

## A common syntax for psychological and locative verbs

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**Overview:** This paper argues that object-experiencer psychological verbs (OEPVs) and locative verbs have the same syntactic structure in their stative reading. I show that the quirky grammatical properties involving the Experiencer objects of OEPVs (the so-called ‘psych effects’) also appear with the Ground objects of locative verbs. I propose a theoretical account that derives psychological and spatial predicates from a core prepositional structure. In so doing, I dispense with thematic roles as grammatical primitives, in the lines of current neo-constructionist, aspectual approaches to thematic interpretation.

**Psych effects:** Stative OEPVs (*worry, amuse, bore...*) display many grammatical quirks across languages known as ‘psych effects’. These effects involve the Experiencer object: despite being morphologically accusative, it patterns with DPs marked with oblique/ dative case (see Belletti & Rizzi 1988; Anagnostopoulou 1999; and Landau 2010 for a recent overview). Among these are:

1. Greek allows for relativization of dative arguments provided a resumptive clitic appears (e.g. (1a)), something impossible with accusative objects (e.g. (1b)); accusative experiencers behave as datives in that respect (e.g. (1c)). The same effect is found in Hebrew (I do not provide the Hebrew examples in this abstract for space reasons).
2. In Russian, accusative objects can switch to genitive case under clausemate negation (e.g. (2a)). DPs bearing inherent case cannot do this (e.g. (2b)); Accusative experiencers behave in this respect like DPs marked for inherent case (e.g. (2c)).
3. Italian allows for left-dislocated experiencers to appear with a dative marker and be linked to a resumptive accusative clitic (3b), which other accusative objects cannot do (3a).
4. Other psych effects include lack of verbal passives, reflexives and periphrastic causatives in Spanish and Italian, not exemplified in this abstract for space reasons.

**Experiencers, case and theta-role:** Psych effects have been taken as evidence that Experiencers are somehow ‘special’, in that they seem to have dedicated syntactic structures. This has been explained by the purported link between inherent case and theta-role assignment (Chomsky 1986). Landau (2010) proposes that the peculiarity of OEPVs is that they contain a PP which contains a silent prepositional head  $P_{\psi}$  that assigns inherent case and an Experiencer theta-role to its DP complement. By modeling these experiencers as unaccusative non-canonical objects within a prepositional domain that assigns them case, Landau successfully explains the psych effects mentioned in 1-4.

**Novel data from locative verbs:** I present novel evidence from locative verbs that casts doubts on the claim that there are dedicated ‘Experiencer’ structures. My data come from stative locative verbs, which denote a spatial relation between two entities (*surround, cover, flank...*). I refer to their subjects as Figures and to their objects as Grounds, following Hale & Keyser’s terminology. The objects of these verbs display morphological accusative case yet they behave exactly like stative OEPVs, i.e. these verbs show ‘psych effects’ too, as the (d) examples show.

- (1) Obligatory resumptive pronoun with relativized object in Greek
  - a. Simbatho ton anthropo pu o Petros \*(tu) edhose to vivlio.  
like.1SG the man.ACC that the Peter.NOM him.CL.DAT gave the book.ACC  
‘I like the man that Peter gave him the book.’
  - b. \*Simpatho ton anthropo pu ton sinandise o Petros  
like.1SG the man.ACC that CL.DAT met the Peter.NOM  
‘I like the man that Peter met him.’
  - c. O anthropos pu \*(ton) endhiaferi i Maria ine ilithios.  
the man that CL.ACC interests the Mary.NOM is stupid  
‘The man that Mary interests is stupid.’ (Anagnostopoulou 1999:77)
  - d. O anthropos pu ?(ton) perikiklonun ta epipla ine omorfos.  
the man that him. CL surround the furniture is handsome  
‘The man that the furniture surround is handsome.’
- (2) Genitive of negation in Russian
  - a. Ja ne našel tzvety/ tzvetov.  
I not found flowers.ACC flowers.GEN ‘I didn’t find (the) flowers.’

- b. On ne upravljao fabrikom/ \*fabriku.  
 he not managed factory.INSTR factory.GEN 'He didn't manage a/the factory.'
- c. Šum ne ogorčio ni jednu devojku/ \*odnoj devojki.  
 noise.NOM not upset no one girl.ACC one girl.GEN  
 'The noise didn't upset a single girl.' (Legendre & Akimova 1993, via Landau 2010)
- d. Zabor ne okružuje dom/ {?/?/?}doma.  
 wall NEG surrounds house.ACC {?/?/?}house.GEN  
 'The wall does not surround the house.'

- (3) Dislocated dative-marked objects with an accusative resumptive pronoun in Italian
- a. \*A Giorgio, la gente non lo conosce.  
 to Giorgio the people not him know.
- b. A Giorgio, questi argomenti non l'hanno convinto.  
 DAT Giorgio these arguments not him.ACC.have convinced
- c. A Giorgio, non lo circondano i palloni, lo circondano le sedie  
 DAT Giorgio not him.ACC surround the balls, him.ACC surround the chairs  
 'Giorgio is not surrounded by balls, but by chairs.'
- Context:* there are several people with different objects around them. Speaker A believes that Giorgio has balls around him, but Speaker B corrects him by uttering (5b).

**The proposal:** I propose, extending Landau's (2010) proposal for OEPVs, that the argument structure of both OEPVs and locative verbs is articulated by a PP, whose head  $P_{\Psi}$  assigns structural case to its complement. An example of the syntactic configuration is given in (5), from (4).

- (4) a. The economic crisis worries Mary.    b. The fence surrounds the house.  
 (5) [ $VP$  worry/ surround [ $PP$  [ $DP$  the economic crisis/the fence ] [ $P'$   $P_{\Psi}$  [ $DP$  Mary/the house ]]]]

I depart from Landau's claim that  $P_{\Psi}$  assigns the theta-role 'Experiencer' to its complement, since Grounds like *the house* in (4) are clearly not Experiencers (they are not even sentient entities). Instead, I propose that the syntactic configuration in (5) denotes a generalized relation between two entities at an abstract level (given that Ps are birrelational, Hale & Keyser 2002). If the structure is lexicalized by a psychological predicate, the relation is interpreted as being mental; if it is lexicalized by a locative predicate, the relation is interpreted as being spatial. The formal lexical entry of is provided in (6).

- (6)  $[[P_{\Psi}]] = \lambda x, y \exists \varepsilon, V [EIGEN(\varepsilon, x) \ \& \ root(V, \varepsilon) \ \& \ ENDPOINT(y, V)]$

I assume a generalized variable  $\varepsilon$  that can be understood as a physical or a mental space depending on the root that lexicalizes the structure.  $EIGEN(\varepsilon, x)$  denotes a relation between an entity  $x$  (the complement of  $P_{\Psi}$ ) and the space  $\varepsilon$  it occupies. Then we take that space and project a set of vectors  $V$  away from it, which I represent as  $root(V, \varepsilon)$ . The label *root* stands for whatever psychological or locative-denoting root lexicalizes the  $P_{\Psi}$  head. Finally,  $endpoint(y, V)$  gives us the final point  $y$  of the vectors, which again depending on the root can be understood as a mental Stimulus or a locative Figure.

**Conclusions:** This paper has provided a uniform syntactico-semantic analysis of OEPVs and locative verbs, from the novel observation that 'psych effects' also hold for locative verbs in a variety of languages. My findings have challenged the received view that an Experiencer theta-role is somehow at play in the peculiar syntactic properties of these verbal predicates (e.g. by providing an inherent case and theta-assignment account for experiencer objects, as in Landau 2010). I have proposed an alternative analysis that derives their thematic interpretation from the aspectual semantics of the functional head  $P_{\Psi}$ , in the lines of current neo-constructionist approaches to event structure.

**References:** Anagnostopoulou, E. 1999. On Experiencers. *Studies in Greek Syntax*. Dordrecht: Kluwer, 67–93 ♦ Belletti, A. & L. Rizzi. 1988. Psych-verbs and theta-theory. *Natural Language and Natural Language and Linguistic Theory* 6, 291–352 ♦ Chomsky, N. 1986a. *Knowledge of language: its nature, origin and use*, Praeger, New York ♦ Hale, K. & S. Keyser. 2002. *Prolegomenon to a Theory of Argument Structure*. Cambridge, MA: MIT Press ♦ Landau, I. 2010. *The Locative Syntax of Experiencers*. Linguistic Inquiry Monograph 53. Cambridge, MA: MIT Press.