

Travaux du 19ème CIL | 19th ICL papers

Congrès International des Linguistes, Genève 20-27 Juillet 2013
International Congress of Linguists, Geneva 20-27 July 2013



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Learning about the syntax-semantics interface

poster presentation in session: 5 Theoretical and comparative syntax (Luigi Rizzi)

Published and distributed by: Département de Linguistique de l'Université de Genève, Rue de Candolle 2, CH-1205 Genève, Switzerland
Editor: Département de Linguistique de l'Université de Genève, Switzerland
ISBN: 978-2-8399-1580-9

LEARNING ABOUT THE SYNTAX-SEMANTICS INTERFACE

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KEY WORDS

Syntactic patterns; argument structure; syntax-semantic interface; cognate verbs in Italian and Portuguese.

i. **Introduction**

The basic grounding idea that guides our working method is found in MARANTZ (2005): there is a small number of syntactic patterns relevant for universally basic types of pairing between structural and encyclopedic meaning. We are adopting the set of syntactic patterns proposed in Marantz's paper as the finite and small range of structural possible contexts for the verbs we are analysing.

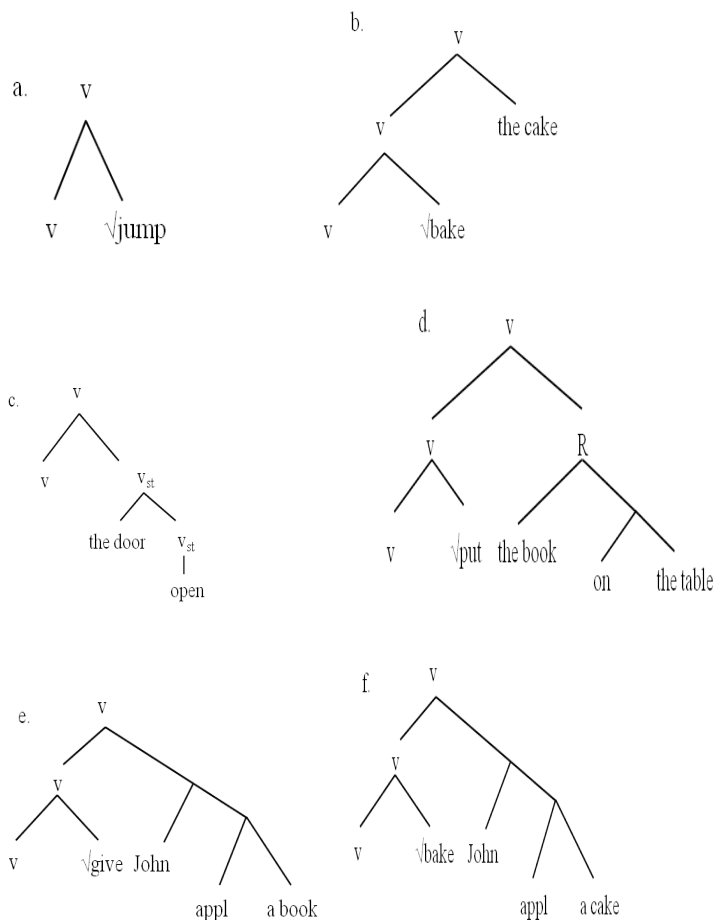
In the very beginning of this work an ubiquitous observation became dominant: verbs are polysemic, and the central factor for polysemy is its syntactic context. No interesting explanatory hint for the verb's polysemy was obtained by hypotheses based on inherent semantic properties of roots, which are indeed very hard, if not impossible, to define. Occasionally, when gathering data from Portuguese verbs, we found lags, that is, the absence of possible sentences fitting one of the possible patterns. Consulting a sister-language dictionary (Italian), many lags were filled up by the cognate verb in this language.

But not only this: the second language data provided other semantic subcategorization possibilities for cells in the table. The total Italian-Portuguese occurrences of a given root occupied a larger space in the table than each one of the roots of each language by itself. This fact affects the mapping between a given root and its syntactic contexts. In view of these preliminary bilingual observations, we decided to enlarge the project into a comparative Portuguese-Italian study. A defense of this comparison is that naïve bilingual speakers of Romance languages do believe that phonologically corresponding verbs of one language are 'the same verb' as the other language's cognate verb.

As a result of this bilingual analysis of Italian and Portuguese verbs we will hopefully be able to see whether the data favor the projectionist or the constructionist theoretical predictions: if there is a concentration of contextual use per roots, the projectionist bit is the winner, and conversely, if each verb is licensed in multiple syntactic contexts with consequent rather regular meaning changes, then the constructionist theory will acquire more value.

The essential theoretical assumption on the basis of this work is that there is a small number of syntactic patterns of very restricted types containing a 'little -v' where bare roots, nouns or adjectives can be inserted, with different non-compositional meanings being possibly negotiated in each of these contexts.

The syntactic patterns in MARANTZ (2005) decompose the meanings of verbs, and in so doing explain the semantic effect of the prefix re-, which is the focus of that paper. These patterns have to do with just one part of the meaning of verbs. Hypothetically, they underlie structural meanings of verbs universally:



Pattern (a) underlies intransitive verbs that after combining the root with a category mark will mean ‘do in the manner of dancing, of singing, of ringing, of drawing’, etc. Basically such verbs express a production process. Pattern (b) is an extension of (a), where the direct object names the product of the action: ‘sing a song’, ‘dance a waltz’, ‘ring a bell’, ‘draw a giraffe’. Marantz calls such direct objects *incremental themes*, and shows that they express events, even when they are nouns.

Pattern (c) has stative verbs expressing the final state of a process where something undergoes a change, as in ‘open the door’, ‘boil some milk’, ‘warm the soup’, ‘clean the floor’. These verbs often combine with a causing agent, and in this case some other functional morpheme needs to combine with the predicate to create a specifier place for the subject.

In structure (d) are HALE & KEYSER’S (1993) *location/locatum* verbs. This structure is an extension of type (a), because the event constructed on the root creates another eventuality, the placement of an entity in a place: ‘shelf the books’, ‘carpet the living-room’.

Structures (e) and (f) are called applicative constructions: (e) underlies a possession relation between two individuals, and (f) creates a beneficiary relation between an event and an entity that is affected by it. Languages vary in how and how much they make use of these two sorts or applicative morphemes. (PYLKÄNNEN, 2000).

ii. Ranges of readings in cognate verbs

The historical relationship between Romance languages is so close that in any pair of languages there are innumerable verbs with phonologically almost identical roots, and also a big range of similar or identical readings. This similarity is clearly perceived by bilingual

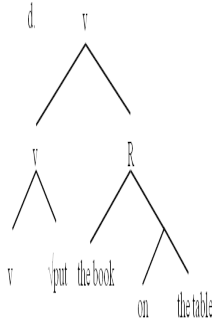
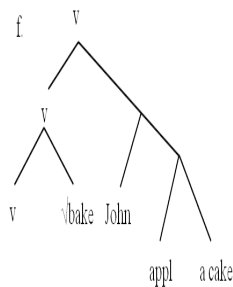
speakers, who ‘believe’ it to mean that the two verbs are one and the same linguistic entity. In this section we will present descriptions of pairs of cognate verbs, working in each language at a time.

What we are going to show below is a graphic summary of the classification of each verb's meanings in each language by decomposing it in terms of the hypothetical underlying syntactic patterns. We will present a selected sample of our analyses, consisting of the six pairs of verbs: *correr/correre* (approximately run), *bater/battere* (approximately beat, hit, knock), *prender* (approximately arrest)/*prendere* (approximately get hold of), *ordenar/ordinare* (approximately order), *mancar* (approximately limp)/*mancare* (approximately miss), *soar/suonare* (approximately sound, ring, play).

Correr/correre

Table 1: *correre/correre*

Syntactic structures	Italian	Portuguese
<p>a.</p> <pre> graph TD v1[v] --- v2[v] v1 --- jump[√jump] </pre>	<p>La tartaruga correva</p> <p><i>The turtle ran</i></p>	<p>A tartaruga corria</p> <p><i>The turtle ran</i></p>
<p>b.</p> <pre> graph TD v1[v] --- v2[v] v1 --- cake[the cake] v2 --- v3[v] v2 --- bake[√bake] </pre>	<p>Angelo Panucci ha corso la maratona</p> <p><i>...ran the marathon</i></p>	<p>O Alexandre correu a maratona</p> <p><i>...ran the marathon</i></p>
<p>c.</p> <pre> graph TD v1[v] --- v2[v] v1 --- Vst1[Vst] Vst1 --- door[the door] Vst1 --- Vst2[Vst] Vst2 --- open[open] </pre>	<p>XXXXXXXXXX</p>	<p>Os alunos correram um abaixo-assinado</p> <p><i>The students promoted a petition</i></p> <p>O cachorro correu o gato</p> <p><i>The dog chased the cat away</i></p> <p>XXXXXXXXXX</p>

	<p>Il fiume corre al mare <i>The river runs to the sea</i></p> <p>Correre ai ripari <i>Try to fix it</i></p> <p>Corse tutto il mondo <i>Run the world</i></p> <p>XXXXXXXXXX</p> <p>XXXXXXXXXX</p>	<p>O rio corre para o mar <i>The river runs to the sea</i></p> <p>XXXXXXXXXX</p> <p>Correr o mundo todo <i>Run the world</i></p> <p>Ela correu as mãos pelo cabelo <i>Run her hand through her hair</i></p> <p>O euro corre na Europa <i>The Euro circulates in Europe</i></p>
	<p>Mi corre l'obbligo di avvertirti <i>It is my duty to warn you</i></p>	<p>XXXXXXX</p>

The initial result of the *correr/correre* analysis is that five of the possible structures were used, and only three by both languages. Italian does not make use of pattern (c) and Portuguese does not make use of pattern (f). The shared patterns were (a), (b) and (d), which are varieties of (a). It is important to note that even when the Italian and Portuguese cells are both used, as in (d), they are not used identically: the use of $\sqrt{corr-}$ applied to ‘run one’s hand through one’s hair’ is absent in Italian. On the other hand, the application of pattern (d) in *correre ai ripari* to refer to ‘fixing misunderstandings or wrongdoings’ is not made by speakers of Portuguese. To summarize these findings: both languages use more than one construction; semantic contrasts between one cell and the other are similar in both languages; in addition to the meaning purely derived from the syntactic pattern we find the application of the pattern in one or the other language to some specific way of focusing world-cognition. The cognition-and-language interface is open to alternatives that guide the

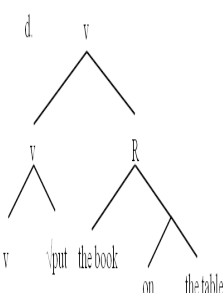
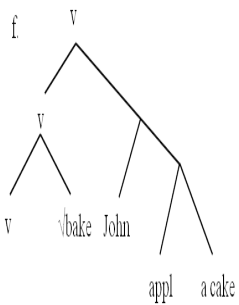
options of world-cognition-focusing appropriate for the use of a construction. This particular interface makes languages differ in the contextual use of verbs.

One important syntactic difference between Italian and Portuguese is being omitted in table 1 and the whole paper: in the past perfect Italian may have both *avere* and *essere* as auxiliaries and *correre* may merge with both: *Piero è corso a casa*; *Piero ha corso dietro al treno*. In this paper we do not have the space to compare the two languages along this syntactic parameter.

Bater/battere

Table 2: *bater/battere*

Syntactic structures	Italian	Portuguese
<p>a.</p> <pre> v / \ v √jump </pre>	<p>La porta batte</p> <p><i>The door slams</i></p> <p>XXXXXXXXXX</p> <p>XXXXXXXXXX</p>	<p>A porta bate</p> <p><i>The door slams</i></p> <p>Essa conta não bate</p> <p><i>This account does not match</i></p> <p>Eu bati</p> <p><i>I finished the game</i></p>
<p>b.</p> <pre> v / \ v the cake / \ v √bake </pre>	<p>La giornalista ha battuto il testo</p> <p><i>The journalist typed the text</i></p> <p>XXXXXXXXXX</p>	<p>A jornalista bateu o texto</p> <p><i>The journalist typed the text</i></p> <p>Bater foto</p> <p><i>Take a picture</i></p>
<p>c.</p> <pre> v / \ v v_st / \ the door v_st open </pre>	<p>Ha battuto la porta</p> <p><i>He slammed the door</i></p> <p>Matteo batteva gli occhi</p> <p><i>Matthew blinked</i></p> <p>L'Europa batte i denti</p> <p><i>Europe is shivering from the</i></p>	<p>Ele bateu a porta</p> <p><i>He slammed the door</i></p> <p>XXXXXXX</p> <p>A Europa bate os dentes</p>

	<i>cold</i>	<i>Europe is shivering from the cold</i>
	<p>La pioggia batte sui vetri <i>The rain hits the window pane</i></p> <p>La polizia ha battuto la zona <i>The police covered all that area</i></p> <p>XXXXXXXXXX</p> <p>XXXXXXXXXX</p>	<p>A chuva bate na vidraça <i>The rain hits the window pane</i></p> <p>A polícia bateu toda aquela área <i>The police covered all that area</i></p> <p>João bateu um prego na parede <i>John pounded a nail in the wall</i></p> <p>Ele bateu nas crianças <i>He hit the children</i></p>
	<p>Quella top si batte per le donne <i>That top model defends feminist causes</i></p>	<p>Aquela modelo se bate pelas mulheres <i>That top model defends feminist causes</i></p>

The pair *bater/battere* presents a total formal parallelism between the two languages. Five patterns are made use of in both languages, with faithful translation correspondences in all of them. In spite of this regularity, in a way similar to the one found in *correre/correre*, each one of the two languages took different profit of each pattern. Structure (a) is used in Portuguese to focus the aspects of ‘successful arithmetical calculation’ and ‘game card winning’, which are named in Italian by means of other concepts related to them. Vice-versa, the verb *battere* is fit in (c) to focus ‘eye blinking’ only in Italian. Structure (d) is shared for several types of ‘beatings’ and ‘poundings’ but not for ‘nail poundings’ and ‘children hittings’ in Italian.

Prender/prendere

Table 3: *prender/prendere*

Syntactic structures	Prendere	Prender
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<p>d.</p>	<p>Prendere questa critica in considerazione <i>Take this criticism into consideration</i></p>	<p>XXXXXXXX</p>
<p>b.</p>	<p>La casa ha preso fuoco <i>The house took fire</i></p> <p>I carabinieri l'hanno preso <i>The guards grabbed him</i></p>	<p>XXXXXXXX</p> <p>XXXXXXXX</p>
<p>e.</p>	<p>Gli hanno preso la bicicletta <i>His bike was stolen</i></p>	<p>XXXXXXXX</p>
<p>c.</p>	<p>XXXXXXXXXXXX</p> <p>XXXXXXXXXXXX</p>	<p>A polícia prendeu os marginais. <i>The Police arrested the thieves.</i></p> <p>Seus olhos verdes prendem corações. <i>Her green eyes are attractive.</i></p>

The phonological pair *prender/prendere* shows a total pattern dissociation between the two languages. Concomitantly, in no case can they be translated from one to the other language by the phonologically identical root. Of course: no syntactic sharing, no semantic sharing. Syntax is really very strong! And the two verbs don't "count" as the "same" verb to bilingual speakers.

Since Portuguese and Italian have a common historical ancestor language, it is necessarily the case to suppose that some historical change happened. For this pair, Italian is the more conservative. The deviance found in Portuguese may be described as having been caused by a misreading of an originally (b) structure being read as a (c) structure. An old generation speaker says *Paulo prendeu Pedro* having in mind that 'Paul grabbed Peter', but a

young speaker takes it as a stative sentence of structure (c) in which Peter's final state is an irreversible state of 'juridical grabbingness', that is, arrest.

Ordenar/ordinare

Table 4: *ordenar/ordinare*

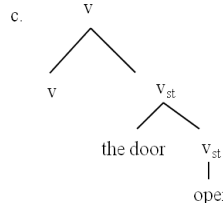
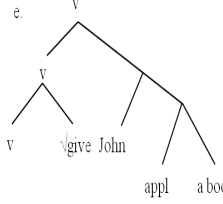
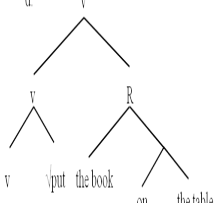
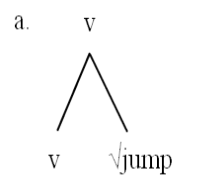
Syntactic structures	Ordinare	Ordenar
<p>d.</p>	<p>Ordinare le tavole <i>set the table</i></p> <p>Il Papa ha ordinato un vescovo cinese <i>The Pope ordained a Chinese bishop</i></p>	<p>Ordenar os talheres <i>set the table</i></p> <p>O Papa ordenou um bispo chinês <i>The Pope ordained a Chinese bishop</i></p>
<p>b.</p>	<p>Il generale ha ordinato la ritirata delle sue truppe <i>The general ordered the army's withdrawal</i></p>	<p>O general ordenou a retirada da tropa <i>The general ordered the army's withdrawal</i></p>
<p>f.</p>	<p>Il medico mi ha ordinato una purga <i>The doctor prescribed me a purge</i></p>	XXXXXX
<p>e.</p>	<p>Ho ordinato una birra <i>I ordered a beer</i></p>	XXXXXX

The pair *ordenar/ordinare* inherits the polysemy of the noun *ordem/ordine*. It may mean create order in the physical (or mental) space, produce a command, include someone in a religious order.

Both languages make use of the patterns (b) and (d), but only Italian also makes use of the applicative constructions (e) and (f). So, depending on the pattern of insertion, the Italian verb may mean 'put in order', 'ordain', 'command', 'prescribe', 'demand'. The picture that is gaining shape is one in which semantic width results from how many syntactic patterns are employed.

Mancar/mancare

Table 5: *mancar/mancare*

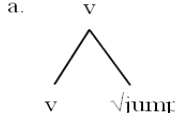
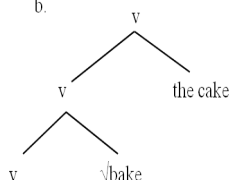
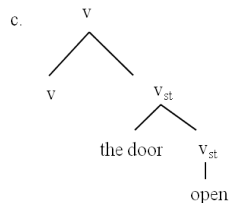
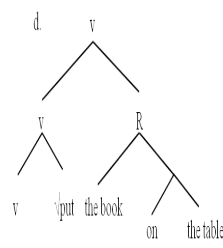
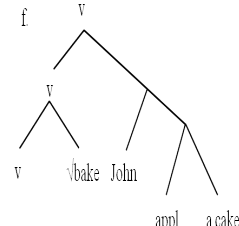
Syntactic structure	Mancare	Mancar
c. 	I ragazzi sono mancati alla riunione <i>The boys missed the meeting</i>	XXXXXXXXXX
e. 	Mi sono mancati dieci Euro per comprare le scarpe. <i>I was short of ten euros to buy those shoes</i>	XXXXXXXXXX
d. 	Hai mancato di tatto. <i>You were unkind</i>	XXXXXXXXXX
a. 	XXXXXXXXXX	Ele manca. <i>He limps</i>

Portuguese and Italian forms of *mancar/mancare* are in complementary distribution as to syntactic patterns. A total divorce occurred in this verb. The Italian verb *mancare*, meaning 'miss', fits patterns (c), (d) and (e), and is the more similar to Latin. The Portuguese homonym fits (a), and means 'to limp'. An interesting question to pose is: what was formed first, 'miss' or 'limp'? Note that the syntactic construction *mancar da perna* is still in use. The most plausible hypothesis is that in this context a language learner misunderstands 'missing' as 'limping' by restricting the more general 'failure' concept to a more restricted concept of 'leg failure'.

Soar/suonare

Table 6: *soar/suonare*

Syntactic	Italian	Portuguese
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structures		
<p>a.</p> 	<p>La campana ha suonato <i>The bell rang</i></p>	<p>O sino soou <i>The bell rang</i></p>
<p>b.</p> 	<p>La campana ha suonato mezzanotte <i>The bell rang midnight</i></p> <p>Piero suona il pianoforte <i>Peter plays the piano</i></p> <p>La radio suonava Beethoven <i>The radio was playing Beethoven</i></p>	<p>O sino soou meia-noite <i>The bell rang midnight</i></p> <p>XXXXXXXX</p> <p>XXXXXXXX</p>
<p>c.</p> 	<p>Le due note sono suonate insieme <i>The two notes rang together</i></p> <p>Le barche hanno suonato le sirene <i>The boats rang the sirens</i></p>	<p>As duas notas soaram juntas <i>The two notes rang together</i></p> <p>Os barcos soaram as sirenes <i>The boats rang the sirens</i></p>
<p>d.</p> 	<p>Questa frase suona strana <i>This sentence rings strangely</i></p>	<p>Esta frase soa estranha <i>This sentence rings strangely</i></p>
<p>f.</p> 	<p>Questa storia mi suona strana <i>This story rings strangely to me</i></p>	<p>Esta estória me soa estranha <i>This story rings strangely to me</i></p>

The pair *soar/suonare* is shared by the two languages in a wide range of syntactic structures: both languages show this root in the intransitive construction (a). In the transitive (b) the construction is shared for the sub-case of direct object meaning 'hours of the day', but

only Italian makes use of the contexts in which the direct object is a DP which refers to a musical instrument or a melody. In these sub-cases Portuguese makes use of the verb *tocar* (play): *tocar piano*, *tocar Beethoven*. For structures (c), (d) and (f) the two languages are identical in their use of this root.

iii. Conclusion

In summary, the interface data for Italian-Portuguese cognate verbs in this small sample are not uniform. We found three essentially different configurations of correspondences:

- (i) all cells are used in both languages (*bater/battere* and *soar/suonare*);
- (ii) some cells are shared and others are not (*correre/correre* and *ordenar/ordinare*);
- (iii) homonym forms with no sharing of cells at all (*prender/prendere* and *mancar/mancare*).

Additionally in groups (i) and (ii) it happens very often that the two languages differ in terms of the profit taken of a given pattern for certain semantic types of nouns or non compositional uses. For example only Italian makes use of *correre* in *correre ai ripari* to express the notion of ‘trying to fix something’ and only Portuguese makes use of *bater* in *essa conta não bate* to express the notion of ‘the account does not match’. Of course the lags do not mean a lack of capacity to describe a given situation. There is a Portuguese translation for *correre ai ripari* and an Italian translation for *essa conta não bate*, but, interestingly, the good translations don’t follow the same conceptual path. At this point we are getting into the boundary between the modules of language and those of cognition, which we linguists see as non isomorphic.

The modularity of constructionist theory predicts the independence between syntactic patterns and vocabulary pieces. The predictable situation is that meaningless roots can fit in any possible syntactic pattern, and get a skeletal meaning from the pattern and an additional *ad hoc* cognitive content, negotiated. And so it is: in our comparative work the predominant situation is that verbs are polysemous, which is what one finds in all groups.

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