Ms. University of Paris 7.
- Fraser, Norman and Greville Corbett. 1995. Gender, animacy and declensional class assignment: A unified account for Russian. In G. Booij and J. Van Marle, eds. *Yearbook of Morphology 1994*. Dordrecht: Kluwer. 123-150.
- Giannelli, Luciano and Leonardo M. Savoia. 1979-1980. L'indebolimento consonantico in Toscana. *Rivista Italiana di Dialettologia* 2: 23-58; 4: 39-101.
- Harris, John and Geoffrey Lindsey. 1995. The elements of phonological representation. In J. Durand and F. Katamba, eds. *Frontiers of Phonology: Atoms, Structures, Derivations*. Harlow, Essex: Longman. 34-79.
- Kaye, Jonathan, Jean Lowenstamm and Jean-Roger Vergnaud. 1985. The internal structure of phonological representations: A theory of charm and government. *Phonology Yearbook* 2: 305-328.
- Kaye, Jonathan, Jean Lowenstamm and Jean-Roger Vergnaud. 1990. Constituent structure and government in phonology. *Phonology Yearbook* 7: 193-231.
- Kihm, Alain. 2005. Noun class, gender, and the lexicon / syntax / morphology interfaces: A comparative study of Niger-Congo and Romance languages. In G. Cinque and R. Kayne, eds. *The Oxford Handbook of Comparative Syntax*. Oxford: Oxford University Press. 459-512.
- Kiparsky, Paul. 1991. *Catalexis*. Ms. Stanford University.
- Lampitelli, Nicola. Forthcoming. *Morphosyntaxe des noms de l'italien*. PhD dissertation. University of Paris 7.

- Larsen, Bergeton Uffe. 1998. Vowel length, *raddoppiamento sintattico* and the selection of the definite article in Modern Italian. In P. Sauzet, ed. *Langues et grammaire II & III, Phonologie*. Paris: Université de Paris 8. 87-102.
- Lowenstamm, Jean. 1996. *CV as the only syllable type*. In J. Durand and B. Laks, eds. *Current Trends in Phonology. Models and Methods*. Salford: ESRI. 419-441.
- Lowenstamm, Jean. 2000. The No straddling effect and its interpretation: A formal property of Chaha 2nd feminine singular formation. In J. Lecarme, J. Lowenstamm and U. Shlonsky, eds. *Research in Afroasiatic Grammar*. Amsterdam: John Benjamins. 183-198.
- Montermini, Fabio. 2003. Appunti sulla cancellazione di vocale in derivazione. In A. Bisetto, C. Iacobini and A.M. Thornton, eds. *Scritti di morfologia in onore di Sergio Scalise in occasione del suo 60° compleanno*. Cesena: Caissa Italia. 171-188.
- Nespor, Marina and Irene Vogel. 1986. *Prosodic Phonology*, Dordrecht, Foris.
- Paradis, Carole and Jean-François Prunet. 2000. Nasal vowels as two segments: Evidence from borrowings *Language* 76.2: 324-357.
- Picallo, M. Carme. 2008. Gender and number in Romance. *Lingue e Linguaggio* 1. 47-66.
- Repetti, Lori. 1993. The integration of foreign loans in Italian. *Italica* 70.2: 182-196.
- Rose, Yvan. 1995. *Minimalité, préservation et tolérance dans les emprunts français en kinyarwanda*. M.A. Thesis. University of Laval.
- Scheer, Tobias. 1996. *Une théorie de l'interaction directe entre consonnes*. PhD dissertation. University of Paris 7.
- Scheer, Tobias. 2004. *A Lateral Theory of Phonology. Vol 1*. Berlin: Mouton de Gruyter.
- Scheer, Tobias. 2008. *A Lateral Theory of Phonology. Vol 2*. Third draft.
- Spencer, Andrew. 1986. A non-linear analysis of vowel-zero alternations in Polish. *Journal of Linguistics* 22: 249-280.
- Thornton, Anna M. 1999. Diagrammaticità, uniformità di codifica e morfomorficità nella flessione verbale italiana. In P. Benincà, A. Mioni and L. Vanelli, eds. *Fonologia e morfologia dell'italiano e dei dialetti d'Italia. Atti del XXXI Congresso della Società di Linguistica Italiana - Padova, 25-27 Settembre 1997*. Roma: Bulzoni. 483-502.
- Thornton, Anna M. 2001. Some reflections on gender and inflectional class assignment in Italian. In C. Schaner-Wolles, J. Rennison and F. Neubarth, eds. *Naturally! Linguistic Studies in Honour of Wolfgang Ulrich Dressler*. Torino: Rosenberg & Sellier. 479-487.
- Thornton, Anna M. 2003. In A. Bisetto, C. Iacobini and A.M. Thornton, eds. *Scritti di morfologia in onore di Sergio Scalise in occasione del suo 60° compleanno*. Cesena: Caissa Italia. 203-219.
- Thornton, Anna M. 2004. *Mozione*. In M. Grossmann and F. Rainer (eds.), *La formazione delle parole in italiano*. Tübingen: Niemeyer.
- Thornton, Anna M. 2009. Constraining gender assignment rules. *Language Sciences* 31: 14-32.
- Ziková, Markéta. 2008. Why are case markers in the Czech nominal declension not cyclic suffixes? In F. Marušić and R. Žaucer, eds. *Studies in Formal Slavic Linguistics*. Frankfurt am Main: Peter Lang. 325-335.

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