Investigating the productivity of evaluative morphology: Diminutives of loanwords in Italian

M. Silvia Micheli
Università degli Studi di Milano Statale
maria.micheli@unimi.it

Matteo Pellegrini
University of Surrey
matteo.pellegrini@surrey.ac.uk

1. Introduction[1]

The field of evaluative morphology has recently attracted renewed attention in studies on Italian morphology, as demonstrated by the growing body of research on approximation and intensification (see, e.g., Masini & Micheli 2020, Micheli 2023, Corona & Russo 2023, Masini & Di Donato 2023 on approximative strategies; Lacić 2025 and Micheli & Verdelli 2025 on intensifiers). Although current scholarly interest appears to have shifted toward what Grandi (2002, 2017) defines as *qualitative* evaluation, the *quantitative* evaluative domains examined in the seminal works by Dressler & Merlini Barbaresi (1992, 1994), namely diminution and augmentation, remain far from fully explored.

Focusing on diminution, Italian diminutive suffixes have traditionally drawn the interest of scholars because of their abundance and the wide range of their semantic and pragmatic functions (see, among others, Rainer 1990; Grandi 1998, 2017; Cinque 2015). On the other hand, research on the form of diminutives has been more limited, with a primary focus on the so-called *antesuffixal interfixes* (e.g., *-ic-* in *pianticina*, plant-INTERFIX-DIM; see Dressler & Merlini Barbaresi 1986, 1989; Merlini Barbaresi 2012). More recently, Micheli & Pellegrini (2025) – henceforth, M&P – have sought to address this gap by proposing a framework for the formal properties of Italian diminutive suffixes, drawing on the theoretical tools of Construction Morphology – henceforth, CxM (Booij 2010). In this paper, we aim to build on our previous work by examining diminutives of loanwords (e.g., It. *t-shirt* > *t-shirtina* 'small t-shirt'). This perspective enables us to address the dimension of productivity, which had remained unexamined in our previous work.

The paper is structured as follows. After reviewing our previous work on the form of Italian diminutives (Section 2), we highlight that the issue of the productivity of different processes is left open in that work (Section 3). We then describe how we obtained our dataset, starting from collections of loanwords and searching for corpus attestations of their diminutive forms (Section 4), and analyse this dataset according to the same parameters used in our previous work (Section 5). Section 6 concludes and highlights possibilities for future work.

[1] The whole paper is the result of the close collaboration of both authors; however, for academic purposes, M. Silvia Micheli is responsible for Sections 1 and 3, Matteo Pellegrini for Sections 4 and 6. Both authors are responsible for Sections 2 and 5.

2. Alternation patterns and constructional schemas in Italian diminutives

Focusing on formal aspects, it can be observed that several factors are at play in Italian diminutive formation. There are several diminutive-forming suffixes; the most common are *-in-*, *-ett-* and *-ell-*, but many others are found in a non-negligible amount of cases. In most cases, these suffixes are transparent to the gender of the base they apply to. We thus have *abitino*$_{M}$[2] from *abito*$_{M}$ 'dress' vs. *copertina*$_{F}$ from *coperta*$_{F}$ 'blanket'. However, it is not uncommon to find masculine diminutives formed from feminine bases (e.g. *cordino*$_{M}$ from *corda*$_{M}$ 'rope'), and – although more rarely – the reverse (e.g. *fiaschetta*$_{F}$ from *fiasco*$_{M}$ 'flask'). There is a relationship between gender and the final segments of bases and diminutives. While there is an exceptionless implication for diminutives, which always end in *-o* if they are masculine and in *-a* if they are feminine, the situation is more complex for bases. This is due on the one hand to exceptional cases of feminine nouns ending in *-o* (e.g. *mano*$_{F}$ 'hand', with diminutive *manina*$_{F}$) and masculine nouns ending in *-a* (e.g. *fantasma*$_{M}$ 'ghost', with diminutive *fantasmino*$_{M}$); on the other hand, to nouns with other endings that can be either masculine or feminine (cf. nouns in *-e*, such as *dente*$_{M}$ 'tooth' vs. *chiave*$_{F}$ 'key'). Furthermore, suffixes can be combined with one of a set of what Dressler & Merlini Barbaresi (1986) called "interfixes", such as *-ic-* (e.g., *oss-ic-ino* from *osso* 'bone', *ort-ic-ello* from *orto* 'garden'). Lastly, several diminutive suffixes are occasionally used cumulatively, as in *ros-ell-ina* from *rosa* 'rose'. The examples just given show that all the factors at play – suffixes, interfixes, gender and final segment of the base and diminutive – are, at least partly, independent of each other: different combinations of suffixes and interfixes are possible, and both gender-preserving and gender-switching diminutives are found with all suffixes and interfixes, together with the related variation in the alternation of final segments.

To account for all these factors and the non-trivial relationship between them, M&P used tools originally conceived for the analysis of patterns of form alternation in inflection, in the tradition of word-based abstractive theories (cf. Ackerman et al. 2009; Bonami & Boyé 2014; Blevins 2016, and subsequent work), and provided a formalisation of these different patterns grounded in the framework of CxM (cf. Booij 2010 and many subsequent studies). CxM considers both individual words and the word-formation mechanisms instantiated through constructions (or schemas), enabling the identification of regularities and sub-regularities in morphologically complex words. This makes it particularly well-suited for capturing generalisations on the surface alternation patterns found between bases and diminutives. At the same time, applying CxM to Italian diminutives allows for the refinement of its analytical tools, which have traditionally focused on capturing semantic rather than formal regularities.

Based on a sample of about 1,300 base-diminutive pairs taken from the Zingarelli dictionary (2022, online version), M&P extracted surface alternation patterns using the Qumin toolkit (Beniamine 2018). These patterns are obtained by matching the form of the base and that of the diminutive, singling out the segments that are not the same in the two forms, as shown in the fourth column of Table 1. These alternation patterns serve as a proxy for paradigmatic relations

[2] Since the semantic effect of the diminutive formation process in Italian includes a broad range of values (e.g. small size, young age, low intensity/importance, affection, etc.), being also influenced by the context, we do not provide a gloss of the meaning of diminutives in this paper. In all cases, the gloss would simply be '<base meaning>.DIM', e.g. in this case 'dress.DIM'.

that hold between different constructional schemas, shown in the fifth column, in the notation of CxM.[3]

Table 1. Alternation patterns between some Italian base-diminutive pairs (from M&P)

Base meaning	Base	Diminutive	Alternation pattern	Paradigmatic relation (CxM notation)
'movie'	/film/	/filmino/	⇌ ino	<[x]$_{MORPH/SYNi}$> ↔ [SEM$_i$] ≈ <[[x]$_{MORPH/SYNi}$/ino/$_{MORPH/SYNj}$] ↔ [DIM SEM$_i$]$_j$>
'van'	/furgone/	/furgonʧino/	e ⇌ ʧino	<[x]/e/$_{MORPH/SYNi}$> ↔ [SEM$_i$] ≈ <[[x]$_{MORPH/SYNi}$/ʧino/$_{MORPH/SYNj}$] ↔ [DIM SEM$_i$]$_j$>
'eye'	/okkjo/	/okkjolino/	⇌ lino	<[x]$_{MORPH/SYNi}$> ↔ [SEM$_i$] ≈ <[[x]$_{MORPH/SYNi}$/lino/$_{MORPH/SYNj}$] ↔ [DIM SEM$_i$]$_j$>
'cabbage'	/kavolo/	/kavolino/	o ⇌ ino	<[x]/o/$_{MORPH/SYNi}$> ↔ [SEM$_i$] ≈ <[[x]$_{MORPH/SYNi}$/ino/$_{MORPH/SYNj}$] ↔ [DIM SEM$_i$]$_j$>

Such surface constructions were then organised into separate hierarchies, including sub-schemas at different levels of generality, to be able to express generalisations on each of the different, mutually independent factors described above. For instance, the hierarchy shown in Figure 1 accounts for the patterns of gender alternation found between bases and diminutives. In that hierarchy, we have the most specific constructions at the bottom, and progressively more abstract groupings going up the tree, e.g., b. for gender-preserving diminutives, and c. for gender-switching diminutives. A similar mechanism operates in the hierarchies drawn for other factors (final segment alternation, suffixes, and what we call "antesuffixal phonological material", which covers both cumulated suffixes and interfixes). For reasons of space, we do not describe in detail these other hierarchies: the interested reader is referred to M&P.

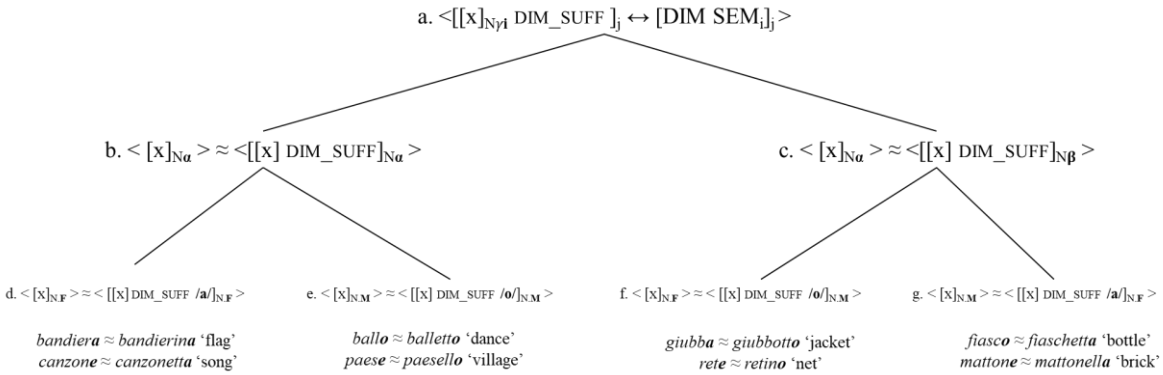

Figure 1. The gender hierarchy (from M&P)

The mechanism of multiple inheritance was then exploited to account for all the factors at play: surface alternation patterns inherit from the most specific schema available in each of the

[3] For the sake of illustration, we adopt a simplified version of the notation commonly used in the CxM literature (Masini & Audring 2019: 368–369).

hierarchies. For instance, the pattern "e ⇌ ikolo", relating the base *rete* 'net' to the diminutive *reticolo*, inherits from sub-schema d. in the antesuffixal phonological material hierarchy, e. in the suffix hierarchy, f. in the final segment hierarchy, g. in the gender hierarchy, h. from the lexical category hierarchy, as shown in Figure 2.

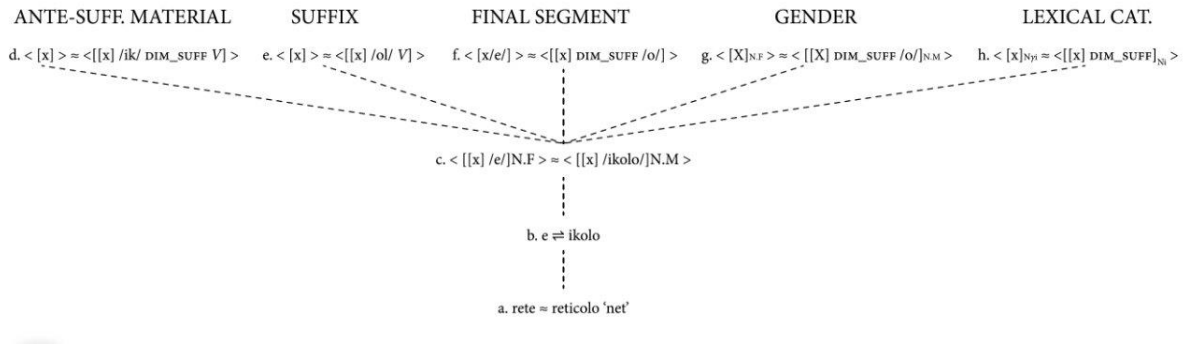

Figure 2. Exploiting the mechanism of multiple hierarchy to account for our data: the pair *rete-reticolo* (from M&P)

3. Open issues

As already noted, an advantage of integrating automatically extracted surface alternation patterns with CxM is that this approach offers both a theoretical representation and a quantitative account of the (sub-)schemas identified in the data. For example, the frequency of the sub-schemas corresponding to diminutive suffixes was calculated, thereby gaining an overview of which suffixes are most frequent in our dataset. The following table presents the most frequent suffixes in our database, specifically those with a type frequency > 10.

Table 2. Sub-schemas corresponding to the most frequent suffixes within the database collected in M&P (p. 193)

Sub-schema	Example pair	Freq.	%
<[x]> ≈ <[[x] /in/ V]>	*cappotto* > *cappottino* 'coat'	573	43.54%
<[x]> ≈ <[[x] /ett/ V]>	*bosco* > *boschetto* 'wood'	417	31.69%
<[x]> ≈ <[[x] /ell/ V]>	*campana* > *campanella* 'bell'	194	14.74%
<[x]> ≈ <[[x] /ol/ V]>	*goccia* > *gocciola* 'drop'	55	4.18%
<[x]> ≈ <[[x] /utʃ/ V]>	*bocca* > *boccuccia* 'mouth'	30	2.28%
<[x]> ≈ <[[x] /ott/ V]>	*barile* > *barilotto* 'barrel'	24	1.82%

However, because the study relied solely on type-frequency data for diminutives extracted from a dictionary (therefore encompassing a largely lexicalised set of forms), it offered only limited insight into the productivity of the processes under investigation. On the other hand, applying corpus-based quantitative measures (such as those proposed by Baayen 1992 and subsequent studies) to Italian diminutives presents several methodological challenges.

The most productive suffix, *-in-*, occurs not only in diminutives but also in the creation of a wide range of other derivatives. Firstly, it is used in the formation of (both denominal and deverbal) agent (see Rainer 2024) and instrument nouns. As a noun-forming suffix, *-in-* is also employed in the creation of feminine forms and, albeit rarely, in the creation of event nouns. As an adjectival suffix, *-in-* creates relational adjectives and ethnic adjectives, as well as adjectives indicating membership of a group. Moreover, it is also used with an attenuative

value, especially in combination with color terms. Finally, the segment *-in-* can also be found in simple nouns and inflected verb forms. Given that *-in-* is not the only diminutive suffix employed in non-evaluative derivational strategies (see, e.g., *-ett-*), it is evident that performing an analysis based on corpus data obtained through wildcard searches presents considerable difficulties. Indeed, evaluative affixation was not included among the processes examined in extensive corpus-based analyses of morphological productivity in Italian (e.g., Gaeta & Ricca 2003, 2006).

In this study, we therefore adopt a different approach, examining the productivity of diminutive affixes by looking at when they are applied to new entries in the lexicon, focusing on loanwords. Indeed, Dressler (2003: 37, 2007: 163–165; see also Gardani 2013: 34–38) proposes loanword integration as a diagnostic for determining the degree of productivity of a morphological mechanism. Following Wurzel (1984), Dressler (2003) argues that the integration of a loanword exhibiting unfitting properties is the strongest indicator of the highest productivity. As will be discussed below, the attachment of a diminutive suffix to an Italian base may fall within this category, since foreign bases typically exhibit unfitting properties (most notably their consonantal endings) and may therefore require phonological adjustments. Adopting this perspective, we compiled a dataset of English loanwords attested in Italian, and we searched diminutives formed from them in corpora, following the procedure discussed in the following Section.

4. Data

As a point of departure for our procedure to gather data for this study, we searched for potential bases of interest – i.e., loanwords – in two lexical sources. We extracted, on the one hand, 2,097 entries that are tagged as English loanwords in the Zingarelli dictionary (2024, online version); on the other hand, 3,998 neologisms were manually identified as non-Italian from the repertoire collected by the Treccani online portal.[4] Together, these two data sources allow us to cover loanwords with different characteristics. The former is a reference dictionary, and thus mostly provides us with loanwords that are by now well established in the Italian lexicon (such as *film*[5]). The latter is a repertoire of neologisms, which consequently provides us with very recent and less entrenched loanwords (such as *foodblogger*).

We then automatically generated diminutives by applying to such bases the processes that were found to be most frequent in M&P, namely, the suffixes *-in-*, *-ett-*, *-ell-,* possibly preceded by the interfixes *-ic-*, *-ar-*/*-er-*, or the cumulated suffix *-ol-*, both in masculine and feminine forms, to account for both gender preserving and gender switching diminutives. For instance, starting from *film*$_{N.M}$, we generated the diminutives *filmino*$_{M}$ and *filmina*$_{F}$, as well as *filmetto/-a*, *filmello/-a*, *filmicino/-a*, *filmicetto/-a*, *filmicello/-a*, *filmarino/-a*, *filmaretto/-a*, *filmarello/-a*, *filmerino/-a*, *filmeretto/-a*, *filmerello/-a*, *filmolino/-a*, *filmoletto/-a*, *filmolello/-a*. We then checked whether such diminutives are found in a large web-crawled corpus of Italian, itTenTen20, by searching not only singular but also plural forms (e.g., *filmini*, *filmetti*, *filmelli,* etc.). After a first automatic check based on the generated strings, we manually excluded false positives. These are sometimes cases of forms that are actually created by one of the other

[4] Specifically, the data come from the webpage *Neologismi della settimana* ('Loanwords of the week'), a repository compiled by the editors of the Treccani portal, also incorporating user submissions. The section is accessible at: https://www.treccani.it/magazine/lingua_italiana/neologismi/ (last accessed 19 December 2025)

[5] The meaning of Italian loanwords is omitted because it is the same as in English. We only provide a gloss when there is a difference.

morphological processes listed in the previous section that also yield forms in *-ino* (e.g. *testino* is found in itTenTen20, but it is not the diminutive of the loanword *test*, but the third person plural subjunctive of the verb derived from it), or simple nouns or – more commonly – proper nouns that happen to display the same final segments as one of the diminutive suffixes or interfixes that we focus on (e.g. *Vannino*, an Italian name that happens to match the form of the diminutive of the loanword *van*).

An interesting case is that of names of objects, brands, websites, projects, etc., which are formed exploiting the morphological processes of diminutive formation. For instance, starting from the loanword *job*, by adding the suffix *-in-* preceded by the interfix *-er-*, *Jobberino* was formed as the name of an online platform for online work. Similarly, starting from the loanword *snack*, by applying the same processes, but with the *-a* final segment normally found with feminine diminutives, *Snackerina* was formed as the name of a brand of food-inspired stickers. While these examples offer further qualitative evidence of the productivity of diminutive formation processes, including interfixes, we decided not to include them in our dataset, due to their apparent status as conscious, metalinguistic coinages.

The outcome of our procedure is a dataset of 644 diminutives for 413 bases. Among those bases, 325 come from the Zingarelli dictionary, 37 from the Treccani neologisms, and 51 are attested in both sources. To be able to extract alternation patterns between the base and diminutive using Qumin, thus replicating the procedure followed in M&P, we obtained an IPA transcription of all the bases and diminutives in our sample, using the online tool IPAfonetica (Pedroncelli 2023), and manually correcting occasional mistakes. This is the dataset on which the results shown in the next section are based.

5. Results

5.1 Surface alternation patterns

The analysis of the surface alternation patterns generated using the Qumin toolkit enables us to determine whether loanword diminutives are formed through a wide range of formal strategies or rather through a more limited set of processes. Based on our dataset, 43 patterns were found. Notably, 12 of these had already been identified by M&P (p. 186), as presented in Table 3.

Table 3. Patterns attested in both our dataset and M&P

Pattern	Example	N. pairs
⇌ ino	*browser* > *browserino*	251
⇌ ːino	*bug* > *bugghino*	84
o ⇌ ino	*gazebo* > *gazebino*	5
o ⇌ etːo	*pogo* > *poghetto*	3
e ⇌ ino	*meme* > *memino*	2
⇌ na	*lobby* > *lobbina*	2
e ⇌ itʃino	*monstre* > *monstricino*	1
a ⇌ ino	*koala* > *koalino*	1
a ⇌ ina	*koala* > *koalina*	1
a ⇌ etːa	*koala* > *koaletta*	1
o ⇌ elːo	*tornado* > *tornadello*	1
o ⇌ olino	*shampoo* > *shampoolino*	1
Total: 12		353

The quantitative data indicate that the most frequent pattern involves the addition of the suffix *-ino* to a base ending in a consonant (e.g., *computer* > *computerino*), while patterns attested only once or twice involve bases ending in a vowel, which English in turn has borrowed from other languages (e.g., *tornado*). As will be discussed below, when the base ends in a consonant, it may also undergo consonant lengthening, as illustrated by the second most frequent pattern (e.g., *bug* > *bugghino*).

More interestingly, we identified as many as 31 patterns not attested in the previous study, thereby substantially enriching the picture outlined by M&P, as illustrated in Table 4.

Table 4. Patterns identified in our dataset (not attested in M&P)

Pattern	Example	n. pairs
⇄ ina	*box* > *boxina*	71
⇄ et:o	*blues* > *bluesetto*	64
⇄ :et:o	*flop* > *floppetto*	28
⇄ :ina	*chat* > *chattina*	26
⇄ el:o	*paper* > *paperello*	21
⇄ et:a	*cover* > *coveretta*	20
⇄ arel:o	*film* > *filmarello*	9
⇄ erel:o	*link* > *linkerello*	8
⇄ :et:a	*snob* > *snobbetta*	7
⇄ itʃino	*prompt* > *prompticino*	3
⇄ el:a	*sneaker* > *sneakerella*	3
⇄ :itʃino	*spot* > *spotticino*	3
…		2-1
Total: 31		290

As expected, all newly identified patterns involve bases ending in a consonant, a typical feature of borrowings from English. Interestingly, the most common pattern involves a base ending in a consonant and a diminutive formed with the suffix *-in-* followed by the final vowel *-a*, which typically marks feminine gender. One aspect that has already been noted concerns the lengthening of the final consonant in monosyllabic bases. This phenomenon is also observed in English loanwords when a verbal inflectional suffix is added to a base, such as in *chat* > *chattare* (as well as in the form attested in our dataset *chat* > *chattina*). M&P argued that the CxM mechanism of multiple inheritance can also be exploited to account for wider phonological generalizations potentially applicable also in contexts other than diminutives. Accordingly, both types of words can be considered to inherit from the same schema that accounts for this regularity, namely <[[x] VC#]> ≈ <[[x] VC: [suff]]>.

5.2 Final segments

Table 5 presents the patterns identified with respect to the final sound, which in the diminutive form corresponds to the inflectional ending. As shown by our data, the most frequent patterns involve bases ending in a consonant combined with diminutive forms ending in *-o* or *-a*, which typically encode masculine and feminine gender in Italian, respectively. In addition, a number of patterns with lower incidence were observed, some of which are unattested in the M&P sample. Among these, we found a pattern in which a base ending in *-i* is paired with a diminutive form ending in *-o* (e.g. *kiwi* > *kiwino*).

Table 5. Final segments of the diminutives in our sample and in M&P

Sub-schema	Example	Pairs	Pairs in M&P	Pairs in our sample
<[xC]> ≈ <[[x]C DIM_SUFF /o/]>	*bug* > *bugghino*	489 (25%)	8 (0.6%)	481 (74.8%)
<[x/o/]> ≈ <[[x] DIM_SUFF /o/]>	*gazebo* > *gazebino*	481 (24.6%)	471 (35.8%)	10 (1.6%)
<[x/a/]> ≈ <[[x] DIM_SUFF /a/]>	*koala* > *koalina*	439 (22.4%)	436 (33.2%)	2 (0.3%)
<[x/a/]> ≈ <[[x] DIM_SUFF /o/]>	*koala* > *koalino*	165 (8.4%)	165 (12.5%)	1 (0.2%)
<[x/e/]> ≈ <[[x] DIM_SUFF /o/]>	*meme* > *memino*	164 (8.4%)	161 (12.2%)	3 (0.5%)
<[xC]> ≈ <[[x]C DIM_SUFF /a/]>	*chat* > *chattina*	136 (6.9%)	-	136 (21.1%)
<[x/e/]> ≈ <[[x] DIM_SUFF /a/]>	*legge* > *leggina* 'law'	52 (2.7%)	52 (4.0%)	-
<[x/o/]> ≈ <[[x] DIM_SUFF /a/]>	*mano* > *manina* 'hand'	21 (1.1%)	21 (1.6%)	-
<[x/i/]> ≈ <[[x] DIM_SUFF /o/]>	*kiwi* > *kiwino*	6 (0.3%)	-	6 (0.9%)
<[x/i/]> ≈ <[[x] DIM_SUFF /a/]>	*wiki* > *wikina*	5 (0.3%)	1 (0.1%)	4 (0.6%)

5.3 Gender

The phenomenon of gender switch induced by diminutive suffixation is well-documented in the literature and has been further corroborated by M&P (pp. 189–190). Nevertheless, the productivity of this mechanism remains largely unexplored. While limited in scope, our data offer preliminary insights into this process. Table 6 illustrates that, alongside standard gender-preserving patterns, a pattern emerges where feminine bases are paired with masculine diminutives (e.g., *t-shirt*$_F$ > *t-shirtino*$_M$). However, the reverse pattern (masculine to feminine) was not observed, further reflecting the lower frequency of this switch reported in the M&P sample. The data thus appear to indicate that gender switch is still productive, albeit confined to cases of feminine-to-masculine reassignment, with masculine commonly analysed as the unmarked gender in Italian. At the same time, it should be noted that our data are rather limited, and the gender attribution of loanwords in Italian is variable, as noted by Thornton (2009). For instance, we observe that the noun *slip* 'briefs underwear' (which is generally masculine in Italian) occurs in our sample in both the forms *slippino*$_M$ and *slippina*$_F$, the latter possibly being based on a feminine variant *(la) slip*, reflecting the influence of the Italian equivalent *mutanda*$_F$ 'briefs underwear' – rather than being the outcome of a gender switch induced by the diminutive formation process. To err on the side of caution, in our annotation, we considered as cases of gender switch only the ones where that analysis appeared to be the only viable option. This motivates the much lower frequency of gender-switching diminutives in our sample compared to M&P, and makes it difficult to draw any more precise quantitative evaluation of the difference between the two samples.

Table 6. Gender of the diminutives in our sample and in M&P

Sub-schema	Example	Pairs	Pairs in M&P	Pairs in our sample
<[x]$_{N.M}$> ≈ <[[x] DIM_SUFF /o/]$_{N.M}$>	*bug* > *bugghino*	1,083 (55.3%)	588 (44.7%)	495 (77%)
<[x]$_{N.F}$> ≈ <[[x] DIM_SUFF /a/]$_{N.F}$>	*cover* > *coveretta*	620 (31.7%)	479 (36.4%)	141 (21.9%)
<[x]$_{N.F}$> ≈ <[[x] DIM_SUFF /o/]$_{N.M}$>	*chat* > *chattino*	176 (9%)	174 (13.2%)	2 (0.3%)
<[x]$_{N.M}$> ≈ <[[x] DIM_SUFF /a/]$_{N.F}$>	*mattone* > *mattonella* 'brick'	28 (1.4%)	28 (2.1%)	-

5.4 Suffixes

Table 7 shows the number of base-diminutive pairs in our dataset, displaying each of the three diminutive suffixes on which we focus, also providing the number of pairs recorded in M&P for those suffixes based on a sample of the full Italian lexicon.

Table 7. Base-diminutive pairs with suffixes *-in-*, *-ett-*, *-ell-* in our sample and in M&P

Sub-schema	Example	Pairs in M&P	Pairs in our sample
<[x]> ≈ <[[x] /in/ V]>	*browser* > *browserino*	573 (43.6%)	465 (72.3%)
<[x]> ≈ <[[x] /ett/ V]>	*cover* > *coveretta*	417 (31.7%)	128 (19.9%)
<[x]> ≈ <[[x] /ell/ V]>	*paper* > *paperello*	194 (14.8%)	50 (7.8%)

As a general remark, we can observe that all three suffixes are attested with a remarkable number of non-native bases, and can thus be confirmed to be productive, as expected on the basis of qualitative observation (Merlini Barbaresi 2004: 265–266). However, a comparison of the distribution found in M&P with that of this work highlights remarkable differences that can help to gain a deeper insight into the relative productivity of suffixes. Specifically, the suffix *-in-* is much more frequent in the sample of loanwords than in the overall lexicon, while the suffixes *-ett-* and *-ell-* are less frequent in the sample of loanwords than in the overall lexicon. According to the principle described in Section 3, the preferential application to novel entries in the lexicon – such as loanwords – can be taken as an indication of productivity. Consequently, *-ett-* and *-ell-* are shown to be more weakly productive, and the difference with the most productive suffix, *-in-*, is even larger than it appears based on the distribution found in the overall lexicon. Indeed, while *-in-* was already found to be the most frequent suffix by M&P, in their data *-ell-* was also very common, being attested with a number of bases not so different from that of *-in-*. In the sample of loanwords, however, the distribution is much more unbalanced, with *-in-* covering most of the bases, and *-ett-* and *-ell-* only used in a minority of cases.

Further evidence of a stronger productivity of *-in-* can be found looking at cases in which more than one diminutive is formed from the same base, using different suffixes (e.g., *filmino*, *filmetto* and *filmarello* from *film*), and comparing their frequency to that of cases where only one suffix can be applied. The relevant data are given in Table 8.

Table 8. Suffixes that can apply to the same base in our sample

Diminutive Suffixes	Example	N. cases in our sample
-in- only	*mouse* > *mousino* 'computer mouse'	276
-in- and *-ett-*	*server* > *serverino/serveretto*	71
-ett- only	*zombie* > *zombietto*	26
-in- and *-ell-*	*computer* > *computerino/computerello*	18
all suffixes	*film* > *filmino/filmetto/filmarello*	10
-ell- only	*muffin* > *muffinello*	10
-ett- and *-ell-*	*fiction* >*fictionetta/fictionarella* 'TV series'	2

What is interesting to observe is that the suffixes *-ett-* and *-ell-* are attested more frequently with bases to which also the suffix *-in-* can be attached. This suggests that some bases are particularly prone to act as bases for the formation of diminutives, and lend themselves easily to the application of several processes, including *-ett-* and *-ell-*. However, this also means that when only one process is applied, the default status of the suffix *-in-* is even stronger than it would appear, looking at all diminutives regardless of whether they are formed from the same base.

Another aspect that deserves attention is whether there are phonological contexts that possibly favor or disfavor the application of specific suffixes. To that end, in Table 9, we group the bases of our sample according to their final segment, and for each final segment, we show how many diminutives are formed with each of the suffixes under consideration, also providing the percentage with respect to the total number of diminutives formed with the corresponding suffix.

Table 9. Final segments of the bases from which diminutives of our sample are formed

Final segment of the base	Diminutives in:		
	-in-	***-ett-***	***-ell-***
/r/	132 (35.2%)	16 (14.7%)	13 (32.5%)
/t/	57 (15.2%)	-	7 (17.5%)
/k/	23 (6.1%)	14 (12.8%)	5 (12.5%)
/p/	25 (6.7%)	14 (12.8%)	1 (2.5%)
/l/	24 (6.4%)	13 (6.4%)	1 (2.5%)
/d/	20 (5.3%)	-	3 (7.5%)
/m/	11 (2.9%)	7 (6.4%)	2 (5%)
/s/	10 (2.7%)	7 (6.4%)	2 (5%)
/n/	11 (2.9%)	4 (3.7%)	3 (7.5%)
/g/	10 (2.7%)	6 (5.5%)	1 (2.5%)

We find evidence of some constraints that appear to be dissimilatory in nature. For instance, bases ending in /l/ rarely display the suffix *-ell-*, which also includes the same consonant. Interestingly, the only case where that happens (*singlerello* from *single* /'singol/ 'unmarried') is only an apparent counterexample, as the suffix *-ell-* is preceded by the interfix *-er-*, so that there is no repetition of the same segment in adjacent syllables. Similarly, bases ending in /t/

never display the suffix *-ett-*, which also includes the same consonant. In this case, the constraint appears to extend also to bases ending in the voiced counterpart /d/.

Furthermore, differences between suffixes regarding the distribution of final segments of their bases suggest that other kinds of phonological conditioning can play a role, although their nature is probabilistic. For instance, compared to the other suffixes, *-ett-* is used less frequently with bases ending in /r/, and more frequently with bases ending in /p/; *-in-* is used less frequently with bases ending in /k/. However, since our data are limited, these preferences should be confirmed by looking at a larger sample to be confident that they are indeed active in speakers' competence.

5.5 Antesuffixal phonological material

Table 10 shows the number of base-diminutive pairs that can be mapped to sub-schemas corresponding to the insertion of antesuffixal phonological material of different nature – namely, the interfix *-ic-*, the two different variants of the interfix *-er-/-ar-*, and the cumulated suffix *-ol-*. Both the sample of this study and the one of M&P are taken into consideration.

Table 10. Base-diminutive pairs with antesuffixal *-ic-*, *-er-/-ar-*, *-ol-* in our sample and in M&P

Sub-schema	Example	Pairs in M&P	Pairs in our sample
<[x]> ≈ <[[x] /iʧ/ DIM_SUFF V]>	*prompt* > *prompticino*	31 (2.4%)	40 (2%)
<[x]> ≈ <[[x] /er/ DIM_SUFF V]>	*link* > *linkerello*	9 (0.7%)	26 (1.3%)
<[x]> ≈ <[[x] /ar/ DIM_SUFF V]>	*film* > *filmarello*	10 (0.8%)	25 (1.3%)
<[x]> ≈ <[[x] /ol/ DIM_SUFF V]>	*shampoo* > *shampolino*	18 (1.4%)	20 (1%)

In general, those processes prove to be vital also in the sample of loanwords. This is an indication of their productivity that brings further support to previous qualitative observations by Dressler & Merlini Barbaresi (1989: 544, 1994: 533), by providing more examples and systematic quantitative data.

Again, differences in the distribution of these items in the two samples offer additional insight into their degrees of productivity. The interfixes *-er-/-ar-* are more frequent in the sample of loanwords than in the overall lexicon, while the interfix *-ic-* and the cumulated suffix *-ol-* are less frequent in the former than in the latter. Consequently, the productivity profile that emerges from the analysis of new entries in the lexicon differs from what could be expected on the basis of data including more strongly lexicalised items. The interfix *-ic-* is the one that is most frequent in the overall lexicon, but it turns out to be less frequent than *-er-/-ar-* when looking at loanwords only: the latter interfix is thus the one for which we find stronger evidence of productivity, despite the prevalence of the former in the overall lexicon.

Our quantitative data also provide a sample of novel entries that can be used to test claims that have been made about the preferential application of interfixes to bases with a specific phonotactic shape in terms of the number of syllables. Dressler & Merlini Barbaresi (1989: 245) claim that the shortness of the base does not favor the insertion of interfixes, citing examples of monosyllabic bases without interfixes such as *teino* from *tè* 'tea'. They also claim that trisyllabic words do not usually display interfixes, although they acknowledge the presence of occasional counterexamples. In contrast, in our data, we find that antesuffixal phonological material is mostly found with monosyllabic and disyllabic bases: the former possibility accounts for 23 diminutives of our sample, the latter for the other 10. The prevalence of monosyllabic bases is even more remarkable if compared with the distribution of the full sample of loanwords: monosyllables account for 35% (146/413) of the bases of our sample, but for

almost 70% of the ones used as bases of diminutives with some kind of antesuffixal phonological material. Furthermore, there is no example of diminutives with antesuffixal phonological material formed from a base with more than two syllables. This suggests that the length of the base in terms of number of syllables plays at least a probabilistic role in favoring the presence of antesuffixal phonological material.

6. Conclusions and future work

This study of the application of the most common diminutive formation processes to loanwords complements the one based on the overall lexicon provided by M&P in several ways. First of all, new patterns of form alternation emerge that were not attested in the sample of M&P. This is mostly due to the peculiar phonological characteristics of English loanwords. Unlike native Italian words, they often end in a consonant, thus giving rise to different overall patterns and alternations of final vowels. Gender-preserving diminutives are confirmed to be the most frequent scenario. We found a few clear examples of feminine-to-masculine switch, but no case of masculine-to-feminine switch, thus confirming the asymmetry between the two possibilities suggested by the quantitative data of M&P, and possibly suggesting an even more limited productivity of the latter – although the *caveats* on the difficulty in identifying cases of gender switch with these data should be borne in mind. Both the suffixes and the antesuffixal phonological material that M&P found to be most frequent are confirmed to be productive by their application to loanwords, even very recent ones, shown in the data presented in this paper. However, their frequency distributions are not the same in the two samples, shedding light on differences between what would be suggested by the frequency data of a study of the overall lexicon, as M&P, and claims that can be made on the actual productivity of morphological processes on the basis of a sample of loanwords, as in this study. The role of the suffix *-in-* as the default process seems to be even more pronounced than it would appear looking at the overall lexicon, while the productivity of *-ell-* and *-ett-* appears to be overestimated looking at frequency data due to their use in many well entrenched items; the observation that the latter suffixes are mostly applied to bases to which also the former can be applied brings further support to this claim. As for interfixes, *-er-/-ar-* is the one that can be claimed to be most productive, as it is most frequently applied to loanwords, even if it is used less frequently than *-ic-* in the overall lexicon. Furthermore, these data provide a more systematic sample to test previous claims on phonological factors that motivate the preferential application of specific suffixes, or the insertion of antesuffixal phonological material. Summing up, focusing on loanwords provides new insight that is likely to more closely reflect productivity than looking at frequency distributions in the overall lexicon.

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