A Contribution to Verb Typology : the case of psych-verbs

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1. Towards a typology of psych-verbs

1.1 Semantic properties
Verbs expressing the experiencing of emotions or feelings (subcategorizing an Experiencer): to love / aimer, to hate /détester, to frighten / éffrayer, to worry / préoccuper, to please / plaire, etc.

1.2 Syntactic properties
Most studies are centred on the specific syntactic properties of this verb class, presupposing homogeneity within the class, but giving very few examples of psych-verbs. Belletti & Rizzi (88) consider the existence of 3 subclasses (whether the Experiencer is a subject, a direct object or an indirect object) and give <u>one</u> example for each. They point out specific syntactic properties of psych-verbs with direct object, which are to be explained by considering them as unaccusative.
The possibility of backward binding is one of these properties:

(1) a. * I propri$_i$ sostenitori temono Gianni$_i$.
　　　‘His$_i$ own supporters fear Gianni$_i$.’
 (2) a. I propri$_i$ sostenitori preoccupano Gianni$_i$.
　　　‘His own$_i$ supporters worry Gianni$_i$.’
- However, backward binding is a property shared by other causatives verbs (Pesetsky 1990):

(3) Each other$_i$’s remarks made (John and Mary)$_i$ angry.
(4) Pictures of each other$_i$ caused (John and Mary)$_i$ to start crying.

- Semantic reconstruction: a subject noun phrase is to be interpreted as an event, and the Experiencer is involved in this event, providing a possible explanation for this binding possibility:

(5) a. [Books] bore me.
　　b. [(I$_i$ read) books] bore(s) me$_i$.
Is semantic reconstruction available for other causative verbs?

- Other aspects are probably to be considered for binding conditions, such as verbs semantic properties as well as discourse properties (Cf. discussion of unaccusativity under a semantics-syntax interface approach in Levin & Rappaport Hovav (92)).

1.3 Aspectual properties
Reference to verbs belonging to this class are found in several studies using the four-class aspectual typology: states, activities, achievements and accomplishments. However, while some authors classify these verbs as Achievements (van Voorst 1992; Cançado 1995), Achievements / States (Dowty 1979), others question this category (Ruwet 1995) and even propose their categorization as Accomplishments (Smith 1991).

1.4 Polysemy
Some psych-verbs have agentive vs non agentive readings (like the verb *frighten* – someone or something frightens me on purpose or not) and many have psychological and non-psychological readings (like the verb *to devour* – someone devours food / Jealousy devoured her).
Are these different readings important for the establishment of a typology of such verbs?
In frameworks like GB (Belletti & Rizzi 88), those different readings receive a homonymic treatment and are not taken into consideration for the description of verbs of emotion.
But Ruwet (72, 94, 95) soon pointed the importance of studying the relationship between different meanings of verbs of emotion, and raised the issue of whether the change of psychological state was always encountered.

2. Syntactic properties

Objectives: to enlarge the set of verbs studied (total of 221) and to make use of corpus data to work towards a typology of Portuguese psych-verbs taking an Experiencer as (in)direct object.

2.1 Transitive construction
Subject Cause = NP (5a), infinitive clause (5b), that-clause (5c)
Direct object = Experiencer

(6) a. “Teresa sorriu, mais humana: (…) **Assusta-me** *a vida de casada*.” (L116)
　　　‘Teresa smiled, more human: *married life* frightens me.’
　　　‘la vie de marriée m’éffrait’
　　b. “Para mim, *ver o quanto éramos jovens* foi o que realmente me **assustou**.” (JC14055)
　　　‘For me, *seeing how young we were* was what really frightened me.’
　　　‘voir comme nous étions si jeune c’est ce qui m’a vraiment éffrayé’

c. "Não o **preocupava**   *que a aventura tivesse representado a hipoteca da courela* (…)." (L0023)
'[It] didn't worry him *that the adventure had meant the mortgage of the plot.'*
'ça ne le préoccupait pas *que l'aventure ait représenté l'hypothèque de la ferme*.'

2.2 Involvement of the Experiencer in the reconstructed event in subject position
See examples (5)

2.3 Subject specification
PP introduced by preposition *com* 'with / avec' functions as the specification of the subject and occurs in post-verbal position (7) or internally to the subject NP (8):

(7) "Teresa, amimada e voluntariosa, **fascinava-o** *com as suas declarações de independência, os seus paradoxos, as suas ideias extravagantes*." (L0116)
'Teresa, indulged and headstrong, fascinated him *with her declarations of independence, her paradoxes, her extravagant ideas*.'
'Teresa le fascinait *avec ses declarations d'indépendance…'*

(8) a. Aquele filme *com tantas cenas de terror* angustiava a Ana.
'That movie *with so many terror scenes* distressed Ana.'
    b. *As cenas de terror do filme* angustiavam a Ana. ("possessor subject", Levin 93)
'The terror scenes of the movie distressed Ana.'

See Jeanjean (1984).

2.4 Anticausative construction:

(9)a. "Ainda estudante, desceu um dia em Lisboa e **impressionou-se** *com a nossa Baixa, o puro pombalino*." (R1765)
'Still a student, he came down to Lisbon one day and got impressed *with our Baixa* (downtown), its pure [architecture of the time of] Pombal.'
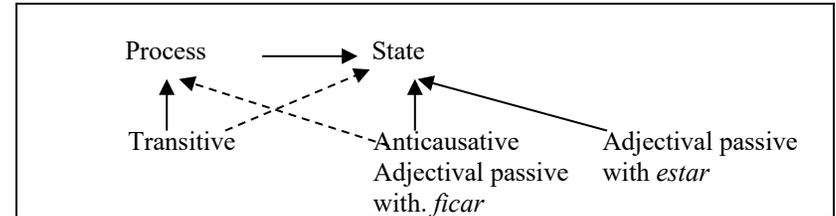
3 Aspectual properties

Accomplishments (ex: to build a house): a) preceding process; b) culmination point; c) duration
Achievements: punctual, with culmination (ex: to reach the top of the mountain) or not (to spot something).

Properties of *Accomplishments* not shared by psych-verbs:
- preceding process of the same nature as the predicate;
- change of state only occurs at the end of the process;
- the resultative state is not time delimited.

Properties of *Achievements* with culmination point not shared by psych-verbs:
- change of state only occurs at the end of the process;
- the resultative state is not time delimited.

Properties of *Achievements* without culmination not shared by psych-verbs:
- no preceding process
- no resultative state.

challenge for the aspectual typologies: there is a cause process (causativity) and there is a resultative state but there is no culmination (punctual change)

→ effect on the semantic roles of the subject of the transitive and complement of the anticausative: highlighting of the cause (*assustar*) or of the Object of Emotion (*preocupar*)

→ aspectual duration connects with cognitive activity: with *preocupar* the subject is the Object of Emotion and the Object of Though
((THINK x, about y) and (BE WORRY (x, about y))

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Accomplish-ment (build a house)	*achievement culmination (reach the top)*	*achievement no culmination (spot something)*	*psych + durative (worry someone)*	*psysch + punctual (frighten someone)*
with transition	with transition	with transition	with transition	with transition
preceding process =	preceding process ≠	no preceding process	simultaneous process	simultaneous process
culmination point	culmination point	no culmination point	no culmination point	no culmination point
resultative state	resultative state	no resultative state	resultative state	resultative state
durative	not durative	not durative	durative	durative
not punctual	punctual	punctual	not punctual	punctual
resultative state not delimited	? resultative state not delimited	n.a	resultative state delimited	resultative state delimited

4. Class variation

4.1 Argument structure + semantic properties of complements

- non occurring transitive construction: *zangar* 'to make / get angry' *transitive 0,8% / pronominal anticausative 43,5% past participle 40,9% (adjectival passives mostly)*
  → saliency on the resultative state and not on the process

- indirect *object: agradar*, *aprazer* 'to please to / plaire à', *desagradar* 'déplaire à'

- prepositional complement = object of emotion: *envergonhar* X de 'to make X ashamed of', *orgulhar / envaidecer* X de 'to make X proud of'

(10) Os bons resultados escolares **orgulhavam**-no <u>do filho</u>.
  'The good school results made him pround *of his son*.'
  'Les bons resultants scolaires l'énorgueillissaient *de son fils*.'

- prepositional clause complement (final reading): *entusiasmar* 'to enthuse, to stir', *desentusiasmar*

(11) "A marquesa **tê-la-á entusiasmado** *a fazer o percurso de El Ouatia* para

descobrir as circunstâncias da morte do marido." (R0190)
  'The marquise must have enthused / stirred her *to make the road of El Ouatia…*'
  'La marquise doit l'avoir enthousiasmée *à faire le parcours de El Ouatia…*'

4.2 anticausative construction

- *pronominal or non pronominal anticausative construction*:
enraivecer 'to enrage / enrager', *entristecer* 'to sadden / attrister', *desalentar*, *desanimar* 'to discourage / décourager', *desesperar* 'to despair /désesperer', *desassossegar* 'unsettle / perturber'

(12) "Dora **entristecera**, ensimesmada durante todo o diálogo dos dois (…)." (L0062)
  'Dora saddened, closed in herself during the whole dialogue of the other two.'
(13) "Mas juro-vos que me encantam as pequenas felicidades de alguns e **me entristeço** com as desgraças de todos (…)." (L0241)
  'But I swear to you that the small happinesses of some delight me and that I sadden with the misfortunes of everyone.'

- prepositional complement: *divertir (*subject Experiencer + Agent of an activity)

(14) "Porque o Dick não sabia conversar e só **se divertia** *a jogar jogos de bolas ou fazer qualquer exercício*." (L0397)
  'Because Dick didn't know how to chat and only had fun playing ball games or doing exercise'
  s'amuser à jouer au cartes
(15) a. O que é que vais fazer? What are you going to do? Qu'est-ce que tu vas faire?
  b. Vou divertir-me. I'm going to have fun. Je vais m'amuser.
  c. # Vou assustar-me. # I'm going to get frightened # Je vais m'éffrayer.
  d. # Vou preocupar-me. # I'm going to get get worried. # Je vais me préoccuper.

- *change in relationship* (preposition *de*): *aborrecer, chatear, enfadar, entediar* 'to annoy / ennuyer'

(16) "No Louvre desde 1976, ela é conservadora no departamento de

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Esculturas e nunca **se aborrece** "*de aprender e de partilhar*" ." (R1791)
 'At the Louvre since 1976, she is in charge of the Sculptures Department and she never gets tired *of learning and sharing*.'
'Au Louvre depuis 1976, elle est directrice du department de Sculptures et ne s'ennuie jamais *d'apprendre et de partager*.'

Verbs expressing a psychological change regarding an event or an entity.
⇒ longer process leading to the change of state, contrary to the other verbs of the class.

- *PP Target of Emotion (also involving change of relationship); zangar, arreliar, chatear, aborrecer, encolerizar, impacientar, enraivecer, ?irar, acirrar 'enrage / enrager'*

(17) "Mas, ou por isso ou por outras, tempos depois a senhora Rita **zangara-se com** a Adélia e pusera-a à porta de casa." (L0020)
'But, because of this or other [things], some time after Mrs. Rita got angry at Adelia and ….'

- agentivity + no change of state: *humilhar* 'humiliate /humilier', *lisonjear* 'flatter / flatter'
Verbs expressing an action that can or not result in a change of psychological state, leading to two readings → saliency of the cause or agent over the resultative state → the verb lexicalizes the process leading to the change of state (flattery) instead of the resulting state (worry).

(18) O Rui **humilhou-me** / achincalhou-me / lisonjeou-me diante dos meus amigos mas eu não me senti humilhado / achincalhado / lisonjeado.
'Rui humiliated / flattered me in front of my friends but I didn't feel humiliated / flattered.'
(19) * A notícia da queda do avião **preocupou-me** mas eu não fiquei preocupado.
'The news of the falling of an airplane worried me but I didn't get worried.'

There is saliency on the process ⇒ the anticausative construction is ungrammatical:

(20) ?? Eu humilhei-me com os seus insultos.

 "(…) prototype theory would predict a prototype clustering distribution around the prototype/mean, whereby the majority – however large – of the membership can be found within a reasonable, well-defined distance." (Givón 1984: 16)

5. Polysemy

- is there a syntactic relation and/or semantic relation between the senses of psych-verbs?
- if yes, what kind of relation is established?
- are senses structures along polysemy, homonymy?

5.1 Physical and/or psychological effect

Two variants of meaning: allossemy (Deane 1988)

(21) "Este piedoso alvoroço **afogueou-lhe** as faces pálidas (…)." (L0245)
'This emotion of piety *made* her white faces *blush*.'
(22) "Tudo a horrorizava, tudo a **nauseava**. Sentada na grande varanda, defronte das montanhas cujo panorama outrora tanto a embevecera, tinha calafrios de medo (…)". (L0731)
'Everything horrified her, everything *nauseated* her. Seated on the balcony, facing the mountains, a panorama that had delighted her so much before, she had shivers of fear'

Relation between physiological and psychological effect: emotion as an organic reaction.

5.2 Underspecification

Other verbs, like *acalmar* 'to calm', *fortalecer* 'to strengthen', *abrandar* 'to reduce/soften', don't refer to a change of state but instead to the gradation of a (psychological) state.
- they aspectually behave like accomplishments;
- they are deajectival;
- and they allow for broad coverage of lexical entities in the position of direct object.

(23) acalmar uma pessoa 'to calm someone', acalmar o trânsito 'to calm the traffic', acalmar a Bolsa 'to calm the Stock Exchange', acalmar as ondas 'to calm the waves'

Their meaning expresses a gradation of a state and the nature of the state depends on the semantic properties of the direct object.

The vagueness of these verbs encounters direct parallel in the vagueness of the adjectives they derive from. The importance of the context for the definition of the meaning of these verbs/adjectives has led to proposals such as external polysemy (Martin 1979) or selective binding (Pustejovsky 1995).

5.3 Regular polysemy

5.3.1 Semantic fields

Verbs with psych-meaning come from regular semantic fields with the following elements of meaning:

(i) contact (*tocar* 'to touch', *marcar* 'to mark', *atingir* 'to reach' (vs *alcançar* 'to reach' – no contact), *arrebatar* 'to snatch', *agarrar* 'to grab', *empolgar* 'to grab')

(24) "(…) o subcomandante Marcos **arrebatou** os "fiéis" com um discurso (…)" (J18065)
'sub-captain Marcos enraptured (lit. 'snatched') the "faithful" with a discourse (…).'

(ii) contact + aggression (*agredir* 'to assault', *torturar* 'to torture', *massacrar* 'to massacre', *dilacerar* 'to dilacerate', *bater* 'to beat', *matar* 'to kill')

(iii) contact + wearing out (*devorar* 'to devour', *minar* 'to mine, *corroer* 'to corrode', *desgastar* 'to wear away', *ralar* 'to grate', *moer* 'to grind')

(25) "**Devora-nos** uma impaciência insuportável (…)." (L0016)
'An unbearable impatience devours us.'

(iv) make X go up / down (*levantar* 'to lift', *demolir* 'to demolish', *calcar* 'to tread', *abismar* 'to cast into an abyss / to astonish', *arrasar* 'to pull down', *deprimir* 'to lower')

(v) movement / imobility (*mexer* 'to touch / to move', *bulir* 'to move', *agitar* 'to agitate / to shake, *paralisar* 'paralyse', *petrificar* 'petrify')

(26) "Sixto **agitou-se** de alegria (…)." (L0062)
'Sixto shacked with happiness.'

(vi) light / shadow (*iluminar* 'to illuminate', *nublar*, *anuviar*, *assombrar* 'to cloud')

(27) "(…) Xavier entrou no nosso gabinete, com um largo sorriso a **iluminar-lhe** a cara (…)." (L0749)
'Xavier entered our office, with a large smile illuminating his face (lit. illuminating him(dative) the face.'

(vii) energy (*electrizar* 'to electrize', *electrificar* 'to electrify')

(28) "(…) reaparece Elvira para a grande cena da sua demência (...), **electrizando** com a sua espantosa técnica vocal (…)". (J17341)
'Elvira returns for the grand scene of her dementia, electrifying with her astonishing vocal technique.'

(viii) heat / cold (*ferver* 'to boil', *aquecer* 'to heat', *acender* 'to light', *arrefecer* 'to cool')

(29) "O velho veio de lá com os olhos pisados, mortos de raiva, e ofendido na dignidade. Aquilo **aqueceu-me** logo todas as **caldeiras do sangue** (…)". (L0518)
'The old man came back with his eyes bruised, full of rage, and ofended in his dignity. It immediately heated all my boilers of the blood (lit. heated me(dative/possessive) all the boilers of the blood.'

5.3.2 Syntax and variation

- Intransitive or pronominal anticausative:

(18) a. "Mas pouco durou a operação, pois com o lume e a água o telhado **abateu** com enorme estrondo." (L69)
'But the operation didn't last long, because with the fire and the water the ceiling *came down* with enormous noise.'
b. "O telhado **abate-se** numa breve reentrância com os bicos voltados para o céu. (L273)
'The ceiling *falls down* in a small recess with the peaks turned to the sky.'
(19) a. "Olhou o cariz do céu: - Não está seguro. Os ânimos **abateram**."(L222)
' He looked at the sky: - It's not safe. The feelings / souls *fell down*.'
b. "Sofrendo com o sofrimento da filha, recuando perante a ameaça da morte da esposa, a sua alma sangrava e **abatia-se**. (L821)
'Suffering with her daughter's suffering, stepping back at the threat of his wife's death, his soul bled and *collapsed* (fell down).'

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- Intransitive anticausative:

(20) a. A sopa **aqueceu**. / * A sopa **aqueceu-se**.
    'The soup got hot.'
    b. Os ânimos **aqueceram**. / * Os ânimos **aqueceram-se**.
    'Feelings / souls got hot.'

- No anticausative construction:

(21) a. * O prédio **demoliu-se**.
    'The building demolished.'
    b. * Ao ouvirem a notícia, os colegas **demoliram-se**.
    'When they heard the news, the colleagues demolished.'

But high frequency of the psych-meaning in the corpus → pronominal anticausative construction is grammatical (22b) even when not possible with the non-psych meaning (22a):

(22) a. * O queijo **ralava-se**.
    'The cheese grated.'
    b. O João **ralava-se** muito com a saúde dos filhos.
    'Joao worried about his children's health.'

	non psych meaning	psych meaning
1	AC pron.	AC pron. (*magnetizar 'to magnetize', electrizar 'to electrify'*)
2a	**AC pron. or non pron.**	AC pron. or non pron. (*abater 'to put down'*)
2b	**AC non pron. (*-ecer*)**	AC non pron. (*aquecer, 'to heat'*)
2c	***AC**	*AC (*derrubar 'to throw down'*)
3a	AC non pron.	**AC pron**. (*inflamar, 'to inflame'*)
3b	*AC	**AC pron.** (*empolgar 'to grabe', ralar 'to rasp', deprimir 'to depress'*)

AC = anticausative construction
Pron = pronominal

There is a syntactic relation between meanings: syntactic properties of the non-psych meaning determine (along with frequency) the syntactic properties of the psych-meaning.

a) less prototypical psych-properties by influence of the non-psych meaning
b) non-lexicalization of the resulting psych-state: context is more important for the psych-meaning to occur → direct object as psych-nominal (emotions) or metonymic (body part)
c) regularity of semantic fields (Lehrer 1990, Willems 1984-85) → analogical processes, metaphorical relation
d) syntactic influence of the non-psych meaning overturned by frequency of the psych meaning
e) psych-meaning of the noun in the case of denominal verbs.

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