

### **Decomposing the VP: aspect, argument structure and the instrumental-subject alternation**

**Goals.** I argue that stative causative (StC) and change-of-state (CoS) VPs share a bi-partite VP structure, unlike activities and states, which are composed of just one VP. I provide novel evidence for my claim from the ability of both StCs and CoS VPs to undergo the instrumental-subject (I-S) alternation, as well as the formation of adjectival passives (APass). I further propose a two-way split in StCs: *surround*-type verbs and *control*-type verbs, and argue that they correspond to different syntactic structures.

**Setting the stage.** In addition to the classic Vendlerian event types—telics/CoS, activities and states—there is a fourth aspectual class, StCs, which despite being stative share a causative component with CoS. The main lexical classes identified as StCs are: *i*) object-experiencer psychological verbs (cf. (1a)); *ii*) *surround*-type verbs (Kratzer 2000; Rothmayr 2009) (cf. (1b)); *iii*) *control*-type verbs (García-Pardo to appear) (cf. (1c)). This paper focuses on classes *ii*) and *iii*).

(1) a. Storms frighten John.      b. The mountains surround the valley.      c. The army controls the city.  
Despite being clearly a distinct *Aktionsart* type, StCs have received little attention in the literature in comparison to the classic Vendlerian types. Work on APass in German (Kratzer 2000) and Spanish (García-Pardo to appear) has defended that both CoS and StCs verbs denote complex causative-resultative eventualities. In the case of CoS, as has often been claimed, the causing eventuality is a dynamic event; in the case of StCs, the causing eventuality is a state. Since both event types have a result state in their decomposition, they are both good inputs for APass (cf. (2a-b)). Activities and states, on the other hand, are out in APass, given that they do not have a resultative component (cf. (2c-d), from Spanish).

- (2) a. La ciudad está destruida. (CoS)      b. El museo está vigilado. (StC)  
    the city is destroyed                      the museum is surveilled  
    c. \*El gato está acariciado. (Activity)      d. \*Pedro está amado. (State)  
    the cat is petted                              Pedro is loved

**The I-S alternation.** I observe that causative-resultative VPs allow for the I-S alternation, i.e. the argument structure alternation by which a transitive VP can either appear with an agent subject plus an optional instrumental-PP or an instrumental subject with an absent agent. That CoS allow for the I-S alternation has already been noticed (Dudchuck 2007; Beavers & Koontz-Garboden 2012) (cf. (3)), but the observation that *control*-type verbs allow for it too is, as far as I know, novel (cf. (4)). Activities can have PP-instruments but no I-S counterpart (cf. (5)), and simple states do not accept instrument-PPs to begin with (cf. (6)). The data is drawn for Spanish, but is easily extendable to languages like English.

- (3) a. El niño rompió la ventana con el balón.      (4) a. Yo protejo mi casa con una valla electricada.  
    the kid broke the window with a ball.              I protect my house with a fence electrified  
    b. El balón rompió la ventana.                      b. La valla electricada protege mi casa.  
    the ball broke the window                              the fence electrified protects my house.  
(5) a. Juan frotó la mesa con un cepillo.      (6) a. María posee una casa (\*con una escritura).  
    Juan scrubbed the table with a brush              María owns a house with a deed  
    b. #El cepillo frotó la mesa.                      b. Juan sabe matemáticas (\*con su cerebro).  
    the brush scrubbed the table                              Juan knows Math with his brain

**The proposal.** I argue that causative-resultative VPs are formed by a bipartite VP structure composed of a lower VP that denotes a result state and a higher VP that denotes a causing eventuality that can either be a dynamic event (i.e. CoS VPs, cf. Ramchand 2008) or a state (i.e. StC VPs). The causative-resultative reading arises by virtue of the syntactic composition of the VPs, with each VP denoting a separate sub-event. The event participants are interpreted by virtue of their syntactic position in the VP-structure. Activities and states, in turn, are composed of a single VP, dynamic in the case of Activities and stative in the case of States, i.e. both are mono-eventive. The external argument is introduced by VoiceP (Kratzer 1996). I represent eventive (i.e. dynamic) verbal heads as  $V_{EV}$  and stative ones as  $V_{ST}$ .

My proposal is that it is precisely this complex syntactic configuration that allows for the I-S alternation phenomenon (see Dudchuck 2007 for a related proposal for CoS VPs). Instrumental-PPs are merged in the specifier of the higher VP and they are interpreted and agent subjects are introduced by VoiceP. Themes are introduced in the specifier of the lower result-denoting VP. I provide a sample structure in

(7). When we have an I-S variant, VoiceP simply does not project, and thereby an agent is not introduced, and the instrument in (Spec,VP) ends up as the subject of the sentence (cf. (7b)).

- (7) a. [<sub>VoiceP</sub> Agent subject [<sub>VP</sub> Instrumental-PP [<sub>VP</sub> Object ]]] (Agent-subject structure)  
b. [<sub>VP</sub> Instrumental-subject [<sub>VP</sub> Object ]]] (I-S structure)

Evidence for this structure comes from the fact that I-S structures cannot form verbal passives, given that VoiceP is the locus of passivization (Kratzer 1996), both with CoS VPs (cf. (8a)) and StC VPs (cf. (8b)).

- (8) a. El vestido fue quemado {por el niño/ \*por la lupa}.  
the dress was burned by the boy by the magnifier  
b. El museo era protegido {por la policía/ \*por rayos infrarrojos}.  
the museum was protected by the police by rays infrared

**The case of *surround*-verbs.** Within the class of StCs, *surround*-verbs behave differently from *control*-verbs. With *control*-verbs, the I-S alternation does not alter the aspectual type of the event: it remains a StC in both versions, just like CoS verbs remain so in both versions (cf. (4)). *Surround*-verbs, on the other hand, also alternate aspectually, i.e. the I-S alternation is also an aspectual alternation: the agent-subject version is eventive/CoS (cf. (9a)) and the I-S version is stative, i.e. a StC (cf. (9b)) (Rothmayr 2009).

- (9) a. El vecino cubrió el coche con una manta. b. La manta cubre el coche.  
the neighbor covered the car with a blanket the blanket covers the car

Note that it is possible to have non-animate subjects in eventive constructions (cf. (10)). What is not possible, crucially, is to have an I-S alternation that satisfies the same scenario without an aspect alternation. For instance, sentence (10) cannot be the I-S counterpart of (9a): *the blanket* in (10) cannot be understood to have been moved to cover the car by the neighbor, as in (9a), but rather, the blanket has come to cover the car due to some causing event, eg. a blast of wind. In other words, there is no agent at any level.

- (10) La manta cubrió el coche (en dos minutos).  
the blanket covered the car in two minutes

I propose that *surround*-verbs, which inherently have a locative meaning, are built by means of a central coincidence PP (Hale & Keyser 2002) that relates a theme and a location (cf. (11)). Agent-subjects are introduced by VoiceP (cf. (12a) for (9a)). I-S structures lack VoiceP, and the theme raises to the stative (Spec,VP) position where it is interpreted as a causer (cf. (12b) from (9a)). Similarly, in (12c), from (10), the theme raises to an eventive (Spec,VP) and thus it is interpreted as a participant of a causing event.

- (11) [<sub>PP</sub> the blanket [<sub>P'</sub> P<sub>[+co]</sub> [<sub>DP</sub> the car ]]] (Base syntax of *surround*-verbs)  
(12) a. [<sub>VoiceP</sub> the neighbor [<sub>VP</sub> V<sub>EV</sub> [<sub>PP</sub> with a blanket [<sub>P'</sub> P<sub>[+co]</sub> [<sub>DP</sub> the car ]]]] (Agent-subject structure)  
b. [<sub>VP</sub> the blanket V<sub>ST</sub> [<sub>PP</sub> ~~the blanket~~ [<sub>P'</sub> P<sub>[+co]</sub> [<sub>DP</sub> the car ]]]] (I-S structure)  
c. [<sub>VP</sub> the blanket V<sub>EV</sub> [<sub>PP</sub> ~~the blanket~~ [<sub>P'</sub> P<sub>[+co]</sub> [<sub>DP</sub> the car ]]]] (Non-agentive eventive version)

This account explains why we cannot have stative agent counterparts with I-S structures: if we did, the agent would be interpreted as the theme of the locative relation denoted by the PP (like *the blanket* in (12b)). That is, the way that *surround*-type verbs are built syntactically precludes that possibility.

**Conclusions.** This paper has studied the I-S alternation phenomenon in the context of StC VPs. The resulting analysis not only accounts for the novel data with *control*-type verbs, but it also provides further support for a syntactic articulation of the VP. In particular, it shows how the syntactic structure of the VP determines *Aktionsart* and argument structure, both in terms of possible configurations as well as in their interpretation, i.e. argument structure and event structure are tightly related and syntactically determined.

**References.** Beavers, J. & A. Koontz-Garboden. 2012. Manner and Result in the Roots of Verbal Meaning. *Linguistic Inquiry*, 43(3), 331–369 • Dudchuck, P. 2007. Instrument/Subject Alternation and Event Structure: Evidence from Russian. *Linguistics Investigations into Formal Description of Slavic Languages*, 503-514 • García-Pardo, A. to appear. The aspectual composition of adjectival passives. *Proceedings of CLS50* • Hale, K. & S. Keyser. 2002. *Prolegomenon to a Theory of Argument Structure*. Cambridge, MA: MIT Press • Kratzer, A. 1996. Severing the external argument from the verb. *Phrase structure and the Lexicon*. Dordrecht: Kluwer, 109-37 • Kratzer, A. 2000. Building statives. *Proceedings of the 26th Meeting of the Berkeley Linguistics Society*. Berkeley, CA: Berkeley Linguistics Society, 385-99 • Ramchand, G. 2008. *Verb Meaning and the Lexicon: A First Phase Syntax*. Cambridge: Cambridge University Press • Rothmayr, A. 2009. *The Structure of Stative Verbs*. Amsterdam: John Benjamins.