

## Anticausatives vis-à-vis unaccusatives

**Overview.** It has long been assumed that the anticausative is a derived/morphologically marked unaccusative (see Chierchia 2004:56, Alexiadou et al. 2006, Koontz-Garboden 2007, Levin 2008), hence their semantics is necessarily identical. This view is problematic for languages that allow the derivation of both unaccusatives and anticausatives from the same verb stem (e.g., Labelle 1992 for French, Lidz 2004 for Kannada). In this paper, I take into account data from Russian and argue for an event-based analysis of unaccusatives and anticausatives in which they minimally differ as to (i) their subevental configuration and (ii) the (implicit) initiator thematic relation.

**Data.** In Russian, a number of verb stems can produce not a pair of predicates of the form “causative – unaccusative/anticausative”, but a triple like the one in (1).

(1) *soxnu-t'* (dry, intr., unaccusative) — *suši-t'* (dry, tr.) — *suši-t'-sja* (dry, intr., anticausative)

The intransitive members of this triple, *soxnut'* and *sušit'sja*, exhibit a number of similarities: both refer to a change of state of the theme argument, disallow agentive adjuncts, (2), and pass Chierchia's (2004:42-44) “da se” diagnostics, (3), indicating that both are associated with the causative event structure.

(2) Bel'je vy-sox-l-o || vy-suši-l-o-sj (\*Vas-ej).  
linen PRF-dry-PST-N PRF-dry-PST-N-REFL V.-INSTR  
'The linen dried (unacc.) || dried (anticaus.) (\*by Vasja).

(3) Bel'je sam-o vy-sox-l-o || vy-suši-l-o-sj.  
linen by.itself-N PRF-dry-PST-N PRF-dry-PST-N-REFL  
'The linen dried (unacc.) || dried (anticaus.) by itself.'

There are, however, crucial meaning differences between *soxnut'* and *sušit'sja*. First, while the perfective anticausative does entail a corresponding unaccusative, its imperfective counterpart does not, so (4b), unlike (4a), is not a contradiction.

(4) a. \*Bel'je vy-suši-l-o-sj, no (soveršenno) ne vy-sox-l-o.  
linen PRF-dry-PST-N-REFL but at.all NEG dry.unacc-PST-N  
Lit. The linen dried (unacc.), but did not dry (anticaus.) at all.

b. Bel'je uže celyj čas suš-it-sja, no soveršenno ne soxn-et.  
linen already whole hour dry-PRS.3SG-REFL but at.all NEG dry-PRS.3SG  
Lit. The linen has been drying (anticaus.) for an hour, but is not drying (unacc.) at all.

Secondly, *sox-nu-t'* and *suš-i-t'-sja* are distinguished by what I call non-volitional initiation scenarios. Unlike the unaccusative, the anticausative is not felicitous if the process has not been volitionally initiated, (5). If an eventuality is (under normal circumstances) brought about by natural forces, the anticausative is definitely odd, (6). The same sort of oddity is triggered by adverbials like *slučajno* ‘by chance’, not compatible with the goal-directed initiation.

(5) Scenario. A housemaid washed the linen but forget to hang it for drying, and left it in a bowl.

When she remembered about the linen two days later, she found that ...

<sup>OK</sup> 'The linen dried (unacc.)' || \*'The linen dried (anticaus.)'

(6) 'By the end of summer, the grass in the meadow completely dried (unacc.) up || ??dried (anticaus.) up.'

These non-trivial relations between unaccusatives and anticausatives are not expected if they are associated with the same underlying semantic configuration, and call for an explanation.

**Proposal.** In the spirit of many recent theories of unaccusatives/anticausatives (Rappaport Hovav & Levin 1998, Davis & Demirdache 2000, Reinhart 2002, Alexiadou et al. 2006, Koontz-Garboden 2007, and especially Chierchia 2004), I suggest the both of them are based on the complex event structure consisting of two subevents connected by the relation of immediate causation, or the causing-of relation (Kratzer 2005), but denote different event predicates:

(7) a. || [<sub>VP</sub> dry (unacc.) linen] || =  $\lambda e \exists e' \exists \theta [\theta(\text{linen})(e') \wedge \text{cause}(e)(e') \wedge \text{dry}(e) \wedge \text{theme}(\text{linen})(e)]$   
b. || [<sub>VP</sub> dry (anticaus.) linen] || =  $\lambda e \exists e' \exists x \exists \theta [\text{initiator}(x)(e) \wedge \theta(\text{linen})(e) \wedge \text{cause}(e')(e) \wedge \text{dry}(e') \wedge \text{theme}(\text{linen})(e')]$

(7a-b) inherits from Chierchia 2004 the overall causal architecture of unaccusatives/anticausatives as well as a specific assumption about the thematic relation  $\theta$  between the causing subevent and an individual that undergoes change in the caused subevent. (As in Chierchia 2004:56, the  $\theta$  variable

over thematic relations is existentially bound; as a result,  $\theta$  can be identified as the causer relation, hence both unaccusatives and anticausatives can pass the “da se” test in (3)).

Two novel aspects of the analysis in (7) are the way event variables are existentially bound and the initiator thematic relation in (7b), discussed below.

The hypothesis is that the unaccusative in (7a) externalizes the caused change of state subevent, existentially binding the causing one, while the anticausative in (12b), the other way round, externalizes the causing subevent. The unaccusative thus denotes processes (brought about by some causing event) in which an individual is becoming dry. The anticausative denotes causing events that bring about an individual’s becoming dry.

This accounts straightforwardly for the entailment pattern in (4). Assuming an existential closure of the event variable and ignoring tense for simplicity we get (8a-b) as semantic representations of perfective variants of unaccusative and anticausative clauses, and (8b) clearly entails (8a):

- (8) a.  $\parallel \text{linen dried(unacc)-PFV} \parallel = \exists e \exists e' \exists \theta [\theta(\text{linen})(e) \wedge \text{cause}(e')(e) \wedge \text{dry}(e') \wedge \text{theme}(\text{linen})(e')]$   
 b.  $\parallel \text{linen dried(anticaus.)-PFV} \parallel = \exists e \exists e' \exists x \exists \theta [\text{initiator}(x)(e) \wedge \theta(\text{linen})(e) \wedge \text{cause}(e')(e) \wedge \text{dry}(e') \wedge \text{theme}(\text{linen})(e')]$

Assuming Landman’s (1992) analysis of the imperfective in terms of the PROG operator mapping events onto their stages (nothing crucial relies on this choice, however), we get (9) for the imperfective anticausative.

- (9)  $\parallel \text{linen dried(anticaus.)-IPFV} \parallel = \exists e [\text{PROG}(e, \lambda e' . \exists e'' \exists x \exists f [\text{initiator}(x)(e') \wedge f(\text{linen})(e') \wedge \text{cause}(e'')(e') \wedge \text{dry}(e'') \wedge \text{theme}(\text{linen})(e'')])]$

According to (9), a stage of a causing subevent from the original extension of the anticausative predicate occurs in the base world. But since causally related eventualities need not be temporally coextensive, neither the whole caused change of state subevent, nor any of its proper parts need to exist in the base world. This is exactly what happens in (4b), and the lack of entailment from imperfective anticausatives to imperfective unaccusatives is thus correctly predicted.

Another significant aspect of the analysis in (7) is that the anticausative, unlike the unaccusative, introduces the initiator thematic relation, with a corresponding individual variable existentially bound. If one assumes reasonable postulates for this relation (initiator is a participant who acts volitionally, who causes an eventuality to come to existence, but does not necessarily exercise control over its development; the elaboration is left for the full version of the paper) contrasts in (5)-(6) follow.

To complete the exposition, an outline of the compositional derivation is due. I suggest that verbs like *soxnut'* and *sušit' sja* (as well as their transitive counterpart *sušit'*, discussed in the full version of the paper) project VPs that denote the same relation between causing and caused subevents in (10).

- (10)  $\parallel [\text{VP dry linen}] \parallel = \lambda e \lambda e' \exists f [f(\text{linen})(e) \wedge \text{cause}(e')(e) \wedge \text{dry}(e') \wedge \text{theme}(\text{linen})(e')]$

The difference between unaccusatives and anticausatives emerges at a later stage of syntactic derivation, when the VP in (10) merges with the  $v$  head. Along the lines of McGinnis 2004, Folli & Harley 2005, and others, I assume that unaccusatives and anticausatives are independently derived from the relation in (10) by merging with different ‘flavors’ of  $v$  in (11a-b). Applying functions in (11a-b) to (10) yields properties of events in (7).

- (11) a.  $\parallel v_{\text{UNACC}} \parallel = \lambda R_{\langle v, \langle v, t \rangle \rangle} \lambda e \exists e' [R(e)(e')]$   
 b.  $\parallel v_{\text{ANTICAUS}} \parallel = \lambda R_{\langle v, \langle v, t \rangle \rangle} \lambda e \exists e' \exists x [\text{initiator}(x)(e) \wedge R(e')(e)]$

**Conclusion.** The above discussion suggests that incorporating data from unaccusatives/anticausatives in languages like Russian into a causative event-based theory (independently needed for the analysis of intransitive change of state predicates) only requires two minor adjustments: either of the two subevents should be allowed to get existentially bound, and the contribution of the volitional initiator is to be recognized.

**REFERENCES.** Alexiadou, A., Anagnostopoulou, E. & Schäfer, F. 2006. The properties of anticausatives crosslinguistically. In *Phases of Interpretation*, M. Frascarelli (ed.), 187-211. Berlin: Mouton. Chierchia, G. 2004. A semantics for unaccusatives and its syntactic consequences. In *The unaccusativity puzzle*, A. Alexiadou, E. Anagnostopoulou & M. Everaert (eds.), 22–59. Oxford: OUP. Davis, H. & Demirdache, H. 2000. On Lexical Verb Meanings: Evidence from Salish. In *Events as Grammatical Objects*, J. Pustejovsky & C. Tenny (eds.), 97-142. CSLI. Koontz-Garboden, A. 2007. *States, changes of state, and the Monotonicity Hypothesis*. Stanford University dissertation. Kratzer, A. 2005. Building resultatives. In C. Maienbaum and A. Wollstein-Leisen (eds.), *Event arguments in Syntax, Semantics, and Discourse*. Tübingen: Niemeyer. Levin B. 2008. Further explorations of the landscape of causation: Comments on Alexiadou and Anagnostopoulou. Ms. McGinnis, M. 2004. Idiomatic Evidence for the syntax of English ‘lexical’ causatives. Rappaport Hovav, M. & Levin, B. 1998. Building Verb Meanings. In *The Projection of Arguments: Lexical and Compositional Factors*, M. Butt & W. Geuder (eds.), 97-134. CSLI.