

The syntactic-semantic behavior of psych verbs in Brazilian Portuguese

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Psych properties

- It is assumed in the literature, for many languages, that the property of *be in a psychological state*, besides being a cognitive relevant property, is also linguistically relevant. Many authors, and for many languages, (Ruwet 1972; Belletti and Rizzi 1988; Grimshaw 1990; Pesetsky 1995; Iwata 1995; Cançado and Franchi, 1999; Landau, 2010 etc) assume that verbs that denote a psychological experience present distinct syntactic properties.

Psych verb types

- In English, there are three types of psychological verbs, according to their thematic and configurational structure:
- John loves Mary. Class I: {Theme, Experiencer}
- John worries Mary. Class II: {Experiencer, Theme}
- John appeals to Mary. Class III: {Theme, Experiencer}
- According to Landau (2010), all Class I and III verbs are stative, and can never be used agentively. However, most Class II are ambiguous between the two readings. We focus only on class II, which generally is associated with specific syntactic properties.

Belletti and Rizzi's proposal

- Belletti and Rizzi assume that Class II in Italian (*preoccupare* verbs) are unaccusative. Although these verbs have an apparent transitive configuration, B&R argue that the ObjExp verbs lack an external argument. They propose that the subject argument is a derived subject in an unaccusative structure with two internal arguments. The authors give some properties as evidence for this assumption:
 - these verbs do not license a verbal passive, but allow the adjectival one;
 - they allow an exceptional binding anaphor;
 - they do not reflexivize;
 - they cannot be embedded as infinitival complements of *fare* 'make';
 - they do not allow the arbitrary *pro* reading .

Pesetsky's proposal

- Pesetsky (1995) assumes that some verbs of Class II present two structures: a simple transitive causative structure, and a stative unaccusative structure, as proposed by Belletti and Rizzi. The authors present two different thematic roles for these classes:
- The television set worried John.
{ Causer, Experiencer }
- John worried about the television set.
{ Experiencer, Subject Matter }

Semantic evidence

- The author argues that there is a semantic distinction between these sentences that can be captured by the logical relationship:
 - John worried about the television set, but the television set did not worry John. (contradiction)
 - The television set worried John, but John did not worry about the television set. (noncontradiction)
- *The television set* is the Subject Matter in the first sentence, and the Causer in the latter (the television set just triggers the state of worry, but in fact he can be not worrying about the set specifically).
- As Experiencer is higher than Subject Matter in a thematic hierarchy, the Subject Matter will link with the lower position, resulting in an unaccusative structure: [_{VP} [_{V'} V Subj. Matter] Exp].

Hypothesis

- I argue that in Brazilian Portuguese (BP) all the syntactic properties that are found in the ObjExp *preocupar* verb type are also found in other specific verb types as well. This fact discards the hypothesis that such a phenomenon is associated with some specific syntactic configuration, justified for the psych verbs. Actually, some of these properties can be explained in terms of the semantic representation of verb classes (Cançado, Godoy & Amaral, 2013).
- Besides, I show that is very questionable evidence given for the the stative nature of '*worry about*' .
- Thus, it remains some questions: to which aspectual class this verb type belongs? There are really two types of ObjExp verbs?

BP data analysis

- My proposal has as base the typological lexical semantic work of Cançado, Godou & Amaral(2013), where these types of verbs were extensively investigated. The authors propose to group the *preocupar* verbs into two fine-grained classes, according to their semantic and syntactic properties:
- A mãe acalmou a filha.
the mother calmed.down her daughter
- Rosa preocupou a mãe.
Rosa worried her mother

Acalmar class properties

- Verbs of the *acalmar* 'calm down' class have an ambiguous reading between an agentive and a non-agentive interpretation, just like the *worry* class in English. The agentive reading can be proved by the instrument and passive sentences; the non-agentive reading can be shown by the eventive DP in subject position, and the non-acceptance of the verbal passive, but the acceptance of the adjectival one; besides, they present a causative-inchoative alternation, which is demonstrated by the clitic *se* in BP:
- A mãe acalmou a filha com um chá.
- the mother calmed.down her daughter with a tea
- A filha foi acalmada (por sua mãe).
- the daughter was calmed.down by her mother
- A chegada da mãe acalmou a filha.
- the arrival of.the mother calmed.down her daughter
- ?A filha foi acalmada pela chegada de sua mãe.
- the daughter was calmed.down by.the arrival of her mother
- A filha está/ficou muito calma/calmíssima (com a chegada de sua mãe).
- the daughter is became very calm with the arrival of her mother
- A filha (se) acalmou (com um chá).
- the daughter SE calmed.down with a tea

Preocupar class properties

- On the other hand, contrarily to English, all verbs of the *preocupar* 'worry' class have only a non-agentive reading: they do not accept a verbal passive, but accept the adjectival one, and they do not accept an instrument; besides, they also present the causative-inchoative alternation, demonstrated by the clitic *se*:
- *A mãe foi preocupada pela Rosa.
the mother was worried by Rosa
- *Rosa preocupou a mãe com um revólver.
Rosa worried her mother with a gun
- A mãe está/ficou muito preocupada/ preocupadíssima (com Rosa).
the mother is became very worried with Rosa
- A mãe (se) preocupou (com Rosa).
the mother SE worried with Rosa
- The animate DP in subject position of these verbs cannot indeed denote a person. The only possible interpretation is that of an unspecified eventuality (event or state), in which this animate DP participates. This fact can account for some presented properties.

Semantic structures

- The most important thing to note is that verbs of the *acalmar* type, 53 verbs, belong to a major class of 436 change of state verbs, which have also the same ambiguous reading between agentive and non-agentive interpretations, and have the same behavior (*quebrar* ‘break’ verbs).
- The *preocupar* class has 121 verbs, also presenting the same properties. However, there are 37 verbs that are not psychological (*empobrecer* ‘impoverish’), but behave exactly like *preocupar*. (
- Therefore, one cannot attribute specific syntactic properties to the fact that *acalmar* and *preocupar* are psych verbs, but must look for other reasons to justify their behavior.
- Cançado, Godoy & Amaral (2013) propose the following semantic structures for these verbs, a change of state verbs, where the first accept an agent or a causer in subject position, and the latter only accept a causer (an event or a state) in subject position:
- [[X ACT (VOLITION)] CAUSE [BECOME [Y <STATE>]]]
- [[X ACT/STATE] CAUSE [BECOME [Y <STATE>]]]

Analysis of some B&R's properties

- **Reflexivization:**

A mãe se acalmou. (the mother calmed herself down)

*A mãe se preocupou./ O menino se empobreceu. (in a reflexive reading)
the mother worried herself/ the boy impoverished himself)

- **Arbitrary *pro***

Acalmaram a mãe do menino. (they calm down the boy's mother)

- *Preocuparam a mãe do menino./ *Empobreceram o menino.
(they worried the boy's mother/ they impoverished the boy)

These properties are blocked with the *preocupar* class by the fact that the animate DP in subject position is an unspecified eventuality (event or state), represented by the first sub-event in [[X ACT/STATE] CAUSE [BECOME [Y <STATE>]]]. Thus, to establish a coreference between an eventuality and the reflexive clitic *se*, which denotes a person, is not possible. Besides, there is no evidence to suppose that this eventuality, which is a causer, is not an external argument. If so, all verbs that has a causer subject argument should be unaccusative. Furthermore, if this unaccusative structure is typical of psych verbs, why other verbs as *empobrecer*, *cansar*, also do not accept the reflexivization? Therefore, these tests to evidence the psych verb unaccusative structure fail.

Analysis of some B&R's properties

- **Verbal passivization**
- A filha foi acalmada (por sua mãe).
the daughter was calmed.down by her mother
- *A mãe foi preocupada pela filha./ *A mãe foi empobrecida pelo filho.
the mother was worried by her daughter/ the mother was impoverished by his son
- Cançado and Franchi (1999) propose that the use of passive constructions in BP is restricted to sentences with a direct-causation interpretation, which is not the case for the semantic structures proposed:
- Paulo/A tempestade matou João. [direct causation]
Paulo/the storm killed João.
- João foi morto por Paulo/pela tempestade.
João was killed by Paulo/by the storm
- João matou de inveja o colega. [indirect causation]
João killed his colleague out of envy.
- *O colega foi morto de inveja por João.
- the colleague was killed out of envy by João
- The semantic structure can explain this for *preocupar* class, if we take the assumption above for granted. The subject of *preocupar* class is an unspecified eventuality, therefore it cannot be a direct causation. Consequently, these verbs cannot present a verbal passive.

Analysis of some B&R's properties

- **Exceptional binding anaphor**
- Estórias sobre si mesma_i preocupam Maria_i.
stories about herself worries Maria

However, Cançado & Franchi (1999) show that there are verbs that can select a complex NP for subject position, not necessarily associated with the thematic role experiencer, for which similar examples of exceptional anaphor binding can be provided:

- Estórias sobre si mesmo tem a aprovação do vaidoso mestre.
stories about himself have the approval of the vain master
- Fofocas dos próprios amigos não convêm a quem assuma tão importante cargo.
gossip about one's own friends do not suit whoever assumes an important job
- Uma foto de si mesmo na primeira página do jornal vale o dia para um político.
a photo of himself on the first page of the newspaper is a real boost for a politician

Cançado and Franchi (1999) concludes that rather than thinking about exceptional binding as a typical phenomenon of specific verbs, one should look deeper into binding theory for other solutions.

Pesetsky's proposal

Stativity in psych verbs:

- O aparelho de TV preocupou o João.
the TV set worried João
- O João (se) preocupou (com o aparelho de TV)
João worried about the TV set
- A construção da casa preocupou o homem.
the building of the house worried the man
- O homem (se) preocupou (com a construção da casa).
the man worried about the building of the house

A very important behavior of *preocupar* verbs in BP is to present a causative-inchoative alternation, just like other change of state verbs. Pesetsky gives a set of logical relationships to prove the meaning difference between two sentences above. But it is not totally convincing (Zubizarreta, 1992). In BP, the judgments about these inferences was not convergent, specially if the subject of *worry* is an eventuality, as in *building of the house*.

Pesetsky's proposal

It is easier to detect that sentences above are examples of verbal alternation due to the use of the clitic *se*, which is a mark of the causative-inchoative alternation. A better way to prove that the sentences above are just an alternation case is comparing these sentences with the prototypical alternating *quebrar* 'break' verb:

- A queda quebrou o vaso.
the fall broke the vase
O vaso (se) quebrou (com a queda).
the vase SE broke (with the fall)
- The examples above are structurally identical to psych-verbs. Many studies in the literature, and in many languages, show this verb as an example of the causative-inchoative alternation (Fillmore 1971, Levin 1993, Levin and Rappaport 2005, Cançado 2010, among many others). Therefore, propose that *quebrar* have two different forms is worthless.

Stativity

Tests of aspectual stativity in psych verbs:

Another point that must be investigated is the aspectual properties related to the stative form proposed for psych verbs. Using Dowty's (1979) tests, these verbs cannot be classified without doubts as states:

- O que aconteceu? (What has happened?)
? O João se preocupou com a construção da casa.
João worried about the building of the house
- O João está se preocupando com a construção da casa a toa. (imperfective paradox)
João is worrying about the building of the house
entails that:
O João se preocupou com a construção da casa.
João worried about the building of the house.

Stativity

- O João se preocupou com a construção da casa todos os dias.

(habituality)

João worried about the building of the house everyday.

Conclusion:

Based on the tests, one cannot affirm that the form *preocupar com* in BP is a state. Besides, it seems to depend on the NP nature (state or eventuality), which is not evidence for analyse a verb class. Thus, the aspect of psych verbs, or causative verbs, must be further investigate.

Final considerations

- Psych properties pointed out in the literature are not exclusive of psych verbs. There are other causative verbs that have the same behavior.
- There are no evidence for an unaccusative structure of *preocupar* class.
- Also, the stativity given to the alternation form of *preocupar* (*preocupar com*) cannot be confirmed by usual aspectual tests.
- A larger analysis must be given for the aspect of these verbs.

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Muito Obrigada! Thank you!