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ON PYLKKÄNEN'S SEMANTICS FOR
LOW APPLICATIVES
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Standard neo-Davidsonian approaches to the semantics of sentences like (1a) assign them representations like (1b), where the verb is analyzed as a unary predicate of events with its arguments and adjuncts related to it by means of binary thematic relations (Parsons 1991).

- (1) a. John wrote Mary that letter for Bill.
b. $\exists e[\text{writing}(e) \ \& \ \text{Agent}(e,\text{John}) \ \& \ \text{Theme}(e,\text{that_letter}) \ \& \ \text{Goal}(e,\text{Mary}) \ \& \ \text{Beneficiary}(e,\text{Bill}) \ \& \ \text{Past}(e)]$

Such radical “separation,” resulting in the arguments of a predicate being related to each other only through the event in which they commonly participate, has been argued to be necessary for a correct semantics of plurality and conjunction (Schein 1993, to appear, Pietroski 2005) and to yield an attractive account of focus (Herburger 2000).

Pylkkänen (2002, 2008) offers an alternative analysis in developing an account of what she terms “high” and “low” applicative constructions. In brief, high applicatives, counterpart to the *for*-PP in (1a), are analyzed in the neo-Davidsonian way: as expressing relations between events and individuals ($\lambda x \lambda e[\text{Beneficiary}(e,x)]$). However, low applicatives, counterpart to the indirect object (*Mary*) in (1a), receive a radically different treatment. In Pylkkänen's words, “Low applied arguments bear no semantic relation to the verb whatsoever: they bear only a transfer-of-possession relation to the direct object” (2008:14). (2b) displays the semantic analysis that Pylkkänen recommends for (2a) (ignoring irrelevant details).

- (2) a. John wrote Mary that letter.
b. $\exists e[\text{writing}(e) \ \& \ \text{Agent}(e,\text{John}) \ \& \ \text{Theme}(e,\text{that_letter}) \ \& \ \text{to-the-possession-of}(\text{that_letter},\text{Mary})]$

As advertised, the referent of *Mary* is not related to the event quantification by means of any binary thematic relation such as Goal; rather,

it is related directly to the referent of the theme argument by means of *to-the-possession-of*(x,y). This semantics figures importantly in Pykkänen's account of the differences between high and low applicatives. High applicatives can combine at a relatively high point in the derivation since they only require access to the event variable of the verb. Low applicatives, by contrast, must combine earlier in the derivation, in the local vicinity of the direct object to which they are related.

Uncoupling the indirect object argument from the event structure of the verb has an important logical consequence that Pykkänen apparently does not foresee. Consider the conjunction in (3a), where *that letter* refers to the same entity in both conjuncts. (3a) does not entail (3b). John's writing a letter, and that letter's coming into Mary's possession, does not entail that John wrote the letter to Mary. A standard neo-Davidsonian analysis blocks this unwanted inference, doing so in an intuitively natural way. The conjunction in (4a) does not entail (4b) since Mary is related (as Goal) to the giving event e' , and not to the writing event e , and there is no way of deducing the latter from the former.

- (3) a. John wrote that letter and Bill gave Mary that letter.
 b. John wrote Mary that letter.
- (4) a. $\exists e[\text{writing}(e) \ \& \ \text{Agent}(e,\text{John}) \ \& \ \text{Theme}(e,\text{that_letter})] \ \& \ \exists e'[\text{giving}(e') \ \& \ \text{Agent}(e',\text{Bill}) \ \& \ \text{Theme}(e',\text{that_letter}) \ \& \ \text{Goal}(e',\text{Mary})]$
 b. $\exists e[\text{writing}(e) \ \& \ \text{Agent}(e,\text{John}) \ \& \ \text{Theme}(e,\text{that_letter}) \ \& \ \text{Goal}(e,\text{Mary})]$

Consider now (5a–b), the analysis of (3a–b) under Pykkänen's (2002, 2008) semantics for low applicatives.

- (5) a. $\exists e[\text{writing}(e) \ \& \ \text{Agent}(e,\text{John}) \ \& \ \text{Theme}(e,\text{that_letter})] \ \& \ \exists e'[\text{giving}(e') \ \& \ \text{Agent}(e',\text{Bill}) \ \& \ \text{Theme}(e',\text{that_letter}) \ \& \ \text{to-the-possession-of}(\text{that_letter},\text{Mary})]$
 b. $\exists e[\text{writing}(e) \ \& \ \text{Agent}(e,\text{John}) \ \& \ \text{Theme}(e,\text{that_letter}) \ \& \ \text{to-the-possession-of}(\text{that_letter},\text{Mary})]$

In fact, (5a) *does* entail (5b) under the elementary logical reasoning in (6).¹

- (6) a. $\exists e[\text{writing}(e) \ \& \ \text{Agent}(e,\text{John}) \ \& \ \text{Theme}(e,\text{that_letter})] \ \& \ \exists e'[\text{giving}(e') \ \& \ \text{Agent}(e',\text{Bill}) \ \& \ \text{Theme}(e',\text{that_letter}) \ \& \ \text{to-the-possession-of}(\text{that_letter},\text{Mary})]$
 b. $\exists e[\text{writing}(e) \ \& \ \text{Agent}(e,\text{John}) \ \& \ \text{Theme}(e,\text{that_letter})] \ \& \ \exists e'[\text{giving}(e') \ \& \ \text{Agent}(e',\text{Bill}) \ \& \ \text{Theme}(e',\text{that_letter})] \ \& \ \text{to-the-possession-of}(\text{that_letter},\text{Mary})$

¹ The steps from (6a) to (6b) and from (6d) to (6e) follow by the familiar first-order equivalence $\exists x[P(x) \ \& \ Q] \leftrightarrow \exists x[P(x)] \ \& \ Q$, where Q contains no unbound occurrences of x . The other steps involve ordinary propositional reasoning with conjunction.

- c. $\exists e[\text{writing}(e) \ \& \ \text{Agent}(e, \text{John}) \ \& \ \text{Theme}(e, \text{that_letter})] \ \& \ \text{to-the-possession-of}(\text{that_letter}, \text{Mary}) \ \& \ \exists e'[\text{giving}(e') \ \& \ \text{Agent}(e', \text{Bill}) \ \& \ \text{Theme}(e', \text{that_letter})]$
- d. $\exists e[\text{writing}(e) \ \& \ \text{Agent}(e, \text{John}) \ \& \ \text{Theme}(e, \text{that_letter})] \ \& \ \text{to-the-possession-of}(\text{that_letter}, \text{Mary})$
- e. $\exists e[\text{writing}(e) \ \& \ \text{Agent}(e, \text{John}) \ \& \ \text{Theme}(e, \text{that_letter}) \ \& \ \text{to-the-possession-of}(\text{that_letter}, \text{Mary})]$

Pykkänen's (2002, 2008) semantics thus underwrites the incorrect inference from (3a) to (3b), and indeed a large family of incorrect inferences of this kind (*John baked the cake and Mark brought Alice the cake* \rightarrow *John baked Alice the cake*, etc.).

Note that what secures the undesirable result is exactly the departure from standard neo-Davidsonianism that Pykkänen insists upon. In (6b), Mary bears no relation to the event of giving. Since the conjunct *to-the-possession-of(that_letter, Mary)* is tied to the second formula by nothing stronger than logical conjunction, the latter is free to reassociate with the first conjunct in the way shown. This outcome reflects the essential inadequacy of Pykkänen's motivating paraphrase for her analysis of low applicatives (7). The latter expresses only a weak conjunctive connection (*italics mine*) between the writing and the possession.

(7) *Low recipient applicative: English*

I wrote John a letter. 'I wrote a letter *and* the letter was to the possession of John.'

(Pykkänen 2008:14)

I will not attempt to pursue the consequences of these results for Pykkänen's broader program.² It is clear, however, that a basic element of that program stands in need of revision.

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² Alternatives to the standard neo-Davidsonian analysis that block the unwanted entailment are conceivable—for example, a causative analysis as in (ib) (see Krifka 1999, Beck and Johnson 2004, among many others).

- (i) a. John wrote Mary that letter.
- b. $\exists e[\text{writing}(e) \ \& \ \text{Agent}(e, \text{John}) \ \& \ \text{Theme}(e, \text{that_letter}) \ \& \ \exists e'[\text{CAUSE}(e, e') \ \& \ \text{to-the-possession-of}(e', \text{that_letter}, \text{Mary})]]]$

However, Pykkänen (2002, 2008) rejects causative analyses of the double object construction (properly, in my opinion, for reasons discussed in Larson, to appear), so this avenue does not appear open to her.

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VARIATION IN CIRCUMSTANTIAL

MODALITY: POLISH VERSUS

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1 Introduction

St'át'imcets 'out of control' constructions (OOCs) and Polish *involuntary-state constructions* (ISCs) may share similar meanings, as the italicized phrases in (1) and (2) show (OOC data given by Davis, Matthewson, and Rullmann (DMR) (2009), who cite sources).

- (1) Kens-7ílhen ku=t'éc szaq', t'u7 OOC
 try-eat DET=sweet bread but
ka-nsnán7-a.
 CIRC-sneeze-CIRC
 'She wanted to eat a cookie, but *she suddenly had to sneeze.*'
- (2) Marta chciała zjeść ciastko, a jej ISC
 Marta wanted eat cookie but she.DAT
się kichnęło.
 REFL sneezed.NEU
 'Marta wanted to eat a cookie, but *she could not help sneezing.*'

DMR (2009) state that (3) is suitable when someone draws with a blindfold on and discovers that she accidentally wrote her name. In such a context, (4) is also well formed.

- (3) Ka-mets-s=kan-á=k'a OOC
 CIRC-write-CAUS=1SG.SUBJ-CIRC=EPIS
 ti=n-skwátsits=a.
 DET=1SG.POSS-name=EXIS
 'I drew my name by accident.'

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A difference for future research relates to entailments. Past ISCs carry actuality entailments (Bhatt 2006). By contrast, DMR (2009) show that OOCs do not carry an actuality entailment.