

Evaluative Affixes in Italian

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1. INTRODUCTION

Italian nouns and adjectives make use of almost two dozen evaluative affixes (to borrow Scalise's 1984 term), most of which can also be found on verbs. While a few of these affixes are strongly productive on N and A and weakly productive on V, today most of those that occur on V are lexicalized (though not all; see Cortelazzo & Cardinale 1989). Nevertheless, their evaluative sense is obvious, and their occurrence suggests a period in the history of Italian (from around 1300 to 1600, judging by Cortelazzo & Zolli 1979) when all these affixes were productive. Since prepositions in Italian form an inert class with respect to morphology (with the exception of portmanteau preposition-articles, as in Napoli & Nevis 1987) and always have in the history of Italian, it is natural that these affixes did not occur on P. Thus, evaluative suffixes did occur on all morphologically relevant categories. This means that most evaluative affixes went through a period when they did not select for category.

Aronoff claims that word formation rules (WFRs), such as affixation, operate on a base that is "always specified syntactically" (1976: 47). The general syntactic and semantic conditions that a WFR might be sensitive to are "category, subcategory, selection, and lexically governed entailment and presupposition" (1976: 48). The specification is, furthermore, always unique. Aronoff dubs this claim the Unitary Base Hypothesis and argues that if any WFR can be found to apply to both nouns and verbs, for example, the UBH would be refuted, given that N and V cannot be stated as a single syntactic category. In support of the UBH, Aronoff looks at a potential counter-example, the English affix-*-able*, which attaches to both N (*sizable*) and V (*readable*), and argues that the identity here is only apparent – that we have, in fact, two distinct affixes with different properties. Aronoff does not admit the possibility of an affix which would put no syntactico-semantic conditions on the base to which it attaches.

The evaluative suffixes studied here, which definitely attach to N as well as V, provide a clear counterexample to Aronoff's UBH, even as modified in Scalise (1984), as we discuss below (see Section 8).

Still, as Zwicky & Pullum (1987) have pointed out, "plain" morphology contrasts with "expressive" morphology in a number of ways, including precisely the fact that expressive morphology is promiscuous with respect to the base it operates on. By *plain morphology* they mean morphological rules that belong properly to the rules of grammar of natural languages. By *expressive morphology* they mean extragrammatical phenomena in word formation,

analogous, perhaps, to rules of poetic form in contrast to true rules of metrical phonology. If our evaluative suffixes could be shown to belong to expressive morphology rather than to plain morphology, their promiscuity would be expected and would not threaten the URBH, which is a principle governing plain morphology.

Evaluative suffixes, however, are not examples of expressive morphological phenomena (EMPs). Zwicky and Pullum offer seven typical characteristics of EMPs, using language games and ideophones as examples, and they claim that while a particular EMP may well not exhibit all seven characteristics, and while a particular plain morphological phenomenon may well exhibit one or more such characteristics, in general we can identify EMPs by a necessarily significant number of those characteristics.

Evaluative suffixes exhibit only one of the seven characteristics: They are promiscuous with regard to the base they attach to. However: (1) Unlike EMPs, they do not elicit a particular pragmatic effect, such as a chuckle; (2) they can apply after inflection, like EMPs, but so can other derivational processes (as we will show in this paper); (3) adult speakers have productive control over the use of those affixes that are active today – unlike EMPs, where some speakers will have no productive control; (4) the attachment of an evaluative suffix and some other affix always results in a single output, not alternative outputs as with EMPs; (5) there is consistency from speaker to speaker with respect to the appropriateness and syntactico-semantic conditions for using evaluative suffixes today, unlike EMPs; and, finally, (6) the words created by the addition of an evaluative suffix behave syntactically like normal words, and do not display the special syntax typical of EMPs.

Thus our evaluative suffixes belong to plain morphology and just happen to share one property with EMPs: the property of not selecting a syntactico-semantic unique base to attach to. In fact, Zwicky and Pullum themselves mention the Spanish diminutive *-ito* (1987: 338) – which is, of course an evaluative suffix – as an example of a plain morphological phenomenon that can be viewed as having a “limited expressive element to it”.

We will show below that evaluative suffixes violate the URBH. We then ask why they should be allowed to do so. We argue that the answer does not lie in the structure of Italian *per se*, since other languages present similar data. Instead, the answer most likely stems from the nature of evaluative suffixes themselves.

We will now proceed to demonstrate the promiscuity of evaluative suffixes. But first a word of caution about our data is called for. Dictionaries of Italian vary on which words with evaluative suffixes they list. Speakers of Italian likewise vary on which words with evaluative suffixes they accept. In this study we have relied heavily on the dictionaries by Alinei (1962), Ragazzini (1967), Zingarelli (1970), Cortelazzo & Zolli (1979), and Cortelazzo & Cardinale (1989). Many of the examples we use are archaic for some speakers and at least unusual for others. Nevertheless, some are quite ordinary for all speakers. We have been catholic in our data collection and presentation, placing rare

examples on a par with common examples, because our focus is on the general fact that this phenomenon occurs in language, not on the particulars of the structure of Italian. The general phenomenon we are describing occurs today to varying degrees in all varieties of standard Italian, so far as we know, and surely has a lively history in this language.

2. AFFIXES IN ITALIAN

Italian has a wide range of inflectional and derivational suffixes, as well as several derivational prefixes. In this paper we will refer to “roots”, which are single lexical morphemes, and “stems”, which are roots plus zero or more affixes (sometimes called “bases”).¹ While inflectional affixes never affect the category of the stem they attach to (and this is claimed to be one of the defining characteristics of inflectional affixes in general across languages; see Spencer (1991), among many others), derivational ones may or may not:

(1) Inflectional:

nominal singular vs. plural by gender:

ragazza/ragazze ‘girl(s)’
ragazzo/ragazzi ‘boy(s)’

verbal present tense first conjugation by person:

parlo/parti/parla ‘I/you(s)/he talks’
parliamo/parlate/parlano ‘we/you/they talk’

(2)

Derivational suffixes that do not change category (though they may change other features):

N → N *cucchiaio* ‘spoon’ *cucchiata* ‘spoonful’
pino ‘pine tree’ *pineta* ‘pine grove’
gelato ‘ice cream’ *gelateria* ‘ice cream parlor’
A → A *bello* ‘beautiful’ *bellissimo* ‘very beautiful’

Derivational suffixes that do change category:

N → A *socio* ‘member’ *sociale* ‘social’
V → N *determinare* ‘to determine’
determinismo ‘determinism’
N → V *polvere* ‘dust’ *polverizzare* ‘to pulverize’

Derivational prefixes that do not change category:

N → N *faccia* ‘face’ *interfaccia* ‘interface’
V → V *notare* ‘to note’ *prenotare* ‘to reserve’

Derivational prefixes that do change category:

N → V *balanza* ‘boldness’ *imbaldanzire* ‘to embolden’²
A → N *pluvio* ‘rainy’ *displuvio* ‘watershed’
V → N *fugare* ‘to banish’ *profugo* ‘fugitive or exile’

While examples of prefixes that change category are, admittedly, rare in Italian, they do occur. But conspicuously missing from the list in 2 is an example of a derivational suffix that operates on a V stem to produce another V stem. All such examples we have found fall under the class of evaluative suffixes.

3. EVALUATIVE SUFFIXES

Evaluative suffixes fall into four groups: diminutives, augmentatives, pejoratives, and others (Scalise 1984: 131). Scalise (1983, 1984) lists six properties which characterize the behavior of these suffixes, properties we have restated in our own words and reorganized into seven (where Scalise would have property (g) included in property (b)):

- (a) They change the semantics of the stem.
- (b) An evaluative suffix can attach to a stem which already has an evaluative suffix.
- (c) They are external with respect to nonevaluative derivational suffixes and internal with respect to inflectional suffixes.
- (d) Rare instances of adjacent identical evaluative suffixes can be found.
- (e) They do not change the syntactic category of the stem they attach to.
- (f) They do not change the syntactic features or the subcategorization frame of the stem they attach to.
- (g) If an evaluative suffix attaches to a stem which already has an evaluative suffix, that stem is a well-formed word.

Properties (a) and (b) are not unusual. Every morphology text we know of claims that many derivational suffixes change the semantics of the stem (see, for example, Matthews 1974). Furthermore, Bybee (1985) gives a rather comprehensive and organized discussion of the semantic contribution of inflectional affixes. And we often find more than one derivational affix in a given word, as well as more than one inflectional affix. Thus properties (a) and (b) would lead us to classify evaluative suffixes as ordinary suffixes without any clear indication as to whether they might be derivational or inflectional (if such a distinction really exists, see Bybee (1985) who argues for a continuum of morphemes from lexical to derivational to inflectional).

However, the collocation of evaluative suffixes between derivational ones and inflectional ones – property (c) – calls for an explanation, and Scalise has offered one. He proposes that evaluative rules (rules adding evaluative suffixes) form a block (or level, within a level-ordered phonology of the type proposed first in Allen (1978) and developed by many, including Kiparsky (1982, 1985) between the block of derivational rules and the block of inflectional rules.

Property (d) is odd because the semantics of derivation are seldom recursive (occurring primarily in double causatives or double passives, as in Turkish), and Scalise is careful to point out that this occurs only “to a limited extent” (1984: 133). We have gone further and called it rare. The example Scalise offers is (3), with the diminutive suffix repeated:

- (3) *carmino* ‘a little bit nice’ = *car + in + in + o*

While some nouns in, e.g., Czech (and possibly in other Slavic languages) license double diminutives (Spencer 1991: 102), this example in Italian is unique so far as we know. In fact, we know of no instance in Italian in which an inflectional suffix is repeated within a word (adjacent or otherwise), and only one comical instance in which a derivational suffix is repeated within a made-up word (though not on adjacent cycles), in the well-known couplet.

- (4) Chi troppo in alto sale, cade repente
Precipitevolissimevolmente.
‘Whoever climbs too high, falls repentant
Very precipitously’.

Property (e) is definitional of inflectional suffixes, but, as we have seen in (2) above, it is also a feature of some derivational suffixes in Italian. However, while property (e) seems to be true when evaluative suffixes attach to N stems or A stems, it does not hold when evaluative suffixes attach to V stems:

- (5) *spendaccione* ‘spendthrift’

The stem here is the verb root *spend-* plus two evaluative suffixes, the pejorative spelled out as *-acci-* and the augmentative spelled out as *-on-*, followed by the inflectional nominal ending *-e*. (All noun, verb, or adjective (that is, lexical category) stems in Italian must have an inflectional suffix in order to form words. See note 1.) We have, then, an example in which a V has been changed to a N by the addition to two evaluative suffixes. Furthermore, the intermediary level, that at which only the pejorative suffix has been added, does not constitute a stem for a well-formed word, neither a V nor a N, no matter what inflectional ending we might try to add:

- (6) Nonexistent:
V *spendacciare*
N *spendaccio spendaccia spendacce*

Thus property (g) also fails to hold when we consider V stems to which evaluative suffixes have been added.

Property (f), of course, assumes property (e). Certainly when evaluative suffixes are added to N stems, the result is a N stem with the same value for the features [\pm animate], [\pm count], and [\pm common], although evaluative suffixes can change gender:

- (7) *domna* (f) 'woman' *domino* (m) 'little woman' (but also *domina*)
domna (f) 'woman' *domnono* (m) 'big woman' (but also *domnona*)
corda (f) 'cord' *cordone* (m) 'cord'

And we have found one example in which an evaluative suffix can change the feature of [\pm human], although it is clear that this example originated from a metaphor:

- (8) *vietello* 'veal or young steer'
vietellone 'big steer or (adolescent) lout'

However, when evaluative suffixes are added to V stems, syntactic features of the V can certainly change. Thus an evaluative suffix may change the conjugational class of a V, which we can see by looking at the same verb root we saw above in (5):

- (9) *spendere* (2nd conjugation) 'to spend'
spendicchiare (1st conjugation) 'to spend in little driblers'

An evaluative suffix may also change the subcategorization frame of a V stem:

- (10) *spruzzare* (transitive) 'to sprinkle'
spruzzolare (transitive) 'to sprinkle lightly'
(intransitive) 'to drizzle (as in weather)'

Given the fact that evaluative suffixes show less limited behavior when they are added to verbal stems than when they are added to nominal stems, one might be tempted to set the verbal suffixes aside as separate but homophonous affixes. Aronoff (1976) suggests two criteria that are relevant here. First, if homophonous affixes have different semantics, they might be different. Second, if homophonous affixes have different formal properties, they might be different. By the first criterion, we are led to identify only one set of affixes for both N and V stems. By the second criterion, we are led to identify two homophonous sets: one for N stems, which have the properties in (a)-(g) above; and another for V stems, which have only the properties in (a)-(c). In light of the fact that we have been unable to find derivational suffixes on V other than evaluative suffixes, the fact that evaluative suffixes collocate according to property (c) would follow if these suffixes on V were actually simple derivational suffixes. That is, evaluative suffixes on V stems would have properties (a)-(c) because evaluative suffixes on V stems would be, in fact, ordinary derivational suffixes.

There is a third consideration to take into account here, however. We have been able to identify no fewer than twenty-three evaluative suffixes for N stems, of which at least twenty, and possibly twenty-one, have semantically corresponding forms for V stems. This is not a matter of just one or two cases of possible homophony. Furthermore, the sort of change in semantics that these affixes effect on a noun is usually analogous to the sort of change they effect on a verb. Thus an augmentative might add size to a noun and

add iteration to a verb; a diminutive might subtract size from a noun and remove some aspect of the action of a verb, such as intensity; and so on. It is undeniable, then, that the process of evaluative affixation occurs both on N and V stems. Rather than have two long lists of affixes that just happen to be homophonous and have similar semantic effects, we propose a single set that can attach to stems of any category.

4. PRODUCTIVE EVALUATIVE SUFFIXES

There are at least four extremely productive evaluative suffixes in Italian.

Diminutive -in-. The most frequently used diminutive suffix in Italian, -in-, easily attaches to N or A stems:

- (11) N *ragazza/ragazzo* 'girl/boy'
ragazzina/ragazzino 'little girl/little boy'
A *bello* 'beautiful' *bellino* 'pretty'

While we have found in a reverse Italian dictionary (Almei 1962) several verbs that exhibit this suffix, there is typically a potential nominal source from which the verb might have come, as in (12a). However, (12b) is a clear example of -in- attaching to a now archaic verb stem to produce another verb stem, and (12c) gives a verb with -in- that has recently entered the language, according to Cortelazzo & Cardinale (1989: 21). Furthermore, in (12d) we see a new verb (again see Cortelazzo & Cardinale 1989: 21) formed from a N which in turn was formed by attaching the diminutive affix -in- to a V stem:

- (12) a. *piombare* 'to coat with lead'
piombinare 'to drop a plumb bob'
but: N *piombino* 'plumb bob'
b. *sciare* 'to expand (in air or water)'
sciariare 'to hang out in the air (as in doing laundry)'
c. *attorcere* 'to twist'
attorchiare 'to side or snake closer (to)'
d. *attaccare* 'to attach'
N *attacchino* 'bill poster'
attacchinare 'to attach political posters to walls'

In sum, -in- productively attaches to stems of all categories.

Augmentative -on-. The most frequently used augmentative suffix, -on-, also easily attaches to N or A stems:

- (13) N *ragazzo* 'boy' *ragazzone* 'big boy'
A *verde* 'green' *verdone* 'deep green'

In Alinei (1962) we find several examples of verbs with this suffix, but in all cases a noun stem containing the augmentative suffix can be proposed as the source for the verb stem (note that the verb *srillonare* in (14a) is new to Italian; see Correlazzo & Cardinale 1989: 238). Nevertheless, (14b) gives examples of Ns directly derived from V stems plus this augmentative suffix:

- (14) a. *zappare* 'to hoe' *zapponnare* 'to hoe with a big hoe'
 (but: N *zappone* 'big hoe')
srillare 'to shriek' *srillonare* 'to shout newspaper headlines
 in order to sell papers'
 (but: N *srillone* 'hawker')
 b. *mangiare* 'to eat' *mangione* 'glutton'
magnare 'to eat' (dialectal form)
magnarone 'freshwater fish with a large mouth'

We have included the second example in (14b) because of its oddity. Here the verb root *magn-* plus the verbal inflection of the conjugation theme vowel *-a-* and the infinitival *-r-* all make up a verbal stem to which the augmentative suffix attaches and forms the noun stem *magnaron-*. Since inflection (the *-ar-*) precedes derivation (the *-on-*) here, this example is of great potential interest to the theory of morphology in light of the claim of level ordering that inflection follows other word formation processes.

We know of at least two other instances in Italian besides evaluative suffixes (and see the remarks on *-cell-* below) in which it appears that inflection can precede other word formation processes. Both regard compounding. First, Vogel (1993) points out that in exocentric compounds like *apribottiglie* 'bottle opener', we find a plural inflection on the noun element of the compound (*bottiglie* 'bottles') without the whole compound having a plural sense. Second, Napoli (forthcoming) points out instances of adjective-noun gender and number agreement internal to compounding (as in *pellerosa* (m) 'redskin, Native American' < *pelle* (f) 'skin' + *ross-* 'red'). In both instances, the inflection is a regular one (unlike the irregular inflection preceding derivation in the English agentive noun *goner*), so we cannot appeal to any sort of lexicalization in these cases.

Ameliorative -ucci- A frequently used ameliorative affix, spelled out as *-ucci-*, appears to be limited to N and A only:

- (15) N *ragazza* 'girl' *ragazzuccia* 'sweet (little) girl'
ragazzo 'boy' *ragazzuccio* 'sweet (little) boy'
 A *caro* 'dear' *caruccio* 'quite dear'

We have come across no examples of V that use this affix.

The three affixes in (11-15) are quite productive today and can even be added to proper names:

- (16) Elena Elena Elenone Elenuccia

An interesting fact about all of them is that they have homophonous affixes applying to stems of the same categories which do not change the meaning in the predicted way. We can see examples in:

- (17) *posta* 'mail' *postino* 'mailman'
carta 'paper' *cartone* 'card board'
cappa 'cloak' *cappuccio* 'hood'

Scalise (1984: 143-146) discusses for *-in-* the theoretical issues involved in determining whether we are really dealing with homophony here or whether there is only one *-in-* which sometimes means diminutive and sometimes not. He tends toward the homophony analysis, because the use of *-in-* that does not carry a diminutive sense with it can change the category of the stem it attaches to, contrary to property (e) above, as in:

- (18) V → N: *imbiancare* 'to paint' *imbianchino* 'painter'

There is no existent N that the diminutive N in 18 could have been formed from; it must have come from the V stem.

We find the same sort of pairs for the nonaugmentative sense of *-on-*, as in (19) (the derivation in (19a) follows Zingarelli 1970, and that in (19b) is pointed out in Schwarze 1988: 467):

- (19) a. V → N: *spaccare* 'to break, split' *spaccone* 'braggart'
 b. V → N: *brontolare* 'to complain' *brontolone* 'grumbler'

But we have not found such pairs for the non-ameliorative sense of *-ucci-*. Given that both the lexicalized and (in 12 and 14) the nonlexicalized senses of the diminutive and augmentative affixes attach to V as well as N/A stems, we suggest that instead of these being sets of homophonous affixes, we have a single set of affixes, with the lexicalized words in (18-19) representing a possibility that was strongly productive at an earlier stage of Italian and is in fact still productive today (though weakly). According to Correlazzo & Zöll (1979), all the verbs with evaluative affixes that we discuss in this paper (with the exception of the new verbs listed in (12) and (14), and all others that we have come across, are first attested in Italian literature between approximately 1300 and 1600 A.D. Thus the dearth of words which must be analyzed as cases of the particular diminutive *-in-* or the particular augmentative *-on-* turning a V into a new V is evidence only of the fact that these affixes were, and still are, so rampantly productive on nominal stems. That is, the V-to-V derivation for examples such as (12a) and (14a) may well be possible, but this derivation is obfuscated by the existence of possible N sources.

The ameliorative affix, however, is quite different. Not only does it select only N stems to attach to and not A stems in its productive usage, it never selects anything but N stems even in its lexical usage. (Again, this fact is easily captured if we have a single affix, not two homophonous ones). This affix,

in fact, seems to be one of only two we have found which never in their history were blind to the category of the stem to which they attached.

Pejorative -acci-. The only other truly productive evaluative suffix today is the pejorative spelled out as *-acci-*, which, like the other productive evaluative suffixes, can be added to proper names as well as common nouns:

- (20) *ragazza* 'girl' *ragazzaccia* 'nasty (little) girl'
ragazzo 'boy' *ragazzaccio* 'nasty (little) boy'

- (21) *Elena Elenaccia*

And like the diminutive and augmentative above, but unlike the ameliorative, it can be added to A:

- (22) *verde* 'green' *verdaccio* 'darkish/grayish/dirty green' and to V:

- (23) *spumare* 'to pull out feathers' *spumacciare* 'to shake up (a pillow)'

Here there is no possible nominal source for the derived V (in contrast to the examples in 12a and 14a above):

- (24) Nonexistent N: *spumaccia*, *spumaccio*

(While some speakers have suggested to us that the N *spumaccio* (from which *spumaccio* could then be formed) may exist, none have said it exists in their own speech). We have evidence, then, that this pejorative affix could attach to a V stem to yield a V at an earlier stage of Italian.

5. MUCH LESS PRODUCTIVE EVALUATIVE SUFFIXES

There are multiple less productive evaluative suffixes in Italian. We will here discuss sixteen of them, of which only the first three appear to be limited to attaching to N or A; however, in the case of the second (diminutive *-cell-*), this is a false first impression, and in the case of the third (diminutive *-cin-*), this is confounded by the fact that the suffix can produce a verbal stem.

Pejorative -astr-. The first is the pejorative *-astr-*, as in:

- (25) N *medico* 'doctor' *medicastro* 'quack'
 A *dolce* 'sweet' *dolcistrò* 'sickly sweet'

While there are verb stems that end in *-astr-*, some of which even have a negative sense, as in:

- (26) *castrare* 'to castrate'
disastrare 'to wreak havoc'

none of them can be analyzed as containing the pejorative affix. (*Disastrare*, for example, has the stem *disastr-*, which consists of the negative prefix *dis-* plus the root *astr-* 'star', yielding the sense 'under a bad star').

Thus *-astr-* is our second and final evaluative affix that attaches only to N/A.

Diminutive -cell-. The second less productive affix is the diminutive *-cell-*, as in:

- (27) N *fiume* 'river' *fiumicello* 'stream'
 orto 'garden' *orticello* 'kitchen garden'
 A *grande* 'big'
grandicello 'big in a certain way, though otherwise small'

The initial consonant of this affix is the voiceless alveopalatal affricate /tʃ/. With respect to nouns, it attaches only to masculine ones, where the singular form always ends in *-e* or *-o*. When *-cell-* attaches, the vowel *-i-* appears between the stem and the evaluative suffix.

We need, then, to ask whether this *-i-* is part of the affix or not. If the *-i-* were part of the affix, then we would have in effect an affix *-icell-* which would attach to the stems in (27) and the derivation would be straightforward.

However, a problem arises with this analysis. When this affix attaches to a stem that ends in a nasal, sometimes the *-i-* does not occur:

- (28) *violone* 'contrabasso' *violoncello* 'cello'
pavone 'peacock' *pavoncella* 'tapping plover'

There is no independently needed phonological rule that we know of that would delete the *-i-* from (28). In fact, *-ificio* in the same environment fails to reduce to *-ficio* (*saponificio* 'soap factory' < *sapone* + *-ificio*).

If, on the other hand, this *-i-* is part of the stem to which the affix attaches, then we must say that the stem in these instances is the full word – including the inflectional suffix – where the inflectional endings of *-o* and *-e* raise to become *-i-*.

This analysis has the advantage of making use of an independently needed rule of Vowel Raising that raises /e/ or /i/ (a rule noted in Scalise (1983) and formulated in Vogel & Napoli (forthcoming)). Vowel Raising operates both in derivational morphology and the formation of compounds. The sources cited give examples of Vowel Raising on verbal forms only. We have found, however, instances in which this same Vowel Raising rule applies to a noun inside a compound,³ as in the compound adjective *cuoriforme* 'heart shaped' (*cuore* 'heart' + *forme*, a bound Latin stem meaning 'form' which occurs in many adjective compounds), and the compound nouns formed with *coltura*, such as *viticoltura* 'vine-growing' (*vite* 'vine' + *coltura* 'cultivation'), and with *-vendolo*, such as *fruttivendolo* 'fruit monger' (*frutta* 'fruit' + *-vendolo*, a bound stem meaning 'seller'). Furthermore, this analysis is supported by the

fact that Vowel Raising in adjective compounds can raise and front /o/ to /i/, as in *fusforme* 'spindle-shaped' (*fuso* 'spindle' + *-forme*). And, finally, we find this Vowel Raising (both /e/ to /i/ and /a/ to /i/) in non-compounds, such as *latticini* 'milk products' (*latte* 'milk' + *-cini-*, the diminutive suffix) and *carticino* 'errata sheet' (*carta* 'paper' + *-cini-*, the diminutive suffix).

On the other hand, this analysis provides us an advantage in accounting for (28). If the full word *violone*, for example, is the form to which *-cell-* is to attach, we can account for the loss of the final *-e* of *violone* with an independently needed optional rule of Italian that drops a postnasal final unstressed vowel that is (part of) an inflectional ending (as in: *andiamo* → *andiam* 'we go').

Furthermore, if *-cell-* is our affix, then we can analyze *-icell-* (where the orthographic *sc* represents a single initial consonant that is the voiceless alveopalatal fricative /ʃ/) as an allomorph that appears whenever the /o/ to /i/ rule fails to apply, as in:

- (29) *ramo* 'branch' *ramoscello* 'twig'

If *-icell-* were our affix, in contrast, (29) would represent either a new affix or an allomorph whose distribution was unpredictable.

For these reasons, we claim that *-cell-* is the affix, not *-icell-*. And we note that in Latin, the counterpart diminutive should likewise be analyzed as *-cell-*, not *-icell-*. In (30) we see Latin data that are parallel to the Italian data above in all regards (and see Hakamies (1951), who limits his study to nominals only):

- (30) *mollis, molem* 'soft' *mollicellus* 'dainty'
annus, annum 'year' *annicellus* 'one year old'
ramus, ramum 'branch' *ramuscellum* 'small branch'

An alternative analysis that we should consider is whether instead of *-cell-*, our suffix might actually be *-ell-* (a diminutive we distinguish separately in (52) below), and epenthetic /l/ (written as *c*) is an interfix that glues *-ell-* to certain stems.

We admit initial resistance to this analysis on theoretical grounds. The highly marked affricate /tʃ/ is not the kind of consonant one would expect; epenthetic consonants across languages tend to be the underspecified consonant(s) of the language – typically a dental or alveolar stop. In both Italian and English, in fact, we find undeniable cases of epenthesis of /tʃ/ or /tʃ/:⁴

- (31) English: *fantastic* < *fantas* + *t* + *ic*
 Italian: *caffettiera* 'coffee pot' < *caffè* + *r* + *iera*

And in Italian we also find an (optional for some speakers) epenthetic /d/ after the preposition *a* 'to' and the conjunction *e* 'and' before a vowel-initial word (although there is an alternative historical account of the /d/ after *a* which would derive *a* from the Latin preposition *ad*):

- (32) *a Marina* vs. *ad Iole*
e Maria vs. *ed Iole*

Nevertheless, at first glance we see a potential advantage in this analysis, since there are other instances in which one might initially wish to posit a *-c-* interfix – namely between stems and the diminutive suffix *-ini-*, as in:

- (33) *balcone* 'balcony' *balconcino* 'small balcony'
corona 'crown' *coroncina* 'little crown'

However, if this were the case, we would not expect to find stems which could take both *-cell-* and *-ell-*, or both *-cin-* and *-in-*. Yet we do. And significantly, we can find instances in which the resulting words are semantically quite distinct, such as:

- (34) *campo* 'field, piazza' *campicello* 'little field'
campello 'little piazza'
prato 'meadow' *praticello* 'small meadow' *pratello* 'small meadow'

- (35) *orto* 'garden' *orticino* 'little garden, planter'
ortino 'kitchen garden'
lume 'light' *luminicino* 'small light' *luminio* 'nightlight'

In fact, we even find instances in which all four affixes can attach to a single stem, with four different meanings:

- (36) *panno* 'cloth' *pannicello* 'rag' *pannello* 'light cloth or panel'
pannicino 'little cloth' *pannina* 'drapery'

The conclusion (welcome, from a theoretical perspective) is that *-c-* is not an interfix. Thus our suffix is, clearly, *-cell-*. (Notice, as well, that we must also conclude that we have a suffix *-cin-* in addition to *-in-*. We discuss this suffix next).

-cell- is the only evaluative suffix we have come across that attaches to a full N word (including its inflectional nominal ending) rather than to a stem. We point this fact out, just as we pointed out a similar derivation with *magnarone* in (14b), because of its relevance to level ordering. We will not pursue the relevant issues further here since they take us far astray of our central point.

Returning to *-cell-*, at first it seems that this diminutive attaches only to nouns and adjectives. There is at least one example, however, in which it is possible that this affix has attached to a verbal stem:

- (37) *sbocconcellare* 'to nibble'

There is no good nominal source for this V. However, there is also no obvious verbal source we have been able to find:

- (38) Nonexistent:
 N *sbocconcello* *bocconcello*
 V *sbocconare*

Nevertheless, there is evidence that the stem of the nonexistent V in (38) is the proper source for (37), if we follow Scalise (1984). Scalise claimed that if an evaluative suffix attaches to a stem that already has an evaluative suffix, the stem is a well-formed word (property (g) in Section 3 above). We have seen, however, that while this may be true of the attachment of evaluative suffixes to N stems, it is not true of the attachment of evaluative suffixes to V stems (as in example (5) above). In (37) the verb contains not just the diminutive *-cell-*, but also the augmentative *-on-*. If the proper source of (37) were a N, it should be one of those listed in (38), given property (g). But the fact that those nouns are not well-formed (i.e., they are nonexistent) leads us to conclude that they cannot be the proper source. Thus the affix *-cell-* in (37) attached not to a noun (since we have precluded the possibility of a nonexistent source N stem, in accord with Scalise), but to a V stem.

The plausibility of this analysis is strengthened by the fact that the N *boccone* 'mouthful' exists. To get from the stem *boccon-* to (the nonexistent) *sbocconare* in (38), all we need do is add the prefix *s-* and change the category to a V, a process that happens elsewhere (*s-* + *-ball-* 'sack/pack' → *sballare* 'to unpack'; *s-* + *-fald-* 'layer' → *sfoldare* 'to flake'; etc.).

Diminutive *-cin-*. Given the discussion in the immediately preceding section, we also recognize the existence of the diminutive *-cin-*, which is found in examples such as:

- (39) N → N *carta* 'paper' *carticino* 'errata sheet'
N → A *carne* 'flesh, meat' *carnicino* 'flesh-colored'

We also find the archaic forms:

- (40) N → V *sermo* 'sermon' *sermocinare* 'give a little sermon'

We do not find in any of our sources the nominal form **sermocino*; thus the diminutive suffix, while attaching to the same stem that is present in the N, is creating a verbal stem in (40).

Given the above, we cannot be sure whether this suffix can attach directly to verbal stems, but we note that it can *produce* verbal stems.

All the remaining affixes discussed in this section clearly attach to both N and V stems.

Diminutive/augmentative *-oti-*. The affix *-oti-* appears on both N/A and V stems, as in:

- (41) *candela* 'candle' *candelotto* 'thick squat candle'
barile 'barrel' *barilotto* 'small barrel, keg'
giovane 'young' *giovanoito* 'robust young man'

- (42) *parlare* 'to talk' *parlotare* 'to murmur or mutter'

There is no good existent nominal source for the V with the augmentative suffix in (42). Thus, while we do find the N

(43) *parlotio* 'murmuring, muttering'
this is formed with the suffix consisting of a stressed /i/ plus the nominal word ending (here /o/), and that suffix is derivational, operating on V stems to produce Ns. The N in (43), then, is formed from the augmentative V in (42), and not vice versa.

We note further that *-oti-* often adds augmentative sense in addition to diminutive sense. For example, while the intensity of the voice in *parlotare* is less than that in *parlare*, the speech act is iterative with *parlotare* and not with *parlare*. Likewise, while a *candelotto* is shorter than a *candela*, it is also thicker or squarer. That *-oti-* has this dual effect on both nouns and verbs is new and additional evidence that the same evaluative suffixes attach to noun stems as to verb stems.

Diminutive *-icci-*. The diminutive *-icci-* occurs in examples such as:

- (44) *carne* 'meat' *carniccio* 'scrap of flesh'
scarpate 'to cut to a slope' *scarpicciare* 'to trample'

Pejorative *-uol-*. The pejorative *-uol-* occurs in examples such as:

- (45) *carro* 'cart (with wheels)' *carrucola* 'pulley'
piangere 'to cry' *piagnucolare* 'to whine'

The spelling of the root-final consonant(s) in the verb here indicates a change from the cluster of a dental nasal followed by an alveopalatal voiced affricate to a simple palatal nasal. This particular sound alternation is attested elsewhere in Italian morphology (such as in the doublet *spengere*, *spegnere* 'to extinguish').

Diminutive *-ucchi-*. The diminutive *-ucchi-* is found in examples such as:

- (46) *bacio* 'kiss' *bacucchio* 'hurried kiss'
mangiare 'to eat' *mangiucciare* 'to nibble'

Diminutive *-uzzi-*. The diminutive *-uzzi-* is found in examples such as:

- (47) *pania* 'bird lime' *paniuzza* 'bird-limed twig'
tagliare 'to cut' *tagliuzzare* 'to cut in small pieces'

Ameliorative *-oli-*. The ameliorative *-oli-* is found in examples such as:

- (48) *costa* 'rib' *costola* 'rib chop'
fuggare 'to ransack' *fuggolare* 'to rummage or root'

Pejorative *-erecci-*. The pejorative *-erecci-* is found in examples such as:

- (49) N → A *festia* 'celebration, festival' *festereccio* 'festive, lawdry'
V → A *spendere* 'to spend' *spendereccio* 'spendthrift'

There are three interesting points to notice here. First, the resultant word is always an A. This affix, then, carries category with it. In this way *-erecci-* is like most derivational suffixes: It is the head of the newly formed word (as in Williams 1981). Second, we want to make clear that the verb root, not the root plus conjugation theme vowel, is the stem to which *-erecci-* attaches. Thus we find *mangereccio* 'edible' (*mangiare* 'eat' + *-erecci-*). Third, while *-erecci-* often carries a pejorative sense, it need not. It can function purely to derive an A form. Thus we find:

- (50) *villa* 'country house' *villereccio* 'rural'
giovare 'be useful' *gioverecchio* 'pleasing in aspect'

Diminutive -etti-. The diminutive *-etti-* is found in examples such as:

- (51) *libro* 'book' *libretto* 'libretto'
zappare 'to hoe' *zappettare* 'to hoe lightly'

Diminutive -elli-. The diminutive *-elli-* is found in examples such as:

- (52) *porco* 'pig' *porcello* 'young pig'
saltare 'to jump' *saltellare* 'to hop'

The root-final consonant of the N in (52) is a velar stop in the nondiminutive form and a voiceless alveopalatal affricate in the diminutive form. This alternation in sounds is found elsewhere in Italian (as in the singular *amico* 'friend' versus the plural *amici* 'friends') (see Dressler 1985: 168ff). This diminutive occurred on both N and V stems in Latin, as well (Strodach 1933).

Diminutive -erelli-. The diminutive *-erelli-* is found in examples such as:

- (53) *fioco* 'fire' *fuocherello* 'little fire'
cantare 'to sing' *cantarello* 'to sing softly, hum'

It is interesting to note that at least some speakers seem to reanalyze the diminutive V in (53) as consisting of an infinitive as the stem, plus the diminutive *-elli-* shown in (52) above. Thus a variant on (53), found in Zingarelli (1970), is:

- (54) *cantarellare*

Diminutive -occhi-. The diminutive *-occhi-* is found in examples such as:

- (55) *capo* 'head' *capocchia* 'head of a match or nail'
sgranare 'to husk, shell' *sgranocchiare* 'to nibble, crunch'

Pejorative -azz-. The pejorative *-azz-* is found in examples such as:

- (56) *coda* 'tail' *codazzo* 'bobtail, ragtag'
innamorarsi 'to fall in love'
innamorazzarsi 'to fall in love with bad consequences'

Diminutive -icchi-. The diminutive *-icchi-* is found in examples such as:

- (57) *canolo* 'pastry cylinder'
canolicchio 'short cylindrical pasta for soup'
spendere 'to spend' *spendicchiare* 'to spend in dribblers'

6. POSSIBLE EVALUATIVE SUFFIXES

Finally, we would like to propose that three more suffixes in Italian are evaluative.

Many Ns in Italian have the same desinences. Sometimes those desinences are evidence of productive affixation in Latin that has been lost in Italian. However, much of the time these historical affixes are still recognized by at least some speakers. Here we list three of these which appear to have come from evaluative suffixes in Latin. For each of them there exists in Italian today enough of a relationship between words with these desinences and corresponding words without the desinences that speakers might reasonably recognize these desinences as suffixes within their own grammar. In each instance the suffix has its counterpart on verbal stems. And in each instance there is no existent probable N source for the suffixed V, although there are often corresponding Ns which are formed from that V (similarly to (43) above).

Pejorative -acchi-. The pejorative *-acchi-* is found in examples such as:

- (58) *verdaccio* 'green plum' (related to: *verde* 'green')
scribacchiare 'scribble' (related to: *scrivere* 'write')

Diminutive -ecchi-. The diminutive *-ecchi-* is found in examples such as:

- (59) *forfecchia* 'earwig (insect)' (related to: *forbicina* 'earwig')
pungere 'to sting' *punzecchiare* 'to prickle, sting'

While the stem-final alternation in the verbal example of *g /dʒ/* and *z /ts/*, both affricates, is not typical of other stems, it is typical of this stem; witness: *pungere*, *punzellare* 'to prickle'.

Augmentative -izz-. The augmentative *-izz-* is found in examples such as:

- (60) a. *rubizzo* 'hale, hearty' (related to: *rubino* 'ruby')
 b. *aderire* 'to adhere'
aderizzare 'to cut a tire tread so that it adheres better to the road'

(60b) is from Cortelazzo & Cardinale (1989: 4); thus once again, we see evaluative affixation to a verb stem as a contemporary process. This affix is, we believe, not to be confused with the homophonous affix that attaches to adjectives to produce verbs (as in *formale* 'formal', *formalizzere* 'formalize').

7. OVERALL INVENTORY

Certainly there are patterns to recognize among these suffixes. First, some suffixes come in sets that differ only by their initial vowel, where those that begin with *e* or *i* are diminutive, those that begin with *o* are augmentative, those that begin with *a* are pejorative, and those that begin with *u* are ameliorative:

- (61) *-in* (dim.), *-on-* (aug.)
-icci- (dim.), *-acci-* (pej.), *-ucci-* (amel.)
-elli- (dim.), *-otti-* (aug.) (but see comments below on *-otti-*)
-ecchi- (dim.), *-icchi-* (dim.), *-acchi-* (pej.)

The identification of initial *e* with diminutive is supported by the fact that it also occurs in the diminutives *-celli-*, *-elli-*, and *-erelli-*. The identification of an initial *a* with pejorative is supported by the fact that it also occurs with the pejoratives *-azz-* and *-astr-*. The identification of initial *i* with diminutive is supported by the fact that it also occurs in the diminutive *-cchi-*, but is confounded by the fact that it occurs in the augmentative *-izz-*.

The identification of an initial *o* with augmentative is confounded in that it also occurs in the ameliorative *-ol-* (which Buetti-Ferrari (1987: 87) says was originally used to carry a diminutive sense that is lost today) and in the diminutive *-occhi-*. Also, it has both diminutive and augmentative sense simultaneously in *-otti-*. The identification of an initial *u* with ameliorative is confounded by the fact that it also occurs in the pejorative *-ucci-* and in the diminutives *-ucchi-* and *-uzzi-*.

The last two facts above are telling. Notice that both *o* and *u* are associated with diminutive as well as ameliorative senses in some affixes. This suggests that, like *i*, they were originally diminutive and that the ameliorative sense appeared later (where 'little' → 'darling'). As many others have noted, diminutives often take on ameliorative, pejorative, or a range of other largely evaluative senses (Haas 1972; Rhodes 1990; Heine *et al.* 1991; Jurafsky 1993).

Second, we can note the recurrence of a geminate voiceless dental affricate (spelled out as *zz*), a geminate voiceless alveopalatal affricate (spelled out as *ccj*), and a geminate voiceless velar stop (spelled out as *cchi*) following an initial vowel in many of these suffixes. We have not conflated these three sets of affixes into one because we see no morphological basis for calling them allomorphs (their relative distribution is not predictable). Furthermore, three of the *-cchi-* affixes and one of the *-zz-* ones are less transparently evaluative suffixes for our informants (although Buetti-Ferrari 1987: 90 lists the *-cchi-* forms as evaluative suffixes and does not list the *-ccj-* ones, mentioning only *-acci-* in passing and only with respect to nominals).

Third, sets like *-acchi-*, *-ecchi-*, *-icchi-*, *-ucci-* raise the question of whether they should be considered a single affix with a variable vowel. Buetti-Ferrari

(1987), who gives a beautifully comprehensive study of the semantics of verbs with many kinds of suffixes – including several of the suffixes listed in this paper, in fact – conflates the suffixes of the form *V + cchi* into one, pointing out that verbs with this suffix share a range of semantic properties regarding the interpretation of the time frame (see also Rohlf's 1969 and Tekavčić 1972), although they add different evaluative senses. She does not, however, discuss nouns with these suffixes, and we see no advantages to this conflation for nouns. Once more, these suffixes do not easily lend themselves to an analysis in which they are allomorphs, since the choice of *V* is not predictable.

Fourth, some linguists have conflated the affixes *-elli-*, *-celli-* and *-erelli-* (as in Schwarze 1988). But given the different idiosyncracies of each that we have noted, there are clear disadvantages to this approach.

The above patterns and caveats noted, we maintain a list of twenty-three distinct suffixes, seeing no obvious theoretical gain in conflating them.

8. THEORETICAL IMPORT OF OUR FINDINGS

We have seen that all but two evaluative suffixes at one time in the history of Italian could productively attach to stems regardless of the morphosyntactic category of that stem, and that even today a few still can. This finding is in direct contradiction to Aronoff's (1976) Unitary Base Hypothesis, which requires that any word formation rule operate only over a single type of syntactically defined stem, where within the syntactic limitations semantic factors may further limit the application of the rule. There is no way to see *N* and *V* as belonging to a single syntactic class, even if we adopt a feature system of defining classes with the features $\{EN, \pm V\}$, as Scalise (1984) does (following Chomsky 1981). Thus, an affix that can attach to both *V* and *A* stems should be allowed, since the affix could be sensitive to the feature $\{+V\}$. And an affix that can attach to both *N* and *A* should be allowed, since the affix could be sensitive to the feature $\{+N\}$. But no affix should be able to attach to *N* and *V*, since they have no feature in common. Therefore, these evaluative suffixes defy any formulation which is in accordance with the UBH (modified or not).

Since the UBH is generally a very useful hypothesis (see Spencer 1991), we should hesitate to abandon it without a struggle. Thus we might be tempted to look within Italian and/or within the nature of evaluative suffixes for an explanation.

Certainly the explanation cannot lie within Italian itself. Latin allowed evaluative suffixes to attach to both *N* and *V* (Strodach 1933), and Spanish certainly does. Fátelsson-Weiser lists many examples of both diminutive and augmentative suffixes that attach to nominal stems in Spanish, at least four of which attach also to verbal stems (1980: 50–51, 100–103):

(62) Augmentative *-ol-*:

- N *angel* 'angel' *angelote* 'sweetie'
 V *bañar* 'to dance' *bañotear* 'to dance around informally'

Diminutive *-el-, -it-, and -ic-*:

- N *aro* 'hoop' *areta* 'earring'
 V *correr* 'to run' *corretear* 'to run around/loiter'
 N *senor* 'sir' *senorio* 'young man'
 V *dormir* 'to sleep' *dormitar* 'to doze/nap'
 N *Maria* 'Mary' *Mariuca* 'little Mary'
 V *llorar* 'to cry' *lloriquear* 'to whine/whimper'

Monterrubio Prieto (1990) gives an extensive list of Spanish verbs that take evaluative suffixes. He compares these verbal suffixes to nominal ones, and from that comparison we can add to the list in (62) the suffix *-orr-*:

(63) N *coche* 'car' *cochorro* 'funny little car'
 V *andar* 'to go' *andorrear* 'to go from one side to the other'

From that list we can also see that evaluative suffixes in Spanish have been multiple: there are eleven such simple suffixes and three more that occur in combination only with others (1990: 89). Still, when we asked native speakers of widely divergent dialects of Spanish about this sort of suffixation, to a one they were surprised by the majority of Monterrubio Prieto's examples, finding only a few of the verbs he listed to be acceptable in their own speech.

Fernandez Ramirez (1986) also notes many evaluative affixes that can apply to both verbal and nominal stems to produce Ns, including the pejorative *-uj-*, the diminutive *-it-*, and the augmentative *-on-*:

(64) V *tentar* 'to try' *tenarujá* 'handling, scrubbing'
 N *grano* 'grain/berry' *granujá* 'loose grape'
 V *degollar* 'to slit throat' *degollina* 'slaughterer'
 N *serpiente* 'serpent' *serpentina* 'small serpent'
 V *fregar* 'to scrub' *fregoná* 'kitchen maid'
 N *sargento* 'sargent' *sargenona* 'corpulent wife'

He notes further that the diminutive *-it-* can attach to nominal stems to produce nominals (as we saw in (62) or verbals (1986: 56):

(65) N *azúcar* 'sugar' → V *azuquitar* 'to sugar'

Finally, Pena (1993) notes also that the evaluative affixes *-ol-, -el-, -it-, -ic-,* and *-orr-* can attach to verbal stems to form Vs (as shown in 62-63). In addition, he provides examples of V → V for the pejorative *-uj-* / *-ill-* (1993: 272):

(66) V *apretar* 'to squeeze or get worse' *apretujar* 'to get much worse'
 V *mascar* 'to chew' *mascuñar* 'to chew badly'
mascular 'to chew slowly and clumsily'

and for the pejorative *-arr-* and the diminutive *-urr-* (1993: 272-273).

(67) V *achuchar* 'to incite' *achucharar* 'to crush'
 V *cantar* 'to sing' *canturrear* 'to sing in a low voice'

French, likewise, has evaluative affixes that attach to nominal stems and ones that attach to verbal stems. Dubois (1962) lists fifteen nominal and ten verbal affixes, four of which appear on both lists (in the first instance in 68, the stem of the verbal form can be argued to be nominal):

(68) N → V *rime* 'rhyme' *rimaller* 'to write doggerel'
 N → N *fer* 'iron' *ferralle* 'scrap iron'
 V → V *voler* 'to fly' *voleter* 'to flutter'
 N → N *balcon* 'balcony' *balconner* 'little balcony'
 V → V *mordre* 'to bite' *mordiller* 'to nibble'
 N → N *botte* 'bunch' *botillon* 'small bunch'
 V → V *vivre* 'to live' *vivoir* 'to live poorly'
 N → N *Pierre* *Pierrot*

Hasselrot further notes the appearance of diminutives on both nominals and verbals in many Romance languages, where an affix that may carry the sense of diminutive with a nominal carries the sense of frequentative with a verbal (1957: 81). It seems clear, however, that although the other Romance languages we have read about exhibit this same phenomenon, none do it to the extent of Italian, or even Spanish.

While the Italian verbs we present in this paper are not generally archaic (in contrast to many of the Spanish verbs in Monterrubio Prieto's study), it is nevertheless clear that the process of adding evaluative suffixes to V in Italian, as in Spanish, is (with the few exceptions we have noted) no longer productive. In both languages, however, we can posit a productive stage, and in both languages the attachment of an evaluative suffix placed a verb stem in the first conjugation regardless of the normal conjugation class for the original root. Since the first conjugation in both languages is the productive conjugation today (that is, if we were to form a new V, the first conjugation is where it would go unless some semantic factor were strong enough to force it into the inchoative class of the third conjugation – the class with the *-isc-* affix (Napoli & Vogel 1990)), we could account for the fact that all our suffixed Vs belong to the first conjugation if this sort of suffixation were productive after the point when the first conjugation virtually became the only growing conjugation. For Italian we have been able to confirm this hypothesis. Our productive suffixation period seems to be roughly from 1300 to 1600, and the first conjugation became the productive conjugation at least two centuries before this period (Lausberg 1971: 178).

We conclude that the violation of the UBH by evaluative suffixes is not limited to Italian, although it remains an open question as to whether or not it is exclusively a Romance phenomenon.

The next question is whether or not this violation follows somehow from

the nature of evaluative suffixes. Certainly this violation occurs also in English, if in a somewhat peripheral status. In baby talk in English, the diminutive *-y/-ie*, which is normally used only with nominal or adjectival stems, can attach to verbal stems, as well:

- (69) N *dog, doggy*
 A *cute, cutie*
 V *look, lookie talk, talky*

Nevertheless, in Italian we cannot attribute this violation strictly to the semantic nature of evaluative suffixes since these are not the only type of counterexample to the UBH that we have found in Italian. There are prefixes in Italian that likewise fail to conform to the UBH:

- (70) negative s-:
 N *fiducia* 'trust' *sfiducia* 'mistrust'
 V *fare* 'to do/make' *sfare* 'to undo'

- (71) negative dis-:
 N *gelo* 'intense cold' *disgelo* 'thaw'
 V *innamorare* 'to fall in love'
disinnamorare 'to fall out of love'

Napoli and Nespor (in progress) discuss both the negative uses of these two prefixes and the positive/emphatic uses. However, while the negative uses operate over both N and V, as seen in (70-71), the positive/emphatic uses are limited to A and V, which do form a single syntactic class (the class with the feature [-N]). Certainly the notion of emphasis has much in common with the notion of augmentation; thus we can see a semantic similarity here with our evaluative suffixes. But, interestingly, the positive/emphatic use does not violate the UBH. Negation, on the other hand, is a different sort of notion from that embodied in the evaluative suffixes (being not one of degree, but of a yes/no toggle-switch quality), and it is the negative sense of the prefixes in (70-71) which violates the UBH. For these reasons, we decline to attribute the violation of the UBH to the semantic nature of evaluative affixes.

If we look beyond semantics, the very fact that it is the prefixes *s-* and *dis-* that violate the UBH in addition to the evaluative suffixes may be telling. In fact, Scalise (1984: 139) argues that the UBH must be modified to apply only to suffixes. Although we will not adopt that position here (for reasons given below), we take Scalise's observation as correct – that generally suffixes obey the UBH – and we search for a reason why this should be so and why evaluative affixes are exceptional here.

Prefixes, unlike derivational or inflectional suffixes, only rarely are the head of a word. That is, prefixes typically do not determine the category of the resultant word, whereas derivational and inflectional suffixes do. Evaluative affixes are generally like prefixes in this regard. The only exception we have noted is the suffix *-erreci-* (which heads an A). Thus we can conclude that evaluative suffixes in general are not heads.

From this we might try to generalize, hypothesizing that non-head affixes will not select for category when attaching to a stem. That is, an affix that never changes the category of the stem it attaches to will attach to stems that do not belong to a single syntactic class (thus violating the UBH).

Surely this hypothesis is both too weak and too strong. First, it is too weak insofar as we do find affixes which are heads but nevertheless can attach to N, A, or V stems. For example, the prefix *be-* in Dutch serves to convert a N, A, or V into a transitive verb (Booij 1977: 140), as in:

- (72) N → V *dijk* 'dyke' *bedijken* 'to dam up or embark'
poeder 'powder' *bepoedieren* 'to powder'
 V → V *lopen* 'to walk' *belopen* 'to walk on; to amount to'
felsen 'to cycle' *befensen* 'to cycle on'
 A → V *hartig* 'hearty' *behartigen* 'to look after or attend to'
gunstig 'favorable' *begunsten* 'to favor or countenance'

Second, it is too strong in that there are many prefixes that are non-heads but that appear to attach only to a single syntactic class, such as:

- (73) English *sub-*:
 A *subhuman*
 Italian negative *in-*:
 A *inelegante* 'inelegant'

We consider examples like *submerge* to be *sub-* plus a stem, where the stem itself has no category. However, if one were to identify this *sub-* with the *sub-* of *subhuman*, and if one were further to argue that *-merge* belongs to the category V, then *sub-* would select [+V] as the determining feature of the category it can attach to.

We might then try to make the entailment in the other direction. That is, we might hypothesize that an affix that can violate the UBH will be a non-head. This is generally true of prefixes:

- (74) English:
 Noun
interstate *interweave*
coauthor *coexist*
disastrous *disregard*
prehistory *preordain*
 Italian:
 Noun
controvoluzione 'counter-revolution'
interfaccia 'interface'
soprapeso 'extra weight'
preistoria 'prehistory'
 Verb
controargomentare 'to counter-argue'
interporre 'to interpose'
sopracaricare 'to overload'
preordinare 'to preordain'

However, there are several suffixes that present problems for this hypothesis. The Italian suffix *-ic-*, for example, is a head with the category V, but it can attach to both N and V stems:

- (75) N → V *neve* 'snow' *nevicare* 'to snow'
 V → V *mordere* 'to bite' *mordicare* 'to bite lightly'

(The V *mordicare* is archaic today). Other Italian suffixes noted by Scalise (1984: 139-140) are adjectival *-ing-* and nominal *-ista* and *-ismo*:

- (76) N → A *ramo* 'branch' *ramingo* 'wandering'
 V → A *guardare* 'to watch' *guardingo* 'cautious'
 N → N *Petrarca* 'Petrarch' *Petrarchismo* 'petrarchism'
Petrarchista 'petrarchist'
 V → N *determinare* 'to determine' *determinismo* 'determinism'
determinista 'determinist'

While these suffixes are not highly productive today and each can be considered exceptional, the fact that we find at least three such suffixes in Italian alone is enough to mark our hypothesis as suspect. We would certainly hope to find a common thread among so many problems which could account for their aberrant behavior before feeling secure in relegating them to the status of exceptions rather than counterexamples.

There is yet one more fact that may bear on the issue of why evaluative affixes can violate the UBH. We have looked across several languages from a variety of language families (Indo-European, Finno-Ugric, Altaic, Japanese, Korean, Semitic) and found that diminutive and augmentative affixes are always suffixes, even in languages that allow prefixation, the only exception being languages which are exclusively prefixing, such as those of the Bantu family (Comrie 1990). Even where diminutives and augmentatives are formed by reduplication, as, for instance, with Ns in Hebrew (Haddass Sheffer, pers. comm., 1993) or Vs in Chinese (Shizhe Huang, pers. comm., 1993), the reduplicated string is usually added to the right of the stem. The only instance we have found where this does not hold is in the French reduplicative diminutive found in children's talk:

- (77) *guêrre* 'war' *gueguêrre* 'little war'
mère 'mother' *memère* 'godmother'
père 'father' *pepère* 'little old man'
soupe 'soup' *sousoupe* 'same old food all the time'

We would hope to find a motivated account for the fact that these affixes are all suffixes.

As Hall (1988, 1991) and Hawkins & Cutler (1988) have shown, the fact that the psychologically most salient part of any word is its beginning portion suggests that languages favor suffixation over prefixation because the order of stem + affix reflects the order of compilation of stem and affix in processing (Hawkins & Cutler 1988: 306). Certainly evaluative suffixes are highly

peripheral to the sense of the whole word, and, in fact, they rarely change the morphosyntactic category of the stem they attach to (as we have discussed above), so rarely do they even seem to be the head of the word (in the sense of Williams 1981). Accordingly, they may be assigned to suffix status because their peripheral semantic and morphosyntactic nature calls for them to occur in final position, the position that reflects their being processed after the lexical and morphosyntactic import of their stem is processed. Perhaps buried in here is a psychological explanation for why evaluative suffixes should be allowed to escape the UBH, although we have not been able to unearth it.

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NOTES

¹ A prefix attaches to the left edge of a stem, and a suffix to the right edge. Italian has no other types of affixes, so far as we know (see n. 2 for remarks on parasynthesis). In particular, Italian has no affixes that interrupt a morpheme. Thus in a word like *spruzzolare* (given below in 10), the affix *-ol-* is suffixed to the stem *spruzz-*, which forms the new stem *spruzzol-* to which the inflection *-are* is suffixed. This analysis is contra that of Scalise (1984: 140) who uses an unusual definition of *infix*.

² The N → V example under 'Derivational prefixes that do change category' calls for a comment. All major category words in Italian (N, V, A) must end in an inflection appropriate to their category. Thus the N root *amic-* 'friend' must have an inflection such as *-i* (to yield *amici* 'friends') in order to be a well-formed N. Analogously, the V root *am-* 'love' must have an inflection such as the internally complex *-are* (to yield *amare* 'to love') in order to be a well-formed V.

We draw a distinction, then, between uninflected verbs and uninflected nouns. In Italian there are no uninflected verbs in our sense, though there are uninflected (or tenseless) verbs.

Given this, when we claim that *im-* converts the root *-balanz-* from N to V, we are using the fact that the newly formed stem *imbaldanz-* takes verbal inflections, not nominal ones, as the infinitival inflection in our examples attests. (This discussion goes counter to Scalise (1984: 147 ff), where, because he does not recognize the choice of inflectional ending as being determined by the stem itself, he is forced into a regrettable parasynthetic analysis.)

³ One might object to all our examples in which we claim that vowel raising has applied to the final vowel of a noun, claiming instead that these instances of noun-final *i* reflect a derivation from the Latin geminate form. We have found none of the purported source compounds in the Latin dictionaries at our institutions' libraries, however. Furthermore, our Italian dictionaries analyze these as Italian compounds.

Both Zingarelli (1970) and Cortellazzo & Zolli (1979) give several examples of compounds with *-forme*, where the first is a noun ending in *i*. In every instance they trace the usage to an Italian process of compounding and, therefore, assume a rule raising the final *V* of the first member of the compound to *i*.

⁴ An alternative to analyzing *fantastic* as involving epenthesis is to say that we have two allomorphs *fantasi-* and *fantast-*. We reject this analysis. Notice that */v/* occurs across other root+suffix boundaries as well:

esatic sarcastic egotistical epenthetic parenthetical

With the allomorphy analysis, we would have no insight into why */v/* is repeatedly involved in these morphologically unrelated forms. Furthermore, such an analysis would predict that the allomorph *fantasi-* would appear elsewhere than just before *-ic*, but it does not. Rather, */v/* is predictable across these unrelated examples because it is the unmarked coronal of English. And it occurs before *-ic* because that is the conditioning environment for the epenthesis rule. There are fascinating issues involved here, and we are doing further research into this question. But for now we suggest that the fact that *-ic* attracts stress to the preceding syllable plays a role in the epenthesis process, as do matters of syllable structure.

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