Italian VeV Lexical Constructions

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Introduction

In this paper we will describe a process of lexical enrichment found in Italian, that yields nouns and adjectives taking two verbs as input.

Guevara & Scalise (forthcoming) have shown that verbs are a disfavoured input category for compounds in Indo-European languages (Guevara & Scalise forthcoming: table (25)), and that VV compounds are quite rare in Romance languages (Guevara & Scalise forthcoming: table (32)).

However, some lexical items that have been described as V-V compounds do exist in Italian. At a purely descriptive level, we can recognize at least two groups. The first, in (1), comprises words formed by a sequence of two different verbs; the second, in (2), comprises words formed by the reduplication of a single verb.

Italian VV compounds (1)

a.	Persons	portareca	lit. carry.bring	'delivery boy'
		pappataci ¹	lit. eat.keep_quiet	'happy cuckold'
b.	Animals	pappataci ²	lit. eat.keep_quiet	'Phlebotomus papatasi'
				(a kind of insect)
c.	Instruments	saliscendi	lit. go_up.go_down	'latch'
		toccasana	lit. touch.cure	'cure-all'
d.	Places	bagnasciuga	lit. wet.dry	'water-line; foreshore'
		montascendi	lit. go_up.go_down	'sloping path'
e.	Games	stacciaburatta	lit. sieve.sieve	'name of a game'
f.	Processes	dormiveglia	lit. sleep.wake	'drowse'
g.	Actions	giravolta	lit. turn.turn	'pirouette; about face'
-		parapiglia	lit. shield.take	ʻĥubbub'

(2) Italial VV reduplicative compounds

a	fuggifuggi	lit. run_away.run_away	'rush, stampede'
b.	pigiapigia	lit. push.push	'rush, stampede'
c.	copiacopia	lit. copy.copy	'generalized copying'

Group (1) contains lexemes that belong to many different semantic categories, including action nouns, while group (2) only contains action nouns.

The lexemes in group (1) do not result from a productive lexeme-formation rule; the words listed in (1) nearly exhaust the stock of VV compounds in Italian, and have been formed over a period extending from the 14th century to the first half of the 19th century.

The lexemes in group (2), instead, appear to be the product of a lexeme formation rule, that took off at the middle of the 19th century and is still productive today. This rule, which is described in Thornton (2007b), forms action nouns which name actions performed by a plurality of agents; the input appears to be restricted to verbs with disyllabic stems.

Thornton (2007b) found that both the action nouns in group (1), such as the ones in (1g), and the lexemes in group (2) have originated from the lexicalization of utterances containing a sequence of two verbs in the imperative singular form. This kind of utterance is a stylistic

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device found in most or all Romance languages; it has been studied by Spitzer (1918; 1951-52), who has called it "descriptive imperative". It consists in using a series of two or more imperatives to describe actions, or, in Spitzer's own words:

(3) Descriptive imperative ("impératif descriptif")

"l'action exécutée en fait est présentée sous forme de l'ordre qui aurait été nécessaire dans la situation" [the action actually performed is presented by means of the order which would have been necessary in the situation] (Spitzer 1952: 22; our translation)

Spitzer observed that, often, instances of descriptive imperative are commands or exhortations used to direct sailing or battlefield maneuvers. These utterances have then been lexicalized, becoming action nouns that refer to the situation in which it would be appropriate to utter the command, or name the maneuver itself.

Nouns such as the ones in (1g) and (2) do not exhaust the supply of action nouns based on two verbs in the imperative form in contemporary Italian. A third kind exists, exemplified in (4a-b):

(4) VeV lexical constructions / VeV lexemes

Action nouns

a. [tira e molla] $_N$ lit. pull and let_go 'see-saw, playing fast and loose' b. [va e vieni] $_N$ lit. go and come 'coming and going, toing and froing'

Adjectives

 $\begin{array}{lll} c. & [usa\ e\ getta]_{ADJ} & lit.\ use\ and\ throw_away \\ d. & [mordi\ e\ fuggi]_{ADJ} & lit.\ bite\ and\ run_away \end{array} \qquad \mbox{``disposable'}$

Concrete nouns, names of games

e. $[gratta\ e\ vinci]_N$ lit. scratch and win 'instant scratch lottery / instant scratch lottery ticket'

At the descriptive level, the Action nouns in (4a-b) differ from those in (1g) only because the conjunction e 'and' appears between the two verbs. But some of the items in this type originate from descriptive imperatives as much as the lexemes in (1g) and (2). For example, $tira\ e\ molla\ (4a)$ was originally a call used on ships to order a specific maneuver, first attested in Venetian and hence passed to several Mediterranean languages (cf. Kahane 1938 on Modern Greek τιραμόλα, τιραμολάρω; Spitzer 1941 on Catalan $tira\ y\ amolla$; cf. also Spanish $tira\ y\ afloja\ attested\ since\ 1787\ (CORDE)).$

A sequence such as *tira e molla* is definitely not a prototypical word: it is spelled as three words, it contains a conjunction (and conjunctions are found as input to lexeme formation processes even less than verbs, if at all: cf. Guevara & Scalise forthcoming), and appears to contain inflected verb forms (although this is not necessarily the only possible analysis, cf. section 2.3.3.2 below). However, items like the ones in (4) fulfill the same task as lexemes created by means of lexeme formation rules or morphological constructions as intended in Booij (2005a,b,c): they enlarge the lexical stock of Italian.

These multiword lexemes have been analyzed in Masini (2006, 2007) as *phrasal words*, i.e., constructions (in the technical sense of Construction Grammar and Construction Morphology, cf. Fillmore, Kay & O'Connor 1988, Goldberg 1995, 2006, Booij 2005a,b,c) which are lexical in nature and function as multiword formation patterns that enrich certain word classes.

In this paper, we will study what we will call the **VeV lexical constructions** or, in short, **VeV lexemes** in contemporary Italian. As can be seen from the examples in (4), VeV lexemes are not limited to action nouns: they also include adjectives (4c-d), concrete nouns and names of games (both exemplified by (4e)).

We will present a sketch of how the lexical constructions in (4) have become independent from the first lexicalized occurrences and have given rise to a new productive type, i.e., – in constructionist terms – how the VeV lexeme construction has become entrenched enough to produce new formations.

Indeed, it is important to realize that by no means all of the VeV lexemes we were able to collect originated as descriptive imperatives: many have been created in a way similar to that used to create neologisms. Therefore, we will start by describing our VeV lexical constructions in the same way as one would describe a lexeme formation rule, looking for constraints on both the input and the output.

2. VeV lexemes

2.1. The corpus

2.1.1. Sources

The corpus on which we based our analysis has been collected from different sources. On the one hand, we used dictionaries and lexicons (GRADIT, DISC, the Eulogos *Lista delle polirematiche* [List of multi-word expressions]) plus occasional observations (Masini 2007). On the other hand, we used *la Repubblica 1985-2000* corpus (henceforth *laR*), which contains 16 years of issues of the daily newspaper *la Repubblica*, for a total of 380 million tokens (http://sslmitdev-online.sslmit.unibo.it/corpora, cf. Baroni *et alii* 2004). The token count throughout the paper is based only on the corpus *la Repubblica*, to give an idea of the distribution of these forms in a corpus.

2.1.2. Essential quantitative data

Our corpus consists of **66 types**, each of which may display different lexical categories (either noun or adjective, cf. section 2.3.4 for further details) and different spellings (cf. section 2.3.2): $VI \ e \ V2$, $VI \ e \ V2$, $VI \ e \ V2$, and $VI \ V2^I$. The whole corpus with all this information (the types with their variants and the tokens based on the corpus $la \ Repubblica$) is listed in the Appendix.

In our corpus, there are few very frequent VeV lexemes, the ones listed in (4): *tira e molla* (cf. 4a) (589 tokens), which is also the oldest item attested², *usa e getta* (cf. 4c) (462 tokens), *mordi e fuggi* (cf. 4d) (261 tokens), *gratta e vinci* (cf. 4e) (194) and *va e vieni* (cf. 4b) (97).

Then there is another small group of fairly well-represented items³: taglia e cuci (28), tassa e spendi (17), sali e scendi (14), apri e chiudi (9), gratta e sosta (8), scappa e fuggi (7), prendi e fuggi (6), leggi e getta (6), tocca e fuggi (5).

All other types have a frequency of fewer than 5 tokens, and 25 are hapaxes (accendi e spegni, appila e spila, apri-e-gusta, compra e fuggi, compra e scappa, compra e vendi, consuma-e-getta, copri e scopri, dai e prendi, gratta e spara, lascia-e-piglia, lava e indossa, mangia e bevi, metti e butta, parla e fuggi, porta il riso in cascina e piangi miseria, prega e fuggi, prendi e scappa, prevedi e previeni, sbatti e butta, scarta e inghiotti, scatta (nel senso di foto) e porta a casa, tocca e corri, tocca e scappa, tura e stura).

The number of verbal bases used in only one lexeme is rather high, but there are also some verbs which tend to occur in more than one type.

V1 types amount to 45. Out of these, 32 occur as V1 in only one lexeme (accendi, appila, attacca, bacia, cerca, consuma, copia, copri, corri• 4, cuci•, dai, fotti, gioca, lascia•, lava, leggi, mordi, piglia•, porta il riso in cascina, prevedi, radi, sali, sbatti, scappa•, scarta, scatta (nel senso di foto), stira, tassa, togli•, tura, usa, va), whereas 9 items occur in two types (apri, guarda, mangia, metti•, parla, prega, taglia, tira•, vedi). Then we have a very small group of verbs which occur as V1 in more than two lexemes: compra• and tocca occur as V1 in 3 lexemes, prendi• occurs as V1 in 4 lexemes and gratta occurs as V1 in 6 lexemes.

The picture regarding V2 is quite similar. The total number of V2 types is 46. This group displays a slightly higher number of verbs occurring as V2 only once in the corpus of VeV

¹ Henceforth, V1 stands for the first member of a VeV lexeme and V2 for the second member.

² Tocca e sana is attested as far back as 1812, but nowadays only the variant without conjunction, toccasana 'cure-all, panacea', is in use. A diachronic study of the development of this and similar words is necessary, but for reasons of space we must leave it for further research.

³ The literal translations of all the examples given in this section are to be found in the Appendix.

⁴ The items followed by the symbol • occur both as V1 and as V2.

lexemes, i.e., 38 (ammira, bevi, chiagni, chiudi, compra•, corri•, cuci•, gusta, impara, indossa, inghiotti, metti•, molla, passa, perdi, piangi, piglia•, prendi•, previeni, racconta, scendi, scopri, scuci, segui, sniffa, sosta, spara, spegni, spendi, spila, stacca, stura, tira•, togli•, torna a casa, trova, vendi, vieni). Therefore, only 7 types occur as V2 in more than one lexeme: butta, incolla, lascia•, stravinci and vinci occur as V2 in 2 lexemes, scappa occurs as V2 in 3 lexemes, getta occurs as V2 in 7 lexemes, and finally, fuggi occurs as V2 in 8 lexemes, being the most frequent V2 base.

Now we will move on to analyze in detail the nature and properties of Italian VeV lexemes. We have looked for phonological, morphological and syntactico-semantic restrictions on the input and the output of these lexical constructions, as is normally done when describing a lexeme formation rule.

2.2. Input

As for the input, we have checked the following properties:

- the number and kind of syllables in the input verb stems (phonology);
- the inflectional class of the input verbs and their morphological complexity (morphology);
- the syntactic and semantic classes of input verbs and the semantic role of the subject of the verbal bases (syntax-semantics).

The results of the analysis of the input are discussed in detail in the following sections and then summarized in section 3 (Table 24).

2.2.1. Phonology

2.2.1.1. Disyllabic bases

As far as phonological restrictions on the input are concerned, we observe a strong tendency towards having verbs with disyllabic bases as input, both in V1 and in V2 (but stronger in V1). Thornton (2007a) has observed a tendency towards disyllabic first members in all sorts of Italian compounding processes. For VN compounds this tendency had already been observed by Dardano (1978: 149) and Ricca (2005). This tendency is stronger in the compounding processes that employ only verbs as bases, such as VV reduplicative compounds and VeV lexemes. To appreciate the strength of this tendency, one must compare the data given for the different sorts of deverbal compounds with the distribution of bases of different lengths in the Italian verbs overall, which is shown in the rightmost column in Table 1.

length of verbal base	V1 in VeV lexemes	V2 in VeV lexemes	verbs in VV reduplicative compounds*	verbs as first members of compounds listed in GRADIT**	verbs in the Italian Basic Vocabulary***
1 syllable	1,5% (1)				0,3%
2 syllables	90,9% (60)	84,8% (56)	95,7%	82,3%	30%
3 syllables	7,6% (5)	15,2% (10)	4,3%	17,7%	52,8%
4 syllables					15,1%
5 syllables					1,8%

Table 1 Length in syllables of the verbal base in several sets of data

In the first members of VeV lexemes, 3 of the 5 trisyllabic bases begin with a vowel. Plénat (1994) has observed that in several prosodically conditioned processes of French, an initial vowel may behave as if it were in some sense "extrametrical", i.e., as if it didn't count in

^{*} Data from Thornton (2007b)

^{**} Data computed on Ricca's (2005) collection

^{***} Data computed using BDVDB (Thornton, Iacobini & Burani 1997)

assessing the number of syllables of a word. Thornton (2007a) has found similar effects of "extramétricité des voyelles initiales" in Italian: most of the trisyllabic verbal first members listed by GRADIT (collected by Ricca 2005) begin with a vowel, and many verbs have two variants, a trisyllabic one with the semantically empty⁵ vowel-initial prefix *a*- (which triggers gemination of a following consonant) and a disyllabic one without it. The three vowel-initial first members in our sample (*accendi* 'switch on', *appila* 'plug', *attacca* 'attach') contain this prefix (only etymologically in *accendi*, but still segmentable in *appila* and *attacca*, particularly in the context of the lexemes *ap+pila e s+pila* and *at+tacca e s+tacca*). The other two trisyllabic first members also contain either a prefix (*prevedi* 'foresee') or a string homophonous with a prefix and etymologically corresponding to a prefix (*consuma* 'consume'). All the trisyllabic second members also begin with prefixes or sequences which are derived from prefixes; six of them are also vowel-initial. The complete set of trisyllabic members is given in Table 2.

Table 2 Trisyllabic members of VeV lexemes

V1	accendi, appila, attacca, consuma, prevedi
V2	incolla (2 types), impara, indossa, inghiotti, ammira, stravinci (2 types), previeni, racconta

2.2.1.2. Bases with heavy penultimates?

Most of the verbs used in both members have a heavy penultimate syllable. To assess whether this is due to a phonological restriction on the input, or is simply a reflection of the distribution of heavy penultimates in Italian verbal bases overall, one should compare the data about the VeV lexemes with data about Italian verbs in general.

Such data are not easily available. As a benchmark of comparison, we computed the percentage of verbs with heavy vs. light penultimate among the disyllabic verbs of the Italian Basic Vocabulary. Table 3 shows some data about the quantity of the penultimate syllable in verbal bases in several sets of data.

Table 3	Quantity of	the penultima	te syllable in ver	bal bases in several	sets of data

quantity of the penultimate syllable	V1 in VeV lexemes	V2 in VeV lexemes	verbs in VV reduplicative compounds*	verbs as first members of compounds listed in GRADIT**	disyllabic verbs in the Italian Basic Vocabulary***
heavy (closed)	64,6%	77,3%	75%	65,9%	61%
light (open)	35,4%	22,7%	25%	34,1%	39%

^{*} Data from Thornton (2007b)

As the data show, a tendency towards verbal bases with a heavy penultimate is already present in the disyllabic verbs of the Italian Basic Vocabulary; it is slightly stronger in all sorts of verbal bases used in compounding, and it is strongest in the second members of VeV lexemes, while the distribution among the first members of the VeV lexemes is closer to the one expected in the null hypothesis.

In conclusion, the tendency to employ verbal bases with a heavy penultimate cannot be considered a genuine phonological restriction on the input.

^{**} Data computed on Ricca's (2005) collection

^{***} Data computed using BDVDB (Thornton, Iacobini & Burani 1997)

⁵ Cf. Crocco Galéas & Iacobini (1993).

2.2.2. Morphology

2.2.2.1. Inflectional class of the base

Italian verbs belong to different inflectional classes. It is a matter of some debate whether one should recognize three main classes, based on the three different thematic vowels that appear between the verb's root and the inflectional ending in some forms of the paradigm (such as the second person plural of the present indicative, all forms of the imperfect indicative, and most infinitives (the regular ones)), or just two macroclasses, i.e., the traditional first conjugation and a second class which comprises all other classes and subclasses (this position is taken by Dressler & Thornton 1991). This is not the place to defend one or the other position. In the following analysis, we will adopt the traditional tripartition, to make the analysis comparable to other published analyses and to use categories more familiar to most readers.

traditional number	infinitive ending (citation form)	Main characteristics of the class
1 st	-are	regular and productive (adapted loanwords and all productive verbal suffixes belong here)
2 nd	-ere	unproductive and extremely irregular (Dressler <i>et alii</i> 2003) (sometimes subdivided in two subclasses, according to whether the stress on the infinitive form falls on the penultimate or the antepenultimate syllable)
3 rd	-ire	has two subclasses: a minority of verbs do not take the <i>-isc-</i> infix; the majority of verbs take the <i>-isc-</i> infix in certain cells of the paradigm; this subclass is slightly productive (neologic parasynthetic verbs can be assigned to it) and regular

Table 4 Italian verbal inflectional classes (conjugations)

Table 5 shows the inflectional classes of members of the VeV lexemes, of the verbal elements in other compounding processes of Italian, and of Italian verbs overall.

inflectional class	verbs in Zingarelli minore*	verbs marked FO+AU+AD+ CO in GRADIT**	verbal element in VN compounds (Ricca 2005)	verbs in VV reduplicative compounds (Thornton 2007b)	verbs in first member of VeV lexemes	verbs in second member of VeV lexemes	16 top rank verbs in LIP and LIF (Giordano & Voghera 2002) ***
-are	79,2%	80%	81,4%	65,2%	66,7% (44)	50% (33)	43,75%
-ere	10,6	9,8%	18,6%	26,1%	25,7% (17)	27,3% (18)	37,50%
-ire	10,2	10,2%		8,7%	7,6% (5)	22,7% (15)	12,50%

Table 5 Inflectional classes of verbal bases in several sets of data

It is immediately apparent that the 1st conjugation, which has by far the largest type-frequency in the overall lexicon of Italian, is underrepresented among verbs used in VV

^{*} Zingarelli minore is a usage dictionary containing about 45.000 types; data computed from more detailed data in Thornton, Iacobini & Burani (1997: 75).

^{**} GRADIT is the biggest Italian usage dictionary. The lemmata marked FO+AU+AD+CO are over 50.000 lexemes in common usage; we have excluded technical or obsolete lexemes listed in the dictionary. Data computed from data in Ricca (2005: 470-471).

^{***} LIP and LIF are frequency dictionaries of written and spoken Italian, based on a 500.000-token corpus each.

reduplicative compounding and in VeV lexemes (while verbs used as first members of VN compounds distribute exactly as in the overall lexicon). Conversely, the 2nd conjugation, which is the totally unproductive one, is highly overrepresented in these sets of data. The 3rd conjugation is overrepresented in the second members of VeV lexemes, but this is partly due to the high type-frequency of a single second member, *fuggi* 'run away', appearing in 8 types (12% of the total).

A tentative interpretation of these data is the following: both VV reduplicative compounds and VeV lexemes are closely connected to syntax and discourse, since, originally, they were born as lexicalizations of sentences (cf. 1). In speech and writing, 2nd conjugation verbs are very frequent⁶, and their high token frequency is probably reflected in the high rate in which they appear as members of lexicalized chunks of speech. Therefore, the distribution of inflectional classes of the input verbs corresponds to that found in token frequency in speech and writing rather than to that found in type frequency in the dictionary.

It is also worth noting that the 3rd conjugation verbs that appear as members of VeV lexemes (as well as of VV reduplicative compounds) all belong to the *-isc*-less subclass of this conjugation, which is the smallest subclass and is totally unproductive. The two 3rd conjugation verbs (*sentire* 'feel', *venire* 'come') among the 16 most frequent Italian verbs (cf. Giordano & Voghera 2002: 292, footnote 2) also belong to this subclass. This fact is probably related to the fact that both VV compounds and VeV lexemes are formed almost exclusively from verbs with disyllabic bases, and no *-isc*- verb can have a disyllabic base, as *-isc*- provides a syllable in itself and there are no monosyllabic verb stems in the 3rd conjugation.

In VN compounds, verbs from the *-isc-* subclass do appear as first members. In VN compounds, the tendency to have disyllabic first members is less strong than in constructions with two verbs (cf. Table 1 above), and *-isc-* can be accommodated in two ways, either by actually using an *-isc-* stem, yielding a VN compound with a "long" first member, or by using in compounds an *-isc-* less stem of the verb, the same stem that is used in derivation. The second strategy is somewhat more common, but often both strategies apply to the same compounds, as shown by the data in Table 6.

			_		
pulisciorecchie	11	~	puliorecchie	35	lit. clean-ears 'cotton swab, Q-tip'
pulisciscarpe	47	~	puliscarpe	3	lit. clean-shoes 'shoe-shining machine"
pulisciunghie	16	~	puliunghie	1	lit. clean-nails 'tool for cleaning nails"
puliscivetri	38	~	nulivetri	45	lit clean-glass 'window cleaner'

Table 6 VN compounds doublets with -isc- and -isc-less stems⁷

Quite to the contrary, the second strategy would not apply to VeV lexemes (and VV reduplicative compounds), which strictly require the stem homophonous to the imperative (cf. section 2.3.3.2). Therefore, the only way to comply with a restriction demanding disyllabicity of (first) members is to select verbs that already have a disyllabic stem, which excludes *-isc*-verbs: if an *-isc*-verb were to be used in one of these constructions, it would have to appear in its imperative form, which invariably displays *-isc*-, therefore being at least trisyllabic.

2.2.2.2. Morphological complexity of the bases

Verbs used as bases in VeV lexemes can be morphologically complex, but only in certain ways. Suffixed (denominal and deverbal) verbs are excluded, very likely because they would

⁶ Giordano & Voghera (2002: 292 footnote 2) list the 21 most frequent verbs in both written and spoken Italian (LIF and LIP corpora; the lists drawn from each of the two corpora coincide in these high ranks). Excluding two auxiliaries (*essere*, *avere*) and three modal verbs (*potere*, *dovere*, *volere*) (which, by the way, all belong to the 2nd conjugation), among the remaining 16 top rank content verbs, 7 (43,75%) belong to the 1st conjugation, 6 (37,5%) to the 2nd conjugation, 2 (12,5%) to the -*isc*-less subclass of the 3rd conjugation, and one, *fare* 'to do /make', the top rank verb, has a mixed conjugation, displaying a few forms belonging to the 1st (e.g., 3rd person singular) but most forms belonging to the 2nd conjugation (e.g., imperfect indicative, present subjunctive, etc.).

⁷ The number following the lexeme is its frequency in Google. Data from Thornton (2007a).

invariably have a stem longer than two syllables. Prefixed verbs, on the contrary, are not excluded. There are several kinds of prefixed verbs among members of VeV lexemes (18 in total):

(5)	Truly pref	ixed verbs°					
	prevedi	prevedere	'to foresee'	<	vedere	'to see'	(V1)
	previeni	prevenire	'to prevent'	<	venire	'to come'	(V2)
	stravinci	stravincere	'to over-win'	<	vincere	'to win'	(V2)
	sbatti	sbattere	'to fuck'	<	battere	'to beat'	(V1)
	scopri	scoprire	'to uncover'	<	coprire	'to cover'	(V2)
	scuci	scucire	'to unstitch'	<	cucire	'to stitch, to sew'	(V2)
	stura	sturare	'to uncork'	<	turare	'to cork'	(V2)
(6)	Parasynthe	etic denominal	verbs				
	incolla	incollare	'to stick'	<	colla	'glue'	(V2)
	scarta	scartare	'to unwrap'	<	carta	'paper'	(V1)

(7) Verbs formed on verb stems that do not occur by themselves, but only preceded by prefixes (often by at least two prefixes, to form pairs of verbs of opposite meaning)

(8) Verbs which are not synchronically analyzable as prefixed, but that are etymologically prefixed and contain an initial string homophonous with existing prefixes

accendi	'switch on'	(V1)
ammira	'admire'	(V2)
consuma	'consume'	(V1)
impara	'learn'	(V2)
indossa	'wear'	(V2)
inghiotti	'swallow'	(V2)
racconta	'tell, narrate'	(V2)

Among these prefixed verbs, 8 (44,4%) are vowel-initial, and therefore they may not count as trisyllabic bases if we follow Plénat's principle of extrametricality of initial vowels; 5 (27,8%) have the prefix s-, which is asyllabic and thus doesn't add a syllable to the base, preserving its disyllabicity. The remaining five prefixes do add a syllable to their base. However, two of these (prevedi 'foresee' and previeni 'prevent') appear in the same lexeme (prevedi e previeni) and create an alliterating effect, whereas another (stravinci 'over-win') is the second member of the lexemes gratta e stravinci lit. scratch and over-win 'a competition with prizes' and gioca & stravinci lit. play and over-win 'a competition with prizes', which are formed by analogy to the very frequent gratta e vinci lit. scratch and win 'instant scratch lottery / instant scratch lottery ticket' (stravincere is obtained by adding the intensifying prefix stra-'over' to the base vincere 'to win'). Further, consuma 'consume', in the VeV lexeme consuma-e-getta lit. consume and throw away 'disposable', is clearly formed by analogy along the lines of usa e getta lit. use and throw away 'disposable'.

Therefore, there is only one true exception, i.e., *racconta* 'tell, narrate'. *Racconta* occurs in *bacia e racconta* lit. kiss and tell, a lexeme which is clearly a calque on English *kiss and tell*. Some other lexemes containing trisyllabic bases are calques: *copia e incolla < cut and paste*, *lava e indossa < wash and wear*. In sum, trisyllabic bases (all of which contain a prefix in our

⁸ In (5) and (6) the forms of prefixed verbs used in VeV lexemes are listed, followed by their citation (infinitival) form and by the citation form of their base.

sample) are peripheral with respect to disyllabic bases, and occur mainly in analogical formations and calques.

2.2.3. Syntax and semantics

2.2.3.1. Syntactic classes

Among the syntactic properties of the verbal bases that form VeV lexemes, we have investigated the kind of syntactic classes involved. The classification of verbs based on argument structure is notoriously problematic. For our current purposes, we have decided to use the classification of Italian verb classes developed by Ježek (2003). We have taken into account three major verb classes⁹:

- transitive-only verbs, including verbs with at least two arguments (e.g., compra 'buy', togli 'remove', dai 'give');
- transitive/intransitive verbs, including verbs such as gioca 'play' (i bambini giocano nel giardino 'the children play in the garden' vs. giocare una partita 'to play a game'), but also transitive verbs that may present the "null object alternation" (cf. Lo Duca 2000, quoted in Ježek 2003: 98; see also Levin 1993: 33, who speaks of "unspecified object alternation") (e.g., mangiare 'to eat': sto mangiando 'I am eating' vs. sto mangiando una mela 'I am eating an apple');
- **intransitive-only** verbs, including one-argument verbs, either unaccusative (e.g., *corri* 'run', *fuggi* 'run_away') or unergative (e.g., *sosta* 'park/stop', *chiagni* 'cry').

Intransitive (but also transitive) pronominal verbs (e.g. *alzarsi* 'to get up', *arrabbiarsi* 'to get angry') never occur as bases of VeV lexemes. The same can be said of zero-argument verbs including impersonal and atmospheric verbs (e.g. *sembra* 'it seems', *piove* 'it rains'), that do not take a dummy subject in a pro-drop language such as Italian.

Table 7 quantifies the presence of the three syntactic classes in our corpus.

Syntactic verb classes	V1	V2
transitive-only verbs	41%	36,4%
transitive/intransitive verbs	56%	42,4%
intransitive-only verbs	3%	21,2%

Table 7 Syntactic classes of the verbal bases in our corpus

Ježek (2003) claims that, in the database she used, the transitive-only group is the most numerous, even though – she states – this datum might be biased by transitive verbs that present the null object alternation, which are not distinguished from transitive-only verbs in a systematic way. This factor might also be relevant for our analysis. As Table 7 shows, most input verbs for VeV lexemes belong to the transitive/intransitive class and not to the transitive-only class. Indeed, this can be partially biased by the fairly high presence of transitive verbs with null object alternation (e.g. bevi 'drink', leggi 'read', mangia 'eat', taglia 'cut'), which are not counted as transitive-only. In addition, the transitive/intransitive class also includes transitive verbs that display an alternation with pronominal verbs with -si (e.g. accendere/accendersi 'to switch on': accendi la luce 'switch on the light' vs. la luce si accende 'the light goes on'). However, these verbs should indeed be considered as fully transitive in our case, since their pronominal variant could not occur in VeV lexemes.

As for intransitive-only verbs, they are much more frequent as V2. This is due to the high type frequency of unaccusative verbs such as *fuggi* 'run away' (8 types) and *scappa* 'run away' (3 types) in this position. In this respect, it is worth noting that the two intransitive-only

⁹ Ježek (2003) distinguishes 15 classes of verbs. However, three main groups can be identified: transitive-only verbs, intransitive-only verbs (which are then divided into intransitives with the auxiliary *avere* 'to have', named unergative, intransitives with the auxiliary *essere* 'to be', named unaccusative, and pronominal intransitives with the auxiliary *essere* and *-si*) and verbs that display transitive/intransitive alternations of various kinds.

(unaccusative) verbs occurring in V1 position (*sali* 'ascend' and *va* 'go') are followed, in V2 position, by other intransitive (unaccusative) verbs that are semantically opposite, namely *scendi* 'descend' and *vieni* 'come'.

Summing up, zero-argument and pronominal verbs are banned from VeV lexemes. In V1 position there is a remarkable tendency to have intransitive/transitive or transitive verbs (the intransitive-only verbs form an oppositive couple with V2), whereas the three major classes are more equally distributed in V2 position.

2.2.3.2. Semantic role of the subject

In this section we analyze the subject of V1 and V2 from a semantic viewpoint and try to determine if there is any preferential semantic role involved. We are aware that semantic roles are a hotly debated question in contemporary linguistics, and we do not want to enter into the theoretical discussion about them. Therefore, we have based our investigation on the classification given in Blake (1994: 68-71), which is reported in Table 8.

Semantic role	Definition	Example
Patient	an entity viewed as existing in a state or undergoing	The flame grew bright
	change	The stone moved
	an entity viewed as located or moving	The bird sang a song
	an entity viewed as affected or effected by an entity	
Agent	an entity that performs an activity or brings about a	The robots assembled the
	change of state	car
		The sun melted the ice
Instrument	the means by which an activity or change of state is	She squashed the spider
	carried out	with a slipper
Experiencer	the creature experiencing an emotion or perception	They love music
Beneficiary	the animate entity on whose behalf an activity is	She did the shopping for her
	carried out	mother

Table 8 Semantic roles according to Blake (1994: 68-71) (partial)¹⁰

We have noticed a general tendency to select verbs whose subject has the semantic role of Agent as input to VeV lexemes. This is particularly true of verbs in V1 position, as can be seen from the data in Table 9¹¹.

Semantic role	V1	V2
Agent	97.8 %	87.0 %
Patient	-	10.9%
Experiencer	2.2 %	2.1 %

Table 9 Semantic role of the subject of V1 and V2

The only base in V1 with a role which we can classify as Experiencer is *vedi* 'see'. However, *vedi* in the actual examples of our corpus is used more with the meaning of 'watch' than of 'see', and therefore we may say that the subject of this verb has an Agent-like role.

As for V2, there is again a strong tendency towards the Agent role, but there is a slightly larger variety than for V1: besides one base whose subject has the Experiencer role (ammira

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¹⁰ Blake's (1994) list of semantic roles is more complete. Table 8 includes only the semantic roles that are relevant for our analysis.

¹¹ For the sake of completeness, we must add that we also counted as Agent the subjects of motion verbs such as *corri* 'run_away' (V1 and V2), *fuggi* 'run_away' (V1 and V2), *sali* 'ascend' (V1), *scappa* 'run_away' (V1 and V2), *scendi* 'descend' (V2), *torna a casa* 'come back home' (V2), *va* 'go' (V1) and *vieni* 'come' (V2). This apparently clashes with Blake's (1994) classification, in which located or moving entities are viewed as Patients. Notwithstanding this, we believe that the subjects of these verbs are Agents.

'admire'), we also have some subjects with the Patient role (e.g., *perdi* 'lose', *stravinci* 'overwin', *trova* 'find', *vinci* 'win')¹².

2.2.3.3. Aktionsart

In analyzing the actional properties of the verbal bases, we have made use of the classification by Bertinetto (1986) (based on Vendler 1967), since this classification is based on Italian data.

Actional class	durative	telic	dynamic
risultativo (accomplishment)	+	+	+
continuativo (activity)	+	-	+
risultativo-continuativo (accomplishment-activity) 13	+	±	+
trasformativo (achievement)	-	+	+
puntuale (punctual)	-	-	-
stativo (stative)	+	_	-

Table 10 Actional classification adapted from Bertinetto (1986)

The analysis, whose results are displayed in Table 11, shows that all Aktionsart classes are represented in the corpus but one, i.e., stative verbs. This is quite expected if we consider that the verbal bases tend to have an Agent as subject. This seems to be the only strong restriction as far as Aktionsart is concerned, even though punctual verbs are also underrepresented.

Actional class	V1	V2
risultativo (accomplishment)	6.7 %	6.5 %
continuativo (activity)	26.7 %	23.9 %
risultativo-continuativo (accomplishment-activity)	22.2 %	-
trasformativo (achievement)	44.4 %	67.4 %
puntuale (punctual)	-	2.2 %
stativo (stative)	-	-

Table 11 Actional classes of V1 and V2

As for other classes, there are two facts worth mentioning: the higher presence of classes with the [+durative] feature in V1, and, conversely, the higher presence of classes with the [-durative] feature in V2. Once again, this is probably due to the high type-frequency of certain bases in V2 position, and in this case to the numerous types with the structure [V1 *e fuggi* 'run away' / getta 'throw (away)'].

2.2.3.4. Semantic classes

As a final investigation of the syntactico-semantic properties of the input, we have looked to see whether we could find any regularities in the semantics of the verbal bases. We have based our analysis on Levin's (1993) classification of verb classes ¹⁴. The categorization of the verbal bases in our corpus according to Levin's classes produced quite fuzzy results.

¹² Ježek (2005: 116, Table 4.5) uses the Italian verb *vincere* 'win' as an example of verb whose Subject has the Beneficiary role, which she defines as the entity that benefits from the event. However, Blake uses a different definition of the role of Beneficiary (cf. Table 8) that does not seem to include the verb *vincere* 'to win' (and *perdere* 'to lose').

This class refers to verbs that can be either telic or atelic depending on whether they are used generically or not (e.g., ho letto un libro in un giorno 'I have read a book in one day' vs. ho letto tutto il giorno 'I've been reading all day long').

A methodological note is needed here. Of course, Levin's classification was developed for English verbs, so we have to be careful in interpreting the data. However, it is not uncommon to use Levin's classes to categorize verbs belonging to other languages (cf. for instance Xu, Aronoff & Anshen 2007).

As for V1, the verbal bases belong to 22 classes. The bases are well distributed among these classes, so there does not seem to be a predominant class. However, we do notice a tendency to use verbs that denote change, causation and motion: 6 bases belong to the class "Change of state" (labelled as 45 in Levin 1993), 5 to the class Motion (labelled as 51), 4 to the class "Change of possession" (labelled as 13), 3 to the class "Verbs of creation and transformation" (labelled as 26) and 3 to the class "Verbs of removing" (labelled as 10).

The results for V2 are in line with the other analyses carried out: in this position there is less differentiation of classes with respect to V1, since we registered 16 classes only. As with V1, the most represented classes are verbs of change, causation and motion: 10 bases belong to the class "Change of possession" (labelled as 13 in Levin 1993), 9 bases belong to the class "Motion" (labelled as 51)¹⁵, 4 bases belong to the class "Throwing" (labelled as 17), and, finally, 4 belong to the class "Change of state" (labelled as 45).

To conclude, we notice that the tendency to have verbs denoting change, causation and motion as a base for VeV lexemes is in line with the results of the Aktionsart analysis, according to which Achievements are the most represented category, followed by Accomplishments and Activities.

2.3. Output

We proceed now to illustrate the properties of the output VeV lexemes. We have checked the following properties:

- the quality of the stressed vowels, the quantity of the penultimate syllable, the length in syllables and the quality of the word onset for V1 and V2 in each VeV lexeme (phonology);
- the spelling variants of VeV lexemes;
- their inflection and the form of the verbal elements (morphology);
- and, finally, the output lexical categories, the semantic relationship between the two members and whether the two verbal bases share the object and the subject (syntaxsemantics).

The results are discussed in detail in the following sections and then summarized in section 3 (Table 25).

2.3.1. Phonology

2.3.1.1. Stressed vowels

Figure 4 shows the distribution of stressed vowels in the two members of the VeV lexemes.

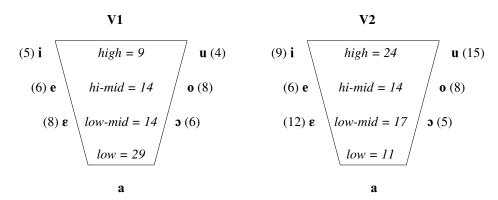


Figure 4 Stressed vowels in first and second members of VeV lexemes (on all 66 types)

There is a clear tendency for first members to display a low stressed vowel (the mode is /a/, appearing in 43,9% of the first members) and for second members to display a high stressed

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¹⁵ The high incidence of this class is due to the high type frequency of *fuggi* 'run away'.

vowel (the mode is /u/, appearing in 22,7% of the cases – but this figure must be considered carefully, because it derives mostly from the frequent occurrence of a single second member, fuggi 'run away', in several different VeV lexemes).

The figures in Figure 4 refer to all members of all the VeV lexemes in the sample, so if a single verb appears in more than one VeV lexeme it has been counted twice.

If we count each verb-base type only once, the results do not change much, as shown in Figure 5: the tendency to have /a/ in the first member remains stable (42,2%), while the tendency to have a high vowel in the second member is slightly reduced (30,4% vs. 36,3%).

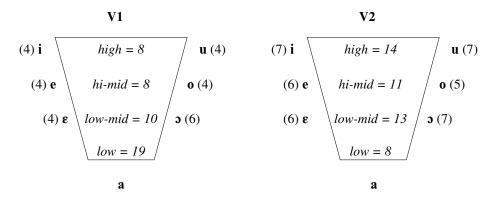


Figure 5 Stressed vowels in first and second members of VeV lexemes (on member types)

The raw distribution of stressed vowels in the two members suggests that there might be a tendency to build VeV lexemes with two members differing as much as possible in their stressed vowels¹⁶. This tendency should be particularly strong in the semantic subclass of VeV lexemes which we call opposites (cf. section 2.3.4). In fact, all lexemes in this semantic class have different vowels (differing mainly for backness and highness) in the two members, except for the five lexemes that are built with the same verb stem preceded by prefixes of opposite meaning, or whose second member is formed from the first one by prefixing the reversative prefix /s/ (e.g., appila e spila lit. plug and unplug, attacca e stacca lit. attach and detach, copri e scopri lit. cover and uncover, cuci e scuci lit sew and unsew, tura e stura lit. cork and uncork).

Overall, most VeV lexeme have disharmonic stressed vowels, as shown in Table 12.

Table 12 Disharmonic stressed vowels in VeV lexemes

same vowel in both members	14	21,2%
different vowels in the two members	52	78,8%

2.3.1.2. Syllabic make-up

We have checked whether the VeV lexemes display harmony in the number of syllables of the two members, and in the weight of their stressed syllabes. The data are shown in Table 13 and Table 14.

¹⁶ This is compatible with the studies on conjoined word pairs (often called "binomials") in general: most analyses of the phonological properties of binomials revealed a tendency towards having words with this or that vowel or consonant in first rather than in second position. For instance, Salvioni (1902: 372), working on Italian alliterative pairs, notes that words with stressed *a* and *o* are found preferably in first position, whereas words with stressed *e*, *i* and *u* are found in second position (e.g., *modo e manièra* 'manner, way', *farne di cotte e di crude* '(be up to) all sorts of tricks'). This finding is replicated in our data. Interestingly, Behagel (1928) found exactly the opposite tendency for German: words with stressed *i* and *u* precede those with stressed *a*.

Table 13 Penultimate syllable weight harmony?

Quantity of the penultimate in V1	Quantity of the penultimate in V2	Number of instances	Penultimate syllable weight harmony
no penultimate (open	open	1	68,2% (45)
monosyllable)			harmonic
open	open	8	
closed	closed	36	
open	closed	15	31,8% (21)
closed	open	6	disharmonic

Table 14 Syllable length harmony?

Number of syllables in V1-V2	Number of instances
1-2	1 (va e vieni)
2-2	51
2-3	9
3-2	4
3-3	1 (prevedi e previeni)

As for the weight of the stressed syllable, 45 types (i.e., 68,2%) present a harmonic pattern (closed-closed and open-open), whereas 21 types (i.e., 31,8%) present a disharmonic pattern (closed-open and open-closed).

As for the number of syllables, there is a clear tendency to syllable length harmony: 78,8% of the VeV lexemes in the sample have members of equal length in syllables. In those lexemes in which syllable length is not equal in the two members, in most cases the second member is longer than the first. It should also be noticed that of the four cases with a first member longer than the second, three (*accendi e spegni* lit. switch on and switch off, *appila e spila* lit. plug and unplug, *attacca e stacca* lit. attach and detach) have a vowel initial first member, that could be considered in fact disyllabic by Plénat's principle of extrametricality of initial vowels, and so make the syllable length of the two members balanced.

This datum is in line with the Gesetz der wachsenden Glieder ('law of increasing members') formulated by Behagel (1909) for frozen binomials in German, Latin and Ancient Greek (and independently found by Jespersen 1905 for English). Subsequently, Morawski (1927) claimed, on the basis on Spanish data, that the shorter member precedes the longer one only in case of rhyme or alliteration and added that, in rhymed pairs with an equal number of syllables, there are a number of phonetic factors ruling the order of the members. One of these factors requires that words beginning with a vowel or an h precede those beginning with a consonant. We investigate word onset harmony in the following section.

2.3.1.3. Word onset harmony?

We checked for harmony or disharmony in the nature of the initial phoneme of the two members. The data are summarized in Table 15.

Table 15 Word onset harmony

Word onset in V1 and V2	Number and percentage of cases
C initial – C initial	55 (83,3%)
C initial – V initial	6 (9,1%)
V initial – C initial	5 (7,6%)
V initial – V initial	

Clearly, there is a tendency for both members to start with consonants, and so to start with the same kind of phoneme (C vs. V). However, there are no V initial – V initial lexemes. The items that do not have harmonic word onsets are for the most part disharmonic in other respects

too: 81,8% of the types with different word onsets also differ in syllabic length. All the 6 C initial – V initial lexemes have a disyllabic first member and a trisyllabic second member; 3 of the 5 V initial – C initial lexemes have a trisyllabic first member and a disyllabic second member; the remaining two V initial – C initial lexemes (*apri e chiudi* lit. open and close, *apri-e-gusta* lit. open-and-enjoy) have two disyllabic members.

These data also point to a strong correlation between being vowel-initial and being trisyllabic, which lends further support to Plénat's hypothesis that initial vowels are extrametrical in some respects in prosodically constrained morphological or lexeme formation processes.

Morawski's finding that V-initial words tend to precede C-initial words in Spanish is not replicated in our Italian data.

2.3.1.4. Phonological words

The two members of the VeV lexemes are distinct phonological words according to the tests proposed by Nespor (1993: 173-174): they can both display low-mid vowels, that only appear under main word stress in Italian; the stressed vowels in open penultimates lengthen in both members.

This is expected, as it is normally the case with all sorts of Italian novel native compounds (cf. Peperkamp 1997: 123-129).

2.3.2. Spelling

As our data come from written corpora, a word on spelling is in order. The three words making up the VeV lexemes are usually spelled separately, with a blank between them. An alternative spelling, with hyphens dividing (or connecting?) the three words, is attested in a minority of cases. Table 16 gives figures for the different spellings found in the *la Repubblica* corpus for the most frequent VeV lexemes.

Table 16 Spelling of the most frequent VeV lexemes in the la Repubblica corpus

tira e molla	537
tira-e-molla	38
tira-molla	16
tiramolla	26
tirammolla	2
tiremmolla	1
usa e getta	413
usa-e-getta	60
usa-getta	0
usagetta	0
useggetta	0
mordi e fuggi	237
mordi-e-fuggi	23
mordi-fuggi	1
mordifuggi	0
mordeffuggi	0
gratta e vinci	190
gratta-e-vinci	4
gratta-vinci	0
grattavinci	0

grattevvinci	0		
va e vieni	84		
va-e-vieni	13		
va-vieni	0		
vavvieni	0		
vaevieni / vaevvieni	0		

Spellings with hyphens are common for other sorts of verb-based compounds in Italian. The VV reduplicative compounds in the la Repubblica corpus are spelled both as two separate words and with hyphens, with a ratio of about 50/50 (Thornton 2007b). Hyphenated spellings are also common for VN compounds, particularly low-frequency ones and adjectival ones (Ricca in prep.), although prescriptive norm would have them spelled as a single word with no blanks or hyphens. So, if anything, our data stand out for the low frequency of hyphenated variants. This might be interpreted as pointing to the fact that the separateness and distinctness of the two members must be preserved, even by means of spelling; in the case of VeV lexemes, a hyphen, as opposed to a blank space, is felt as closer to a way of linking than to a way of separating, and is therefore little used in this type.

It can be observed that a few lexemes are also attested without the conjunction e between the two members, namely apri-chiudi lit. open-close, cerca-trova lit. look_for-find, cuci-scuci lit. sew-unsew, mordi-fuggi lit.bite-run_away, sali-scendi lit. ascend-descend, tassa-spendi lit. taxspend, tira-molla lit. pull-let_go. However, most lexemes are never attested without the e, and never in synthetic spellings. This orthographic characteristic points to the fact that both the conjunction and spelling the two verbs separately are felt as necessary, and so suggests an inherently additive and double nature of the semantics of the type (cf. section 2.3.4).

2.3.3. Morphology

2.3.3.1. Inflection

The VeV lexemes are invariable, both in their nominal and in their adjectival use. Examples (9)-(10) show two couples of nominal VeV lexemes (singular-plural), whereas examples (11)-(12) present VeV lexemes in adjectival function accompanying both singular and plural nominal heads. No lexeme presents an overt plural marker¹⁷.

(9) a. ...non comprerò mai più gratta sostanot buy.1SG.FUT never anymore scratch and park а "... I will never buy a scratch and park ticket againsono chedue volte multato, già vengo ...be.3PL.PRES already two times that come.1SG.PRES fine.PTCP.PST.M. i nonostante abbia pagato gratta sosta... have.1SG.SBJV.PRES pay.PTCP.PST the.PL scratch although and park "... I have been fined already twice, although I had paid the scratch and park tickets (10) a. ... dopo un estenuant-e tira molla after an exhausting-SG pull and leave ... "...after an exhausting see-saw ..." molla dopo estenuant-i tira e ... after exhausting-PL pull and leave ... "... after exhausting see-saws ..." "stira ammira" ... (11) a. ... dopo un trattament-o e ... after treatment-SG admire ... iron and "... after a perfect ironing treatment ..."

¹⁷ All examples are taken from *la Repubblica* corpus.

```
b. ... figli
                        di
                               casalingh-e "stira
                                                                ammira"...
                                                        \boldsymbol{e}
          ... children of
                               housewife-PL iron
                                                                admire ...
                                                        and
          "... children of perfect housewives ..."
(12) a. ... si chiama
                                       "bottigli-a
                                                                    getta" ...
                                                     usa
                                                              \boldsymbol{e}
          ...call.3SG.PRES.PASS
                                       bottle-SG
                                                                    throw_away ...
                                                      use
                                                              and
          "...it is called "disposable bottle"..."
      b. ... produrremo
                                   solo
                                           bottigli-e
                                                       usa e
                                                                    getta ...
          ...produce.1PL.FUT
                                   only
                                           bottle.PL
                                                        use
                                                              and throw_away ...
           ... we will produce only disposable bottles ...'
```

Following Hopper & Thompson (1984), the invariability of VeV lexemes, i.e., the lack of morphological markers typical of nouns and adjectives, denotes the low prototypicality of these forms as nouns and adjectives.

2.3.3.2. The form of the verbal element

As in all other verb-based compounds of Italian, the verbs in VeV lexemes appear in a form which is homophonous to the 2nd person singular imperative. Table 17 shows that different hypotheses (both 3rd person singular and the "Scalisian" stem, i.e., the verb stem as defined by Scalise 1983, that is, the infinitive form of the verb without its inflectional marker *-re*) fail to yield the correct output in most of the cases (the bases of the lexemes in the first column are representative of different inflectional classes).

VeV lexeme	imperative	3 rd ps.sg.	Scalisian stem	input V citation form (infinitive)
1	mordi!	€™orde	€ morde-	mordere
mordi e fuggi	fuggi!	€fugge	fuggi-	fuggire
anatta a ninai	gratta!	gratta	gratta-	grattare
gratta e vinci	vinci!	€ [™] vince	6 [™] vince-	vincere
va e vieni (also vai e	va!/ vai!	va	€ [%] anda-	andare
vieni)	vieni!	€ [®] viene	6 [%] veni-	venire
manaia a hani	mangia!	mangia	mangia-	mangiare
mangia e bevi	bevi!	€beve	6 [%] be-	bere
	corri!	€ [*] corre	6 [™] corre-	correre
corri e tira	tira!	tira	tira-	tirare
auai a aauai	cuci!	€ [%] cuce	cuci-	cucire
cuci e scuci	scuci!	€ [%] scuce	scuci-	scucire

Table 17 The form of the verbal bases

The question of course is why this homophony between the verbal members of VeV lexemes and imperatives holds. Romance verb-based compounds have been an object of investigation for almost two centuries. Research has focused mainly on VN compounds, while compounds containing two verbs have been less studied, probably because they are much less numerous than VN ones (Thornton 2007b).

Scholars have been divided into three main parties over the nature of the verbal element in VN compounds:

- a) those maintaining that the verbal element is the imperative, as diachronic evidence shows that the compounds originate in imperative sentences;
- b) those maintaining that the verbal element is the 3rd person singular of the present indicative (a minority, including the italian scholars Tollemache and Merlo);
- c) those maintaining that the verbal element is a verb stem (Pagliaro).

The whole question was settled about half a century ago, with balanced positions such as the ones expressed by Migliorini and Folena and quoted in (13):

- (13) a. "Formalmente, si tratta d'imperativi; concettualmente, oggi questo carattere è molto meno avvertito." [Formally, they are imperatives; conceptually, today this property is much less felt] (Migliorini 1957²: 82 [1935: 42]; our translation)
 - b. "la valutazione sincronico-semantica va [...] distinta da quella diacronico-etimologica" [the synchronic-semantic analysis is to be distinguished from the diachronic-etymological one] (Folena 1958: 104; our translation)

We share the views expressed in (13), especially in the light of the diachronic data reported in section 1.: as we have seen, all VV Italian lexical constructions, including VeV lexemes, originate in discourse from a particular stylistic device that Spitzer (1951-1952; cf. also Spitzer 1918) named "impératif descriptif" (descriptive imperative). Therefore, the homophony between the verbal elements in VeV lexemes and imperatives is due to the fact that the earliest attested lexemes are in fact lexicalizations of imperative sentences. When the construction became entrenched enough to behave as a more abstract pattern for the creation of new lexemes (without a discoursal source), the construction retained a restriction to the effect that the verb base used in it is homophonous with the singular imperative. To characterize the morphological make-up of the output of the currently productive construction, we could say that it employs the verb stem used in compounding, as defined in works such as Rainer (2001) and Thornton (2005: 157-160), i.e., a specific morphomic stem which has a place in Italian morphology (inflection and lexeme-formation)¹⁸.

It is worth noting that postulating that the VeV lexeme construction makes use of a stem like other compounding phenomena is not trivial, since VeV lexemes, being phrasal words, should be made up of free forms. On the other hand, the compounding stem is always completely homophonous with the imperative singular free form, which is the verb form at the origin of VeV lexical construction, so it is impossible to decide whether these constructions display the compounding stem or the imperative form.

2.3.4. Syntax and semantics

2.3.4.1. Subject and object

As a first syntactic property, we have checked whether the main arguments (i.e., subject and direct object) of the verbal bases are shared. Of course, the calculation for the object involved only pairs with transitive verbs (cf. section 2.2.3.1).

As shown in Table 18, the large majority of VeV lexemes are formed by verbs that share the same object (e.g., apri e chiudi lit. open and close, copia e incolla lit. copy and paste, leggi e getta lit. read and throw_away). However, there is also a remarkable number of cases that present distinct objects, such as for instance radi e getta lit. shave and throw_away, tassa e spendi lit. tax and spend, gratta e vinci lit. scratch and win¹⁹. Finally, there are a few lexemes in which the two verbs may but also may not share the same object, e.g., compra-e-vendi lit. buy and sell, dai e prendi lit. give and take. It is worth noting that these two verbs belong to a specific class of opposites that Cruse (1986: 234) calls "indirect converses".

Table 18 Shared objects

Shared object	%
+	71.0 %
±	4.5 %
-	24.5 %

¹⁸ The form of the verbal element used in VeV lexemes is homophonous to the imperative in a stricter way than for verb-based compounds, such as VN compounds, where the morphome used in derivation may sometimes be preferred to the one used in compounding to achieve disyllabicity of the compound's first member, as the data in Table 6 above show.

¹⁹ We should add that the pairs that do not share the object are mostly made up of one transitive verb and one transitive/intransitive verb. Since the latter may simply be read as intransitive, we may say that there is actually a strong tendency to share the direct object.

In conclusion, the shared object does not seem to be a restriction for the formation of VeV lexemes, but rather a mere tendency. On the contrary, the tendency to share the subject is much stronger. Data are given in Table 19 (based on the whole corpus).

Table 19 Shared subjects

Shared subject	%
+	74.25 %
±	25.75 %
-	0 %

V1 and V2 definitely tend to share the same subject: in the examples in (14), the person who buys and runs away is the same person, and the person who speaks and throws away is the same person. There are lexemes in which one can have a disjunct subject interpretation (as in (15), where a reading is possible in which there are two people performing the actions alternatively, or different people V1-ing and V2-ing at different times), but in those very cases it is also possible to have a shared subject interpretation. A disjunct subject interpretation only is never possible.

(14) Shared subject

- a. ... epoca del compra e fuggi ...
 ... age of the buy and run_away
 '... age of frenetic and superficial buying ...'
- b. ... cellulari parla e getta ...
 ... mobile_phones speak and throw_away
 'disposable mobile phones'

(15) Optionally shared subject

- a. ... continuo accendi e spegni continual switch_on and switch_off 'a continual switching on and switching off'
- b. ... poltroncine apri e chiudi ...
 - ... armchairs:DIM open and close

'back stalls that fold up'

In conclusion, the shared subject condition seems to be a strong restriction on the formation of VeV lexemes. In this respect, it will be useful to remember that the verbal bases forming the lexemes preferably have subjects with the semantic role of Agent (cf. section 2.2.3.2). Therefore, so far we can say that VeV lexemes are made up of two verbal bases which share an agentive subject.

2.3.4.2. Lexical categories of the output

The first feature we explore is the kind of lexical category of the output. VeV lexemes are either nouns or adjectives.

Some adjectival (Adj) VeV lexemes are presented in (16).

(16) Adjectives

a. leggi e getta
b. lava e indossa
lit. read and throw_away
'disposable (said of books)'
'wash and wear'

Nominal VeV lexemes belong to different subclasses. Action nouns (henceforth Naction) denote an event that is described by the (sequence of the) two input verbs (cf. (17)).

(17) Action nouns

a. dai e prendi
b. compra e fuggi
lit. give and take
'giving and taking'
'a frantic and quick buying'

Concrete nouns (henceforth Nconcrete) denote an inanimate entity that has some role in the event that is described by one or both of the input verbs: in most cases, the noun denotes a patient of the action described by both verbs (as in the examples in (18a-f)); in a few cases the noun denotes the patient of V1 where V2 is intransitive (18g) or intransitively used (18h); in a smaller number of cases (those in (19)), the noun denotes the instrument used to perform the actions described by both verbs or by V1 only; in a couple of cases the noun indicates the place where the action denoted by the two verbs takes place (as in (20)); three of these concrete nouns are proper names (a magazine (20a), a restaurant (20b), and a product (19d)):

(18) Concrete nouns (patient)

a.	consuma-e-getta	lit. consume and throw_away	'disposable item'
b.	leggi-e-getta	lit. read and throw_away	'worthless book'
c.	vedi e getta	lit. see and throw_away	'worthless movie'
d.	usa e getta	lit. use and throw_away	'disposable item'
e.	gratta e sniffa	lit. scratch and sniff	'scratch and sniff card/sticker'
f.	mangia e bevi	lit. eat and drink	'a sort of sundae'
g.	gratta e sosta	lit. scratch and park	'scratch and park ticket'
h.	gratta e vinci	lit. scratch and win	'instant scratch lottery ticket'

(19) **Concrete nouns** (instrument)

a. copri e scopri	lit. cover and uncover	'convertible truck roof'
b. radi e getta	lit. shave and throw_away	'disposable razor'
c. parla e getta	lit. talk and throw_away	'disposable mobile phone'
d. stira e ammira®	lit. iron and admire	'name of an ironing starch
marketed by		_
·		Inhana,

Johnson⁵

(20) **Concrete nouns** (place)

a. cerca-trova – lit. look_for-find – as name of a magazine that publishes only classified ads

b. mordi e fuggi – lit. bite and run_away – as name of a fast-food restaurant

Finally, names of games (henceforth Ngame) are a kind of action nouns; they may be also ascribed to proper names, like some of the concrete nouns mentioned above. In half of these nouns V1 and V2 describe actions to be performed in playing the game (e.g., (21a)), in the other half V1 describes an action to be performed to play and V2 describes the outcome (e.g., (21b)).

(21) Names of games

the	a.	mangia e passa	lit. eat and pass	'Double Bughouse (a variant of
uic	b.	gratta e vinci	lit. scratch and win	game of chess)' 'instant scratch lottery'

Out of the 66 types, 32 (48.5%) display only one output category, with the following distribution:

action nouns = 16 (accendi e spegni, appila e spila, compra e fuggi, compra-e-vendi, cuci e scuci, dai e prendi, fotti e chiagni, lascia-e-piglia, metti e togli, parla e fuggi, piglia e lascia, porta il riso in cascina e piangi miseria²⁰, prega e segui, tocca e corri, tura e stura, va e vieni);

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²⁰ In our corpus, *porta il riso in cascina e piangi miseria* is the gloss of *fotti e chiagni*; therefore, the former has been categorized like the latter, i.e., as an action noun.

- concrete nouns = $1 (consuma-e-getta)^{21}$;
- names of games = 4 (gioca & stravinci, gratta e stravinci, mangia e passa, tira e vinci);
- adjectives = 11 (apri-e-gusta, attacca e stacca, compra e scappa, gratta e spara, guarda e compra, lava e indossa, metti e butta, prevedi e previeni, sbatti-e-butta, scarta e inghiotti, scatta (nel senso di foto) e torna a casa).

The remaining 34 types present more than one category. The combinations found are the following:

- adjectives/action nouns = 15 (apri e chiudi, bacia e racconta, copia e incolla, corri e tira, guarda e impara, prega e fuggi, prendi e fuggi, prendi e getta, scappa e fuggi, taglia e cuci, taglia e incolla, tassa e spendi, tocca e fuggi, togli e metti, vedi e fuggi);
- adjectives/concrete nouns = 6 (gratta e sniffa, leggi-e-getta, parla e getta, radi e getta, stira e ammira, vedi e getta);
- adjectives/concrete nouns/action nouns = 6 (copri e scopri, gratta e sosta, mangia e bevi, mordi e fuggi, sali e scendi, usa e getta);
- adjective/action nouns/names of games = 4 (prendi e lascia, prendi e scappa, tira e molla, tocca e scappa);
- concrete nouns/action nouns = 1 (cerca e trova);
- adjective/names of games = 1 (gratta e perdi);
- adjectives/concrete nouns/action nouns/names of games = 1 (gratta e vinci).

If we split the total number of types (66) per category, we obtain 112 types. Table 20 shows the percentages of the represented categories with respect to this figure, whereas Table 21 refers to the tokens. The picture is quite similar: the most represented categories are adjectives and action nouns.

Table 20 Lexical categories represented in VeV lexemes (types)

Categories		(n) %		
adjectives		(44) 39.3%		
	action	(68) 60,7%	(43) 38.4%	
nouns	concrete		(15) 13.4%	
	game		(10) 8.9%	

Table 21 Lexical categories represented in VeV lexemes (tokens in *laR*)

Categories		(n) %		
adjectiv	/es	(584) 32.8%		
	action		(997)	56.0%
nouns	concrete	(1197) 67.2%	(54)	3.0%
	game		(146)	8.2%

2.3.4.3. Semantic relationship between the members

In this section we explore the semantic relationship between V1 and V2. From our analysis, it turns out that V1 and V2 entertain two types of semantic relationships, namely:

lexico-semantic relationships *strictu sensu* (cf. Cruse 1986, Ježek 2005), i.e., V1 and V2 may be <u>opposites</u> (**OPP**) (of the kind called "reversive" by Cruse 1986: 226) (e.g., (22a)), <u>synonyms</u> (**SYN**) (e.g., (22b)), <u>co-hyponyms</u> (**CO-HYPO**) (e.g., (22c)), or, finally, have an intrinsic cause-effect relation (**CONSEQ**) (e.g., (22d));

²¹ In the only context in which it occurs ([...] *in epoca di* consuma-e-getta *e di film in tv ridotti a panini imbottiti di pubblicità* [...] 'in an age of consume-and-throw away and of TV movies turned into sandwiches filled with commercials'), this lexeme denotes a concrete noun referring to commercial products.

(22) a. apri e chiudi lit. open and close

b. scappa e fuggi lit. run_away and run_away

c. mangia e bevi lit. eat and drink

d. cerca e trova (lavoro) lit. look_for and find (job)

• **frame-like** relationships: in this case the two verbs share the same frame (in the Fillmorean sense), and often define it. For instance, in example (23a), *grattare* 'scratch' and *sostare* 'park' are not linked by a particular lexico-semantic relationship, but are linked at an encyclopedic level since they form a well-defined complex event which is part of the shared knowledge of a community, i.e., the act of buying and scratching a special ticket so as to be authorized to park a car for a particular length of time. The same holds for (23b), where unwrapping and swallowing are two sequential events that belong to the frame of EATING or FOOD: some foods are packaged, so in order to eat them one needs to unwrap the packaging first.

(23) a. gratta e sosta lit. scratch and park 'scratch and park ticket'
 b. scarta e inghiotti lit. unwrap and swallow 'easy to unpack (snack)'

In this last group we have a number of subtypes:

- <u>sequential</u> (**SEQ**): this group contains a V1 and a V2 that simply refer to events that occur one after the other, like (23) above.
- <u>aspectual</u> (**ASP**): this group displays two specific verbal bases as V2, namely *getta* and *butta* (both meaning 'throw (away)'); rather than identifying a proper second phase of the complex event denoted by the whole lexeme, these verbal bases have more the effect of modifying the V1 event; more precisely, they convey an aspectual meaning of "semelfactivity" of the V1 event, which therefore cannot be reiterated (for instance *leggi e getta* in (24) denotes an editorial product which can be read or is worth reading only once); these lexemes refer to different kinds of disposable (hence, often, low-quality, low-price) commercial products;
- (24) *leggi e getta* lit. read and throw away 'low-quality, low-price editorial product'
 - manner (MAN): quite similarly, this group also presents two specific verbal bases as V2 fuggi and scappa (both meaning 'run away') that have the function of modifying the manner in which the V1 action is accomplished: in this case, V2 conveys an adverb-like meaning of "in a hurry" and "superficially" (see for example mordi e fuggi in (25), which, used as an adjective, often refers to a kind of frantic and superficial tourism);
- (25) mordi e fuggi lit. bite and run_away '(too) quick and hasty'

Table 22 shows the number of types and tokens per semantic relationship.

Table 22 Semantic relationships between V1 and V2

semantic relationships		abbreviations	number of types	number of tokens (laR)
lexico-semantic	lexico-semantic opposites		18	755
	cause-effect	CONSEQ	8	201
	cohyponyms	CO-HYPO	1	1
	synonyms	SYN	1	7

frame-like	sequential	SEQ	18	55
	manner	MAN	11	282
	aspectual	ASP	9	480

As can be easily seen, there are five main categories (opposites, cause-effect, sequential, manner and aspectual), whereas synonyms and cohyponyms are isolated exceptions, both in terms of types and tokens.

If we compare the semantic groups just outlined and the type of verbal classes (of various kinds) involved in each group, we note that there is a tendency towards dishomogeneity. However, there are some regularities, since the verbs in V2 position of the ASP and MAN classes obviously display the very same features: in the ASP class, V2 all belong to the semantic class "Throwing" (labelled as 17), to the syntactic class "transitive" and to the Aktionsart class "Achievement"; in the MAN class, V2 all belong to the semantic class "Motion" (labelled as 51), to the syntactic class "intransitive" (and more precisely "unaccusative") and to the Aktionsart class "Achievement" (cf. also section 2.2.3.3).

As for lexical categories, as shown in Table 23, almost all semantic classes are in line with the figures presented above for the whole corpus (cf. Table 20), i.e., in almost all classes there is a majority of adjectives and action nouns.

semantic classes		lexical categories (types per category, total 112)			
		Adj	Naction	Nconcrete	Ngame
opposites	(OPP)	8	17	2	2
cause-effect	(CONSEQ)	4	3	2	5
cohyponyms	(CO-HYPO)	1	1	1	-
synonyms	(SYN)	1	1	-	-
sequential	(SEQ)	13	10	3	1
manner	(MAN)	9	9	1	2
aspectual	(ASP)	8	2	6	-

Table 23 Semantic relationships and lexical categories

No exclusive relationship is found between semantic classes and lexical categories. All semantic classes display more than one lexical category and most display all of them. However, there are some interesting correlations that are worth mentioning, namely:

- most names of games are found in the CONSEQ group; the latter also displays another peculiar feature: it is the only class in which the semantic roles of the subjects of V1 and V2 do not coincide. As mentioned in section 2.2.3.2, there is a strong tendency towards the Agent role, but in V2 position one may also find verbs whose subjects have the role of Patient. These verbs appear to gather in the CONSEQ class, which contains in V2 position verbs such as *vinci* 'win' or *perdi* 'lose';
- the ASP group contains a rather high number of concrete nouns; this is due to a nominalization process that has the adjectives of the same group as a base: for instance, usa e getta used as an adjective (as in un rasoio usa e getta 'a disposable razor') is then nominalized by dropping the nominal head: un usa e getta 'a disposable [razor]' (cf. Thornton 2004 for an analysis of this nominalization process in Italian).

3. Summing up: input and output

In the preceding sections we have analyzed the phonological, morphological, syntactic and semantic properties of VeV lexemes and of their input verbs.

The results of our investigation are summarized in the following tables. As can be seen, VeV lexemes display certain tendencies and a number of rather strong restrictions. Besides, they can be classified in a number of well identified semantic classes. In the following section we will analyze in more detail how these classes have arisen by means of a corpus-based investigation.

Table 24 Input: constraints and tendencies in VeV lexeme formation

level	constraints		
phonology	the input verbs should be disyllabic (cf. section 2.2.1, Tables 1 and 2)		
morphology	the distribution of inflectional classes of the input verbs corresponds to that found in		
	token frequency in speech and writing, not to that found in type frequency in the		
	lexicon (cf. section 2.2.2.1, Tables 4 and 5)		
	verbs taking the <i>-isc-</i> suffix are banned (cf. section 2.2.2.1)		
	the input verbs may be prefixed but not suffixed (cf. section 2.2.2.2)		
syntax and	zero-argument and pronominal verbs are banned from VeV lexemes; there is a high		
semantics	tendency to have intransitive/transitive or transitive verbs in V1 position (cf. section		
	2.2.3.1, Table 7)		
	the input verbs tend to have subjects with the semantic role of Agent (cf. section		
	2.2.3.2, Tables 8 and 9)		
stative verbs are banned (cf. section 2.2.3.3, Table 11)			
	the input verbs mostly denote change , causation and motion (analysis based on		
	Levin's 1993 classes) (cf. section 2.2.3.4)		

Table 25 Output: constraints and tendencies in VeV lexeme formation

level	constraints
phonology	V1 and V2 tend to have maximally different stressed vowels (cf. section 2.3.1.1, Table
	12, Figures 1 and 2)
	V1 and V2 tend to have equal stressed syllables of equal weight (cf. section 2.3.1.2,
	Table 13)
	V1 and V2 tend to display syllable length harmony ; if not, they tend to comply with
	Behagel's Gesetz der wachsenden Glieder ('law of increasing members') (cf. section
	2.3.1.2, Table 14)
	V1 and V2 form distinct phonological words (cf. section 2.3.1.4)
morphology	VeV lexemes are invariable (cf. section 2.3.3.1)
	the verbal bases are homophonous to the imperative (cf. section 2.3.3.2, Table 17)
syntax and	V1 and V2 share the subject (cf. section 2.3.4.1, Table 19)
semantics	the output lexical categories are noun and/or adjective (cf. section 2.3.4.2, Tables 20
	and 21)
	V1 and V2 are linked by a lexico-semantic relationship or share the same frame (cf.
	Tables 22 and 23)

4. VeV lexemes in use

In order to reach a better understanding of the role of the VeV semantic classes identified above, and of how the different semantic classes have arisen, we carried out a corpus-based quantitative and qualitative analysis of all VeV lexemes in our corpus.

As for the quantitative analysis, the results based on the *la Repubblica* corpus give us insight into the matter. The distribution of the tokens per each type is indeed quite telling. As Table 26 shows, for almost all proper semantic classes (i.e., opposites, cause-effect, manner and aspectual), there is a "leader" in terms of tokens, the type that emerges due to its remarkably higher number of tokens with respect to the other items in the same group. The only exception to this generalization is the sequential class.

Table 26 Types, tokens, leaders and hapaxes for each semantic class

semantic classes		number of types	number of tokens (laR)	leader of the group	% of leaders (tokens)	number of hapaxes (laR)
opposites	OPP	18	755	tira e molla (589 tokens) va e vieni (97 tokens)	78.00% 12.80% (90.8%)	7

cause-effect	CONSEQ	8	201	gratta e vinci (194 tokens)	96.50%	1
cohyponyms	CO-	1 (mangia e bevi)	1	-		1
	HYPO					
synonyms	SYN	1 (scappa e	7	-		=
		fuggi)				
sequentials	SEQ	18	55	-		6
manner	MAN	11	282	mordi e fuggi (261 tokens)	92.60%	7
aspectual	ASP	9	480	usa e getta (462 tokens)	96.25%	3

In what follows, we set forth the results of our qualitative analysis of the occurrences of VeV lexemes in the *la Repubblica* corpus. These results show that each of the leader lexemes is used in one or a few specific frames, and that new lexemes are formed that fit into the same frame and differ only slightly from the leader.

4.1. Manner (MAN) class: mordi e fuggi

The Manner class is led by the VeV mordi e fuggi:

(26) *mordi e fuggi* lit. bite and run_away

Adj = '(too) quick, hasty'

Naction = 'quick operation' [in some specific domain]

Of a total of 261 tokens of *mordi e fuggi* in the *laR* corpus, over 30% are adjectives. We have checked what kinds of nouns *mordi e fuggi* as an adjective modifies. The overwhelming majority of these nouns belong to the frame of TOURISM. The highest token-frequency is found with *turismo* 'tourism' (13 tokens):

- (27) turismo 'tourism' modified by mordi e fuggi (13 tokens)
 - a. nella stragrande maggioranza dei casi, si tratta di un turismo mordi e fuggi che riempie le spiagge e lascia deserte le altre strutture.
 - 'in the great majority of cases, it is a bite-and-run-away tourism, which fills the beaches but leaves other places empty'
 - b. Agrigento, le cui aspettative sono concentrate su un turismo meno "mordi e fuggi" 'Agrigento, whose hopes focus on a less "bite and run away" tourism'
 - c. il turismo d'affari e quello mordi e fuggi 'business tourism and the "bite and run away" one'
 - d. le nostre battaglie sono [...] per un turismo dolce stanziale e non "mordi e fuggi" 'we fight for a nice stationary tourism, not a "bite and run away" one'

Besides *turismo*, as many as 14 other nouns referring to travelling for pleasure occur modified by *mordi e fuggi*, for a total of 31 tokens; they are listed in (28):

(28) Action nouns belonging to the frame TOURISM modified by *mordi e fuggi* (14 types, 31 tokens)

arrembaggi turistici 'touristic boarding', assalto __22 ai centri storici '__ assault on historic centres', crociere 'cruises', ferie 'vacation', gita 'day trip', incursioni 'incursions', rapidi blitz 'quick blitzes', ritiri (spirituali) (2)23 '(spiritual) retreats', soggiorno in fattoria 'stay in a farm', trasferta 'trip', rendez-vouz [sic] 'rendez-vous', vacanza (2) 'vacation', viaggi (2) 'trips', visita (2) 'visit'

There is also a minority of nouns referring not to the activity, but to the agents who undertake quick pleasure trips (29):

²³ The figure between round brackets indicates the number of tokens.

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²² The underscore marks the position of the VeV lexeme in the string.

(29) Agent nouns belonging to the frame TOURISM modified by *mordi e fuggi* (4 types, 9 tokens)

turista (2) / turisti 3 'tourist(s)', visitatore / visitatori 'visitor(s)', vacanzieri 'vacationers', tedeschi 'Germans' 24

Altogether, the TOURISM frame hosts about 50% of the adjectival tokens of mordi e fuggi.

No other frame is as richly represented as the TOURISM frame among nouns modified by *mordi e fuggi*. Other small clusters, sometimes attaining frame-like coherence, hardly ever surpass a 10% of the tokens. They are listed in (30):

- (30) Frames within which mordi e fuggi occurs as an Adjective
 - a. ECONOMY (10 tokens)
 venditore 'seller', acquisto 'buying', investimento 'investment', operazione di Borsa
 (2) 'stock exchange operation', spesa 'shopping', spedizioni industriali (2) 'industrial shipping', fabbriche 'factories', imprese 'enterprises'
 - b. GENERIC ACTIONS AND STATES (8 tokens)

 iniziative 'initiative', operazione (2) 'operation', attività 'activity', atteggiamento
 'attitude', stile (3) 'style'
 - c. MISCELLANEOUS ACTIVITIES (7 tokens)

 sesso (2) 'sex', ciclismo 'bicycle racing', neodiplomazia 'neo-diplomacy', passioni kennediane 'kennedian passions', agricoltura 'agriculture', ascolto 'listening'
 - d. MEDIA, COMMUNICATION, JOURNALISM (8 tokens)

 opinionista 'columnist', minirecensioni 'mini-reviews', interviste 'interviews',

 dichiarazione 'statement', battute 'utterances', quotidiano ___ Usa today 'daily

 newspaper USA Today', giornalismo 'journalism', televisione 'television'
 - e. KIDNAPPINGS, CRIME (5 tokens) rapimento 'kidnapping', rapimenti 'kidnappings', sequestri 'kidnappings', crimine 'crime', attacchi 'attacks'
 - f. OTHER AGENTS (4 tokens) politicante 'politician', assessori 'councilmen', voi 'you (PL)', raider 'raider'

Some of the same frames host *mordi e fuggi* used as an Action noun, as can be seen in (31). To make the data more easily comparable, we have analyzed as many tokens of *mordi e fuggi* used as a noun as of *mordi e fuggi* used as an adjective (covering over 50% of the noun tokens).

(31) Frames within which mordi e fuggi occurs as an Action noun

(based on the analysis of 50% of the noun tokens)

ECONOMY 38 tokens
GUERRILLA 9 tokens
SPORTS 8 tokens
ENTERTAINMENT 8 tokens
FAST FOOD 8 tokens
TOURISM 7 tokens

Only a handful of tokens refer to generic actions or belong to other frames (for example, only one token belongs to the KIDNAPPINGS frame).

In these frames, *mordi e fuggi* as an action noun refers to some action which is characterized by quickness and is defined within the frame: rapid buying and selling in ECONOMY, quick

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²⁴ For non-Italians it is maybe necessary to explain that Germans are the prototypical tourists in Italian culture, or at least they have been for a long time. A search in the *laR* corpus for the phrases corresponding to 'German tourist' (in all possible gender and number combinations) yields 381 tokens, whereas 'American tourist' occurs only 293 times, and 'Japanese tourist' a mere 167 times (not to speak of Greek tourists, mentioned only 12 times in 15 years of *la Repubblica*!).

actions in SPORTS and GUERRILLA, quick production of movies or concerts in ENTERTAINMENT, quick meals in FAST FOOD, quick visits in TOURISM. In some of these frames, quickness is not viewed as a negative feature, but rather as a positive one.

The TOURISM frame has generated other VeV lexemes used as adjectives: in the *laR* corpus we find a number of hapaxes connected to this frame, shown in (32).

- (32) Other adjectival VeV lexemes (hapaxes) that modify nouns belonging to the TOURISM frame
 - a. turista compra e scappa 'buy and run_away tourist'
 - b. visitatori prendi e scappa 'take and run_away visitors'
- c. turista scatta (nel senso di foto) e torna a casa 'take a snapshot and go_back home tourist'
 - d. paesaggio tocca e scappa 'touch and run_away landscape'
 - e. turismo vedi e fuggi (3 tokens) 'see and run_away tourism'

In most of these lexemes, the actions referred to by V1 are not metaphorical, as in <u>mordi</u> e fuggi lit. <u>bite</u> and run_away; rather, V1s are descriptive, sometimes almost excessively so (as in the case of (32c) <u>scatta (nel senso di foto)</u> e torna a casa); clearly, their (nonce-)formation is guided by the TOURISM frame.

Another frame that has given rise to a few additional formations is that of MEDIA, COMMUNICATION, JOURNALISM, in which we find a few lexemes referring to situations in which there is a component of quickness (33):

- (33) The MEDIA, COMMUNICATION, JOURNALISM frame
- a. *libri kiss and tell*, *alla lettera bacia e racconta 'kiss and tell*, literally kiss and tell, books'
 - b. libri istantanei, prendi-e-getta 'instant, take-and-throw_away, books'
 - c. cartoni guarda-e-compra 'look-and-buy cartoons'

While example (33a) shows that some of the VeV lexemes have been formed as calques of pre-existing English expressions, (33b) is particularly interesting because it shows that sometimes a VeV lexeme is formed even when it is somehow redundant: in this context there was already another adjective (*istantaneo* 'instant') that expressed the idea of quickness and was used to calque the English phrase *instant book*; *prendi-e-getta* adds a nuance. This lexeme brings us to another semantic class of VeV lexemes, the Aspectual class, that we will now describe.

4.2. Aspectual (ASP) class: usa e getta

The leader of the Aspectual class is usa e getta:

(34) usa e getta lit. use and throw_away

Adj = 'disposable'

Naction = 'a way of life characterized by wasting environmental resources'

There are 462 tokens of *usa e getta* (403 tokens spelled *usa e getta* and 59 tokens spelled *usa-e-getta*) in *laR*. Of these, more than 80% are adjectives. The analysis of the contexts in which *usa e getta* appears has been conducted on 100 tokens (all the 59 hyphenated tokens, and the first 41 non-hyphenated tokens). The distribution of nouns and adjectives in this sample matches the overall distribution of lexical categories in the full set of data.

As an adjective, *usa e getta* is mostly used to modify nouns that refer to disposable products, as the data in (35) show:

- (35) Nouns denoting products modified by *usa e getta* (from a 100-token sample)
 - a. Generic, superordinate nouns (12 tokens)

- articoli / articolo 'item(s)', confezioni 'package', materiali (2) 'supplies', oggetti in plastica 'plastic objects', prodotti (2) 'products', strumenti 'tools', qualcosa 'something', pacchetto [di lenzuola e federe] (2) 'package [containing bed linen]'
- b. Specific, basic level nouns (29 tokens)

 abiti di carta 'paper clothes', accendini (2) 'lighters', aghi (2) 'needles', assemblages

 e collages __ di ritagli '__ assemblages and collages of paper clippings', bazooka del

 tipo __ 'bazooka of the __ kind', biancheria 'linen', bicchiere di plastica 'plastic

 cup', bicchieri 'cups', bicchieri di carta 'paper cups', bottiglia | bottiglie 'bottle(s)',

 bottigliette in vetro 'glass bottles:DIM', cronometro 'chronometer', federe di carta

 'paper pillow-cases', kodak 'Kodak camera', lamette 'blades:DIM', lenti a contatto

 'contact lenses', giocattoli 'toys', missili 'missiles', pannolini 'diapers', penne a

 sfera e rasoi 'ball-point pens and razors', penna biro 'ball-point pen', portatile

 'notebook (computer)', rasoi 'razors', stadio 'stadium', vestiti di piume 'feather

 clothes', volumi 'volumes'

The second strongest cluster of nouns modified by *usa e getta* can be analyzed as belonging to a frame that we have called MEDIA AND ENTERTAINMENT (36):

- (36) Nouns modified by *usa e getta* belonging to the MEDIA AND ENTERTAINMENT frame (13 tokens)
 - a. successi __ per teenager 'hits for teenagers', canzonette 'songs: DIM', musichetta (2) 'music: DIM', scenografie 'stage sets', tv 'tv', raccontini rosa 'chick-lit: DIM', film 'movie', pellicolette 'films: DIM', teatro 'theatre', programmazione spesso __ 'often tv programs'
 - b. *la trasmissione del sabato sera*, *definita [da Intini] "un non programma usa e getta"* 'the Saturday night show, defined [by Intini] "a use and throw_away non-show"
 - c. tutto quello che lo stesso pubblico [...] aveva considerato come "usa e getta" 'everything that the same audience [...] had considered as "use and throw_away"

A few more nouns are connected to communication (particularly verbal communication), and could easily belong to the MEDIA, COMMUNICATION, JOURNALISM frame that was quite strong with *mordi e fuggi* (37):

(37) MEDIA, COMMUNICATION, JOURNALISM paroletta 'word:DIM', slogan 'slogan', battuta 'utterance', giornalismo 'journalism'

In the same frames, usa e getta also occurs twice as a Concrete noun, as in (38):

- (38) a. non so ancora se un Vocabolario sia un effimero usa-e-getta come un giornale 'I do not know yet whether a dictionary is an ephemeral use-and-throw_away like a newspaper'
 - b. *il teatro* [...] *non è un usa e getta* 'theatre [...] is not a use and throw_away'

A few nouns refer to people (39a), or groups of people (39b), and another small group of nouns modified by *usa e getta* is constituted of action nouns (39c):

- (39) a. amante (2) 'lover', uomini 'men', sindaco debole, __ 'weak, __ mayor', leader 'leader', bambino 'kid'
 - b. *sindacati kleenex*, __ 'kleenex-like, __ unions', *pendolariato stile* __ 'commuters in the __ style'
 - c. tradimento __ che dura un giorno solo '__ betrayal, that lasts only one day', candidatura 'candidature', risata 'laugh', arrampicata 'climbing', arrampicate 'climbings', utilizzazione __ degli shoppers '__usage of shopping bags''

An example of convergence between the Aspectual and the Manner classes is found in the quotation in (40), from our corpus:

(40) Lui è il turista fast food, il turista usa e getta, il turista compra e scappa, il turista scatta (nel senso di foto) e torna a casa.

'He is the fast food tourist, the use-and-throw_away tourist, the buy-and-run_away tourist, the take-a-snapshot-and-come back-home tourist.'

In fact, the two classes have a common semantic flavour: both are used to qualify objects and actions that, for one reason or another, are not prototypical instances of their kind. Activities performed in a *mordi e fuggi* way, or agents that act in a *mordi e fuggi* way, are considered, by the speakers who use this adjective to qualify them, too quick: the activities are not performed in the correct, standard, typical way. Similarly, *usa e getta* objects are not the typical, permanent, long-lasting objects; they are not worth keeping. There is often a connotation of lesser value and lesser quality connected to the referents of the nouns that are modified by *usa e getta*; this is particularly clear with the nouns that belong to the MEDIA AND ENTERTAINMENT frame, that often appear in a diminutive form²⁵ (cf. (36a)).

This negative connotation stays with *usa e getta* even in those relatively few cases in which this lexeme is used as an action noun, listed in (41). As an action noun, *usa e getta* refers to a philosophy, an approach to life, and occurs mostly in contexts where the author criticizes it (41a). *Usa e getta* refers mostly to the production of disposable products, criticized because it causes damage to the environment, but is sometimes used metaphorically also to refer to an approach to human relations and life in general, as in (41b).

(41) Usa e getta as action noun

- a. civiltà dell'usa e getta 'use and throw_away civilization', società dell'usa e getta 'use and throw_away society', mentalità dell'usa e getta 'use and throw_away mentality', ideologia dell'usa e getta 'use and throw_away ideology', all'insegna dell'usa e getta 'under the banner of the use and throw_away', società fondata sull'usa e getta 'society based on use and throw_away', il fascino effimero dell'usa e getta 'the ephemeral charm of the use and throw_away', L'usa e getta 'the use and throw_away', l'usa e getta frenetico 'the frantic use and throw_away'
- b. *l'usa e getta delle idee e delle ideologie* 'the using-and-throwing away of ideas and ideologies'

Starting from *usa e getta*, a few more lexemes have developed, containing the verbs *getta* or *butta* 'throw_away' as V2. They are listed in (42) with the nouns they modify:

(42) a. *libri / romanzoni /lavoro culturale leggi e getta* 'books / novels:AUG / cultural work read-and-throw away'

b. lenzuola metti e buttac. telefonino parla e getta'put (to use) and throw_away sheets''speak-and-throw_away cell phone'

d. *i libri istantanei prendi e getta* 'instant take-and-throw away books'

e. rasoio / rasoi radi e getta 'shave and throw away razor / razors'

f. [film] vedi e getta 'see and throw_away [movies]'

These new formations appear to be driven by the "collocation" the modified noun entertains with a particular verb: books are read, movies are seen, cell phones are used to speak, razors to shave, and so on.

Starting from the element of quickness contained in *mordi e fuggi*, and probably helped by the negative connotation of haste of the *usa e getta* type, some lexemes have been created that sometimes contain neither *fuggi / scappa* nor *getta / butta* as V2, but share the general negative

²⁵ Lesser importance or value is one of the possible connotations of diminutives (cf. Dressler & Merlini Barbaresi 1994: 121).

connotation and refer to undesirable or objectionable quickness (in the mind of the speaker); most of these adjectives occur in context having to do with quick sex, as shown in (43a-d):

(43)	a.	camiciole apri-e-gusta	'open-and-enjoy shirts:DIM'
	b.	una signora sbatti-e-butta	'a fuck-and-throw_away lady'
	c.	scopate prendi e fuggi	'take-and-run_away fucks'
	d.	l'idea del sesso è prendi e getta	'the idea of sex is take-and-throw_away'
e. una componente tocca e fuggi 'a touch-and-run_aw		'a touch-and-run_away component'	
	f.	una chiesa quasi prega e fuggi	'an almost pray-and-run_away church'

The lexemes in (33a-b) above (*libri kiss and tell*, *alla lettera bacia e racconta*, and *libri istantanei*, *prendi-e-getta*) also belong to this group.

In a few cases (44), quickness has a positive, or at least non-negative, connotation (that could be linked to the practicality also connected with disposable objects, qualified by *usa e getta*):

(44) a. poliestere lava e indossab. merendine scarta e inghiotti'wash and wear polyester''unwrap and swallow snacks'

This group of lexemes which carry a positive connotation is preceded by a use of *apri e gusta* that is not found in our *laR* corpus, but is well known to most middle-aged Italians: *apri e gusta* was a slogan first used in 1971²⁶ (perhaps as a sequence of two real imperatives) in tv commercials for Manzotin canned beef (45):

(45) *Manzotin: apri e gusta* 'Manzotin²⁷: open and enjoy'

In our corpus, *apri e gusta* refers to sexy shirts, easy to unbutton, and therefore has entered the QUICK SEX frame. *Scarta e inghiotti*, instead, is a true descendant of *apri e gusta*, developed in the frame of ready-to-eat food. *Lava e indossa* is a calque of English *wash and wear*: it is noticeable that no attempt to replicate the alliterative make-up of the English model has been made in the calque.

4.3. Cause-effect (CONSEQ) class: gratta e vinci

The leader of the cause-effect class is gratta e vinci:

(46) gratta e vinci lit. scratch and win
Ngame = 'instant scratch lottery'
Nconcrete = 'instant scratch lottery ticket'
Adj = 'scratch-and-win-like' or 'to be scratched'

There are 190 tokens of *gratta e vinci* in *laR* corpus. Over 70% of them are used as the name of a specific lottery existing in Italy, or of any kind of instant lottery.

As a concrete noun, *gratta e vinci* refers to instant lottery tickets; only once, in a satirical article, does it refer to a slip of paper of a different kind (a garlic-flavoured slip of paper replacing the hamburger in a McDonald's sandwich, to save money).

As an adjective, again *gratta e vinci* occurs mostly to modify nouns that refer to an instant lottery or its tickets (47a), although in a few cases (47b) it spreads to other referents:

(47) Nouns modified by gratta e vinci used as an adjective

²⁶ The date of first usage of the *apri e gusta* slogan was obtained from the *Manzotin Consumers Service* (e-mail to Anna M. Thornton of October 26, 2007).

²⁷ The etymology of Manzotin as given on the company's official website (<u>www.manzotin.com</u>) is the following: *manzo* 'beef' + *tin* 'tin can'.

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- a. *lotteria* (9) 'lottery', *lotterie* (6) 'lotteries', *biglietti* (3) 'tickets', *lotterie e concorsi* 'lotteries and competitions with prizes'
- b. schede magnetiche tipo __ 'magnetic cards of the __ type', pellicola 'film', concorsone 'state_exam:AUG', la nostra società 'our society''

Clearly, the main frame for this class is the INSTANT LOTTERY frame. Some other lexemes are formed on the model of *gratta e vinci* by exploiting syntagmatic or paradigmatic relations with one or both of its constituents, and always refer to instant lotteries or some other game (48):

(48)	gratta e vinci	'scratch and win'	
	gratta e perdi	'scratch and lose'	(antonym of vinci)
	gratta e stravinci	'scratch and over-win'	(derived from vinci with an intensifying
			prefix)
	gioca e vinci	'play and win'	(superordinate term in the frame of games)
	tira e vinci	'kick and win'	(co-hyponym of gratta, specifying the
			action to be performed to play)

However, a few adjectival tokens show that it is spreading to other frames, having to do more with the organization of society. In one instance *gratta e vinci* modifies the noun *concorsone* 'state_exam:AUG (a public selection to obtain a job)', and a *concorsone gratta e vinci* is a selection in which the outcome is considered, in the view of the speaker, to depend on sheer luck, and not on the candidates' qualifications. In one instance, *gratta e vinci* modifies 'our society', to express the view that luck counts more than qualification in Italian society overall.

Three other lexemes belonging to this class do not seem to have developed on the model of *gratta e vinci*. They are more closely connected to proverbs, and in general to gnomic sayings (49).

(49) a. cerca e trova
 'look for and find'
 b. guarda e impara
 'look and learn'
 c. prevedi e previeni
 'foresee and forestall'
 Proverb: Chi cerca trova
 'Seek and you will find'
 Proverb: Sbagliando s'impara
 'You learn from your mistakes'

In his paper on the stylistic usages of imperatives, Spitzer has shown that one possible usage, which he calls "impératif gérondial", is in sayings that are closely related to proverbs, in that they depict a situation with a repetition of the same imperative twice, and then conjoin this sequence of imperatives, by means of the conjunction corresponding to *and*, to a verb form that depicts the "necessary consequence" of the first action. Spitzer maintains that the conjunction is used to express "la conséquence nécessaire" of the actions named in the first half of the construction. Spitzer observes that this "*et* de la conséquence nécessaire" is found in proverbs and in gerundial imperatives. He illustrates this with the Catalan expression *cerca que cerca*, *y a la fí el trobarem* 'look and look, *and* at the end we'll find it' (Spitzer 1951: 457, n. 1). It is possible that some of our lexemes belonging to the CONSEQ class have been formed by association with "impératifs gérondials" rather than with descriptive imperatives, as is the case in most of our data.

4.4. Sequentials (SEQ) class

A few lexemes with *gratta* as V1 occur also in the SEQ semantic class: the best attested is *gratta e sosta*, which refers to a system of paying parking fees by buying and scratching prepaid vouchers, and is also used as a concrete noun to refer to the vouchers themselves. The SEQ class does not seem to have a leader lexeme; most of its members have already been explained in connection with frames developing from the leader lexemes of the ASP and MAN classes; a

small cluster of nouns in the SEQ class refers to games or specific kinds of actions to be performed in certain games and sports (cf. (50)); the few remaining lexemes do not fit in any specific frame.

(50) GAMES, ACTIONS IN GAMES

corri e tira lit. run and shoot mangia e passa lit. eat and pass tocca e corri lit. touch and run

It must also be observed that a relatively high number of lexemes in the SEQ class is represented by calques from English, as shown in (51):

(51) Lexemes in the SEQ class that are calques from English

a. copia e incolla copy and paste < b. taglia e incolla < cut and paste c. lava e indossa < wash and wear d. bacia e racconta kiss and tell < e. corri e tira < run and shoot tax and spend f. tassa e spendi < g. gratta e sniffa < scratch and sniff

All in all, it seems that so far the SEQ class has not established itself firmly. Its existence may be an illusion on our part: this supposed class collects an almost random set of lexemes that are better understood as calques or as modelled on leaders of other, better established and semantically coherent classes.

4.5. Opposites (OPP) class: tira e molla, va e vieni

The leaders of the Opposites class are tira e molla and va e vieni:

(52) a. tira e molla lit. pull and let_go (attested since at least 1890)
b. va e vieni lit. go and come (attested since at least 1870)
'see-saw, playing fast and loose' (coming and going, to and fro')

This class contains some of the oldest lexemes of the VeV type: *va e vieni* is attested since at least 1870, *tira e molla* is attested since at least 1890, and *sali e scendi* in the variant without conjunction *saliscendi* is attested as an action noun since 1836, and as a concrete noun as early as 1400.

Almost all the lexemes in this class are primarily action nouns; some of them can also be used as adjectives or concrete nouns (but interestingly, the leader nouns seem to be impervious to becoming adjectives: *tira e molla* can be interpreted as an adjective in only 3 of its 572 tokens in *laR* corpus).

Semantically speaking, this class is close to other kinds of verb-based lexemes, such as those VV compounds that are action nouns and VV reduplicative compounds, which are also action nouns. The only formal difference between the VeV lexemes in this class and other VV action nouns resides in the presence *vs.* absence of the conjunction *e* 'and': but Zamboni (1986) has observed that several lexeme-types are attested in variants with and without the conjunction. Thus, within the OPP class the presence of the conjunction is not relevant to the semantics of the lexemes.

The VeV action nouns refer to complex events, consisting of two opposite actions that take place alternatively, performed by the same subject(s) or by different subjects.

Many of these nouns refer to a kind of stop-and-go in human relations, particularly in political negotiations, but also in love partnerships.

The nouns often occur in syntactic contexts that refer to the continual, lengthy, time-consuming alternation of opposite actions, as illustrated in (53):

- (53) a. un accendi e spegni continuo
 - 'a continual switch_on and switch_off'
 - b. *l'interminabile cuci e scuci di maggioranze interne alla DC* 'the unending sew and unsew of majority groups within Christian Democracy'
 - c. una notte di tira-e-molla
 - 'a whole night of pull and let_go'
 - d. *il tira-e-molla era <u>durato per quasi tutto l'autunno</u>* 'the pull and let go had lasted almost all autumn'
 - e. un <u>lungo</u> tira-e-molla (2)
 - 'a long pull and let_go'
 - f. <u>dopo otto ore / dopo un mese (2)/ dopo anni</u> (2) di tira-e-molla 'after eight hours / one month / years of pull and let_go'

Other adjectives that occur often with *tira e molla* are *estenuante* (19) 'exhausting' and *faticoso* (4) 'heavy', that refer to how unbearable the sequence of actions is.

No specific frame is evoked, even if the high token frequency of *tira e molla* and the high frequency of contexts referring to political negotiations within it result in a high frequency of contexts having to do with politics.

5. Discussion

5.1. The emergence of VeV semantic classes on an exemplar basis

In this final section we would like to discuss briefly some theoretical implications of our findings, starting from the semantic classification of VeV lexemes.

The detailed corpus-based analysis in section 4 shows that each VeV semantic class has emerged thanks to the high frequency of a single type. For instance, the Manner class has clearly emerged due to the very frequent occurrence of the leader *mordi e fuggi* lit. bite and run_away '(too) quick, quick operation' (both in the nominal and the adjectival use) within certains frames, above all the TOURISM frame. The general meaning of "quickness" and "superficiality" conveyed by *mordi e fuggi* also extends to other frames, such as for instance ECONOMY, ENTERTAINMENT, SPORTS, etcetera. At the same time, within both the TOURISM frame and other frames, a number of other VeV lexemes emerge that are semantically similar to *mordi e fuggi*: see for instance *tocca e scappa* (lit. touch and run_away) or *vedi e fuggi* (lit. see and run_away). These new formations retain the general semantic meaning of *mordi e fuggi*, but feature other input verbs (especially in V1 position) that are more specific to the situation depicted. A clear example can be found in the Aspectual class (whose leader is *usa e getta* lit. use and throw_away 'disposable'): in the expression *libri leggi e getta* (lit. books read and throw_away), the verb 'read' is clearly used by collocation with 'books'.

Whereas some of the classes appear to be bound to one or more specific frames and new formations seem to be the result of analogical processes strictly speaking (this is the case of the above-mentioned Manner and Aspectual classes), other classes, such as the Opposites class, have a wider scope. For instance, the hapax *accendi e spegni* (lit. switch on and switch off) obviously shares with the leaders (*tira e molla* lit. pull and let_go 'playing fast and loose'; *va e vieni* lit. go and come 'coming and going') the abstract meaning of 'doing X and doing the opposite of X repeatedly', but its specific semantics is independent of the specific semantics of the leaders.

The phenomena just described can be straightforwardly accounted for in a usage-based constructionist model of language such as that outlined, among others, by Bybee (2006) (cf. also Bybee & Eddington 2006, Goldberg 2006, and Tomasello 2003 for an acquisitional perspective).

Bybee (2006: 711) claims that "grammar is the cognitive organization of one's experience with language" and that "certain facets of linguistic experience, such as the frequency of use of particular instances of constructions, have an impact on representation". More important for our current purposes, Bybee (2006: 716) insists on the importance of token frequency and

"exemplar" representations²⁸: "new tokens of experience are not decoded and then discarded, but rather they impact memory representations. In particular, a token of linguistic experience that is identical to an existing exemplar is mapped onto that exemplar, strengthening it. Tokens that are similar but not identical [...] to existing exemplars are represented as exemplars themselves and are stored near similar exemplars to constitute clusters or categories. [...] Constructions emerge when phrases that bear some formal similarity as well as some semantic coherence are stored close to one another". Therefore, the clustering of exemplars plus a high level of repetition "can lead to the establishment of a new construction with its own categories" (2006: 719). Almost the same process is named "entrenchment" by Langacker (2000).

It is now clear that the emergence of VeV lexemes in Italian can be explained in terms of an "exemplar" effect: some expressions (i.e., the leaders of the semantic classes, which are themselves lexically specified constructions), due to their high frequency and to exemplar clustering, become entrenched and new more abstract or schematic constructions then arise (identified by the various semantic classes). The existence of these more abstract constructions accounts for the formation of new expressions that instantiate it.

5.2. Towards a family of constructions

Another issue we would like to discuss is whether there is ground to cluster together some of the semantic classes identified above, in order to draw some higher-level generalizations. In order to reach this goal, we have selected the following three criteria²⁹:

- **± fixed order** of the events denoted by V1 and V2;
- **± iterativity** of the two events:
- ± obligatorily shared subject for the two events.

By applying these criteria to our data, we are able to identify two main macro-classes of VeV lexemes, which are shown in Table 27. The two macro-classes cover 97% of the types in the corpus and leave out two types only, namely: *mangia e bevi* lit. eat and drink 'a sort of sundae' (the only item in the CO-HYPO class) and *scappa e fuggi* lit. run_away and run_away 'quick' (the only item in the SYN class). Both macro-types seem to be productive to some extent, since there are some hapaxes in each.

macro- class	fixed order	iterativity	shared subject	semantic types involved	n. of types	n. of tokens	n. of hapaxes
1	-	+	±	OPP	18	755	7
2	+	-	+	CONSEQ, MAN,	46	1025	17
				ASP, SEQ			

Table 27 The macro-classes of VeV lexemes

According to the data in Table 27, there is a first class (macro-class 1) that has the following characteristics: first, it denotes a complex event described by the sequence of two opposite events that may occur more than once, with no priority of one event over the other (so that we can have both sequences V1-V2 or V2-V1, e.g., prendi e lascia lit. catch and release, where the events of catching and releasing are not strictly ordered); second, the events referred to by the two verbs may be performed either by one and the same subject or by different subjects, i.e., there may be a disjunct subject interpretation (cf. example (15) in section 2.3.4.1). In this second case, the different subjects can be interpreted as one collective and generic subject. Of course, this is closely linked to the positive value of the iterativity feature (and, secondarily, to the negative value of the fixed order feature).

²⁸ As Bybee (2006: 716) states, exemplar theory was originally developed in psychological studies of categorization and was then applied, in linguistics, to phonetics.

²⁹ Note that all the criteria make reference to the events denoted by the input verbs, not to the linguistic realization of the verbs themselves. Therefore, "fixed order" does not refer to the order of the constituents, but to the conceptual representation of the event denoted by the whole lexeme.

The situation is different in macro-class 2 lexemes, which denote single complex events formed by two fixed phases – V1 and V2 – that are not iterated and have to be performed by one single subject. In general, V1 and V2 are not linked by a lexico-semantic relationship (apart from the CONSEQ class), but share the same frame. Some of the macro-class 2 lexemes, such as those belonging to the Aspectual and Manner classes, have developed a more abstract meaning (cf. section 2.3.4.3).

From what we have seen so far, the key feature here seems to be played by the "verbal number" category as described in Corbett (2000: 243-264): event/participant plurality is the feature that distinguishes the two macro-classes, and is also the feature that links the two macro-classes to VV reduplicative compounds. As mentioned at the beginning of the paper, according to Thornton (2007b) VV reduplicative compounds are a fairly productive construction that forms action nouns with a (compulsory) plural agent. Therefore, we can depict a *continuum* involving these three constructions like the one represented in Figure 6.

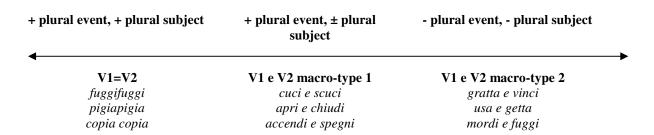


Figure 6 Productive Italian V-(e)-V lexical constructions

In conclusion, it seems that VV lexemes in Italian form a family of constructions that resemble one another in both form (all of them are made up of two verbs) and meaning (all of them have a complex event semantics) and can be distinguished according to a set of parameters, such as the ones listed above³⁰.

6. **Conclusions**

In this paper, we have offered a fine-grained analysis of Italian VeV lexical constructions, i.e., phrasal lexemes formed by two conjoined verbs that yield a noun or an adjective as output. These constructions are peculiar in that they cannot be regarded as prototypical words, but nonetheless have the status of lexemes.

In our analysis, we have used two approaches.

On the one hand, we have applied to VeV lexemes the traditional methodology used in Lexical Morphology in order to capture the generalizations underlying the formations of these items. Therefore, we have looked for constraints on the input and the output of VeV lexemes at the main levels of linguistic analysis, namely phonology, morphology, syntax and semantics.

On the other hand, we have made use of usage-based constructionist models in order to account for the rise of various semantic classes of VeV lexemes and new formations. Data form corpora show that the emergence of VeV lexemes is to be ascribed to the entrenchment of a few exemplars, which led to the creation of more abstract constructions that in turn license the formation of new lexemes.

Finally, VeV lexemes are found to be closely related to other VV lexemes in Italian that are usually ascribed to the realm of compounding: all these constructions are dedicated strategies to encode a complex event semantics into different linguistic forms, namely nouns and adjectives (but not verbs). This obviously raises interesting typological questions regarding the nature and

³⁰ Some syntactico-semantic properties of VeV lexemes (such as their sharing arguments, and the kinds of semantic classes to which they belong) suggest a connection of VeV lexemes with the constructions known as "serial verbs" (cf. Aikhenvald 2006). As a path for further research, we suggest that at least some Italian VeV lexemes could be analyzed as nominalizations of virtual serial verbs.

role of lexicalization strategies involving two verbs in the languages of the world, which we leave for future research.

Appendix: the corpus³¹

N	VeV lexemes	Literal translation	Semantic category	Lexical category	Tokens per variant (laR)	Tokens per lexeme (laR)
1	accendi e spegni	switch on and switch off	OPP	Naction	1	1
2	appila e spila	plug and unplug	OPP	Naction	1	1
3a	apri e chiudi	open and close	OPP	Adj	6	9
3b	apri-chiudi	open-close	OPP	Adj	1	
3c	apri e chiudi	open and close	OPP	Naction	2	
4	apri-e-gusta	open-and-enjoy	SEQ	Adj	1	1
5	attacca e stacca	attach and detach	OPP	Adj	0	0
6a	bacia e racconta	kiss and tell	SEQ	Adj	2	3
6b	bacia e racconta	kiss and tell	SEQ	Naction	1	
7a	cerca e trova (lavoro)	look for and find (job)	CONSEQ	Naction	1	2
7b	cerca-trova	look for-find	CONSEQ	Nconcrete	1	
8	compra e fuggi	buy and run away	MAN	Naction	1	1
9	compra e scappa	buy and run away	MAN	Adj	1	1
10	compra-e-vendi	buy-and-sell	OPP	Naction	1	1
11	consuma-e-getta	consume-and-throw away	ASP	Nconcrete	1	1
12a	copia e incolla	copy and paste	SEQ	Adj	0	0
12b	copia e incolla	copy and paste	SEQ	Naction	0	
13a	copri e scopri	cover and uncover	OPP	Adj	0	1
13b	copri e scopri	cover and uncover	OPP	Nconcrete	0	
13c	copri e scopri	cover and uncover	OPP	Naction	1	
14a	corri e tira	run and shoot	SEQ	Adj	2	11
14b	corri e tira	run and shoot	SEQ	Naction	9	
15a	cuci e scuci	sew and unsew	OPP	Naction	3	4
15b	cuci-scuci	sew-unsew	OPP	Naction	1	
16	dai e prendi	give and take	OPP	Naction	1	1
17	fotti e chiagni	cheat and cry	SEQ	Naction	2	2
18	gioca & stravinci	play & over-win	CONSEQ	Ngame	0	0
19a	gratta e perdi	play and lose	CONSEQ	Adj	0	2
19b	gratta e perdi	play and lose	CONSEQ	Ngame	1	
19c	gratta-e-perdi	play-and-lose	CONSEQ	Ngame	1	
20a	gratta e sniffa	scratch and sniff	SEQ	Adj	0	0
20b	gratta e sniffa	scratch and sniff	SEQ	Nconcrete	0	
21a	gratta e sosta	scratch and park	SEQ	Adj	0	8

_

After completing our analysis, we found five more VeV lexemes: *agita e gusta* (lit. shake and taste, a proper name indicating a food product by Bonduelle); *punta & clicca* (lit. point and click, used as an adjective in combination with the noun *avventura* 'adventure' to indicate a computer adventure); *strappa e vinci* (lit. strip and win, a sort of game similar to *gratta e vinci*); *arrusti e mangia* (Regional Italian spoken in Catania, Sicily; lit. roast and eat, a takeaway food shop where horse meat is roasted and served in a sandwich, and also the sandwich itself); *gratta e truffa* (lit. scratch and cheat, used as an adjective with the noun *francobollo* 'stamp').

³¹ Each type is marked in bold type and numbered progressively. The spelling variants (based mainly on the corpus *la Repubblica*; when the item is not attested in this corpus, the spelling found in the original source is used) and the different lexical categories (based on both the corpus *la Repubblica* and Google) are listed under each type in Roman type (with progressive letters, e.g., 13a, 13b, and so on). All token figures are based on the corpus *la Repubblica*. However, most types are attested on the internet.

241	I		lano	ls.	la la	
_	gratta e sosta	scratch and park	SEQ	Nconcrete	3	_
-	gratta e sosta	scratch and park	SEQ	Naction	5	1.
-	gratta e spara	scratch and gun down	SEQ	Adj	1	1
	gratta e stravinci	scratch and over-win	CONSEQ	Ngame	0	0
_	gratta e vinci	scratch and win	CONSEQ	Adj	25	194
	gratta-e-vinci	scratch-and-win	CONSEQ	Adj	2	
_	gratta e vinci	scratch and win	CONSEQ	Naction	2	
_	gratta e vinci	scratch and win	CONSEQ	Nconcrete	23	
-	gratta-e-vinci	scratch-and-win	CONSEQ	Nconcrete	1	
24f	gratta e vinci	scratch and win	CONSEQ	Ngame	140	
24g	gratta-e-vinci	scratch-and-win	CONSEQ	Ngame	1	
25	guarda e compra	look and buy	SEQ	Adj	0	0
26a	guarda e impara	look and learn	CONSEQ	Adj	0	0
26b	guarda e impara	look and learn	CONSEQ	Naction	0	
27	lascia-e-piglia	leave-and-take	OPP	Naction	1	1
28	lava e indossa	wash and wear	SEQ	Adj	1	1
29a	leggi e getta	read-and-throw away	ASP	Adj	3	6
29b	leggi-e-getta	read-and-throw away	ASP	Adj	1	
29c	leggi-e-getta	read and throw away	ASP	Nconcrete	2	
30a	mangia e bevi	eat and drink	СО-НҮРО	Adj	1	1
30b	mangia e bevi	eat and drink	СО-НҮРО	Nconcrete	0	
30c	mangia e bevi	eat and drink	СО-НҮРО	Naction	0	
31	mangia e passa	eat and pass	SEQ	Ngame	0	0
32	metti e butta	put on and throw away	ASP	Adj	1	1
33	metti e togli	put and remove	OPP	Naction	2	2
34a	mordi e fuggi	bite and run away	MAN	Adj	92	261
34b	mordi-e-fuggi	bite-and-run away	MAN	Naction	143	
34c	mordi e fuggi	bite and run away	MAN	Nconcrete	2	
34d	mordi-e-fuggi	bite-and-run away	MAN	Adj	11	
34d	mordi-e-fuggi	bite-and-run away	MAN	Naction	12	
34e	mordi-fuggi	bite-run away	MAN	Naction	1	
35	parla e fuggi	talk and run away	MAN	Naction	1	1
36a	parla e getta	talk and throw away	ASP	Adj	0	0
36b	parla e getta	talk and throw away	ASP	Nconcrete	0	
37	piglia e lascia	take and leave	OPP	Naction	0	0
38	porta il riso in	take the rice home and	SEQ	Naction	1	1
	cascina e piangi	plead poverty				
	miseria			1		1.
_	prega e fuggi	pray and run away	MAN	Adj	1	<u></u> 1
$\overline{}$	prega e fuggi	pray and run away	MAN	Naction	0	
-	prega e segui	pray and follow	SEQ	Naction	0	0
-	prendi e fuggi	take and run away	MAN	Adj	4	_6
	prendi e fuggi	take and run away	MAN	Naction	2	1-
	prendi e getta	take and throw away	ASP	Adj	1	2
-	prendi-e-getta	take-and-throw away	ASP	Adj	1	_
-	prendi-e-getta	take-and-throw away	ASP	Naction	0	
_	prendi e lascia	catch and release	OPP	Naction	1	2
43b	prendi-e-lascia	catch-and-release	OPP	Naction	1	

61a	togli e metti togli e metti	remove and put remove and put	OPP OPP	Adj Naction	2	3
61a	<u> </u>	-		<u> </u>	1-	3
			LODD	1 4 4 4 4 4	14	la l
600	tocca e scappa	touch and run away	MAN	Ngame	0	
\vdash	tocca e scappa	touch and run away	MAN	Naction	1	
	tocca e scappa	touch and run away	MAN	Adj	0	1
-	tocca e fuggi	touch and run away	MAN	Naction	3	1
$\overline{}$	tocca e fuggi	touch and run away	MAN	Adj	2	5
	tocca e corri	touch and run	SEQ	Naction	1	1
	tira e vinci	kick and win	CONSEQ	Ngame	2	2
\vdash	tira-e-molla	pull-and-let go	OPP	Adj	1	
	tira-e-molla	pull-and-let go	OPP	Naction	37	
	tira-molla	pull-let go	OPP	Naction	16	
	tira e molla	pull and let go	OPP	Ngame	1.6	
	tira e molla	pull and let go	OPP	Naction	532	
	tira e molla	pull and let go	OPP	Adj	<u>Z</u>	589
_	tassa e spendi	tax and spend	SEQ	Naction	9	700
	tassa-spendi	tax-spend	SEQ	Adj	0	
_	tassa-e-spendi	tax-and-spend	SEQ	Adj	1	
	tassa e spendi	tax and spend	SEQ	Adj	6	17
	taglia e incolla	cut and paste	SEQ	Naction	5	1.5
	taglia e incolla	cut and paste	SEQ	Adj	0	5
_	taglia-e-cuci	cut-and-sew	OPP	Naction	5	 -
	taglia e cuci	cut and sew	OPP	Naction	21	
-	taglia e cuci	cut and sew	OPP	Adj	2	28
	stira e ammira®	iron and admire	SEQ	Nconcrete	0	20
	stira-e-ammira®	iron-and-admire	SEQ	Adj	1	
	stira e ammira®	iron and admire	SEQ	Adj	2	3
	foto) e torna a casa	come back home		 		
51	scatta (nel senso di	snap (as with a camera) and	MAN	Adj	1	1
	scarta e inghiotti	unwrap and swallow	SEQ	Adj	1	1
_	scappa e fuggi	run away and run away	SYN	Naction	2	
49a	scappa e fuggi	run away and run away	SYN	Adj	5	7
48	sbatti-e-butta	fuck-and-throw away	ASP	Adj	1	1
47e	sali e scendi	ascend and descend	OPP	Adj	1	
47d	sali-scendi	ascend-descend	OPP	Nconcrete	1	
47c	sali e scendi	ascend and descend	OPP	Nconcrete	2	
47b	sali-scendi	ascend-descend	OPP	Naction	3	
	sali e scendi	ascend and descend	OPP	Naction	7	14
-	radi e getta	shave and throw away	ASP	Nconcrete	0	
_	radi-e-getta	shave-and-throw away	ASP	Adj	2	
	radi e getta	shave and throw away	ASP	Adj	2	4
-	prevedi e previeni	foresee and forestall	CONSEQ	Adj	1	1
_	prendi e scappa	take and run away	MAN	Ngame	0	
	prendi e scappa	take and run away	MAN	Naction	0	-
\vdash	prendi e scappa	take and run away	MAN	Adj	1	1
	prendi-e-lascia	catch-and-release	OPP	Adj	0	
43c	prendi-e-lascia	catch-and-release	OPP	Ngame	0	

63a	usa e getta	use and throw away	ASP	Adj	337	462
63b	usa e getta	use and throw away	ASP	Naction	52	
63c	usa e getta	use and throw away	ASP	Nconcreto	14	
63d	usa-e-getta	use-and-throw away	ASP	Adj	53	
63e	usa-e-getta	use-and-throw away	ASP	Naction	4	
63f	usa-e-getta	use-and-throw away	ASP	Nconcrete	2	
64a	va e vieni	go and come	OPP	Naction	84	97
64b	va-e-vieni	go-and-come	OPP	Naction	13	
65a	vedi e fuggi	look/watch and run away	MAN	Adj	1	3
65b	vedi e fuggi	look/watch and run away	MAN	Naction	2	
66a	vedi e getta	look/watch and throw away	ASP	Adj	1	3
66b	vedi e getta	look/watch and throw away	ASP	Nconcrete	2	

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