

## On the syntactic determination of thematic roles: evidence from transitive motion clauses

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This paper examines the interpretation of NP arguments in transitive manner of motion expressions. The thematic roles that arguments hold in transitive motion expressions are widely held to be *lexically idiosyncratic*, i.e. introduced with the verb. This paper presents evidence that the thematic roles are actually determined syntactically. The second part of the talk presents a new analysis of the syntax of these clauses. I show transitive motion is not ‘resultative’ (*contra* previous analyses), but involves a transitive Event Modification syntax.

An enduring question in the study of argument structure is whether thematic roles are introduced with the verb/root, or determined in relation to the structure in which the verb/root and NPs occur (e.g. Borer 2013, Marantz 2013, Wechsler 2015). Particularly important support for the former view is the apparent possibility of lexically idiosyncratic roles, exemplified by transitive motion (1). Specifically, in (1a) the subject is supposedly a Theme thematic role holder, in the sense that it is interpreted as undergoing change of location (Levin & Rappaport Hovav 2001 a.m.o.). In (1b), the object is apparently an Agent of *waltz*, together with the subject (“Accompanied Motion”) (Folli & Harley 2006 a.m.o.).

1. a. The wise men followed the star to Bethlehem. (Wechsler 1997)
- b. Mary waltzed John around the room. (Folli & Harley 2006)

If this characterization of thematic roles is correct, it has the significant consequence that the lexico-semantics of the (roots of) verbs *follow* and *waltz* are (in some sense) able to ‘override’ the canonical relationship between syntax and semantics, whereby transitive subject → Agent / transitive object → Theme (e.g. Kratzer 1996, et seq.). I argue (1a-b) in fact support (2):

2. NP thematic roles are determined by a relation between syntax and compositional semantics. Verb/root lexico-semantic properties do not interfere with this relation.

Thematic content can be identified by syntactic/semantic tests like adverbial modification. I apply a battery of adverb tests to the NP arguments in (1). Tests for agency are the ability to: wield a *with* PP instrument; control a Rationale clause PRO; be modified by agent-oriented adverbs. (I show these tests reliably pick out Agents, and not e.g. subjects). The subjects of both (1a-b) pass these tests; neither of the objects do. I conclude the object in (1b) does not hold an Agent role in the formal grammar. I label *John* in (1b) a *Pseudo-Agent*.

Tests for Themehood (‘undergoing change or holding a state’, in line with traditional descriptions of (1a) as a ‘Theme subject’) include: contradiction when the NP is denied as holding an end-state/location (3a); coercibility into a state-holder interpretation by specifying a definite temporal point with which the (change-of-) state/location coincides (3b); and a non-attained result state interpretation of *almost* modification (3c). (3) shows the apparent ‘Theme Subject’ in (1a) fails each of these tests. (In contrast the Pseudo-Agent *John* in (1b) passes all these tests). I label the subject in (1a) a *Pseudo-Theme*.

3. a. The wise men followed the star to Bethlehem, but they ended up in Allentown due to unexpected cloud cover.
- b. ??The wise men had followed the star to Bethlehem at 2pm.
- c. The wise men almost followed the star to Bethlehem. (Means *the wise men almost followed*, not that they almost arrived at Bethlehem)

(3) contrasts with the object of *lead* (4). *Lead* and *follow* can be understood to describe the ‘same event’; but the participant roles of the NPs depend on their position in the clause.

4. a. The star led the wise men to Bethlehem, ???? but they ended up in Allentown due to unexpected cloud cover.
- b. The star had led the wise men to Bethlehem at 2pm.
- c. The star almost led the wise men to Bethlehem (but they didn’t quite get there).

The distribution of thematic roles in these expressions therefore in fact supports a strict relationship between syntax and compositional semantics. Moreover, the data indicates that the construal of the participant roles from the lexico-semantics of the verb/root does not override this formal relationship, supporting (2).

Previous lexicalist analyses of (1a-b) have argued that aspects of the phrasal syntax of (1a-b) depend on the Pseudo-Theme/-Agent roles. The second part of the talk shows these clauses actually have simple transitive syntax, in line with the thematic roles I identified. Previous work says (1a-b) involve secondary resultative predication (Folli & Harley 2006, Beavers 2012). (1a) is a ‘Subject Resultative’, syntactically/semantically parallel to the transitive resultative in (5a), except that the secondary XP predicates of the subject in (1a), vs. the object in (5a). ((1a) is thus the purported exception to the Direct Object Restriction). (1b) is said to be an Unselected Object Resultative, syntactically/semantically parallel to (5b) (Folli & Harley 2006), i.e. a (small clause) secondary XP introduces the object NP.

5. a. Mary pounded the metal flat.
- b. John sang his throat hoarse.

First, constituency and distributional diagnostics show that both (1a-b) have a transitive [ V O ] syntax, and PP is a vP-attached adjunct interpreted as an event modifier (6). In particular, (1a-b), but not (5a-b), license: the VP pro-form *do so*; *though*-movement; V-fronting; a topicalized XP; a clefted XP. I conclude [V O] forms a constituent in (1a-b), to which PP is external. (5a-b) do not have [V O] syntax (Levin & Rappaport Hovav 1995). The main reason for analysing the PP in (1b) as a secondary XP is as an argument licenser of the object NP (Folli & Harley 2006). But (7) shows the NP is fine with adverbs (mostly repetitives and intensifiers) (7a), and under negation (7b). Such adverbs do not license unselected objects of unergatives like (5b) (7a’, 7b’). Further, (1b) objects appear in passive and nominalizations without PP; (5b) objects do not. I conclude PP is not a Result XP in (1b).

6. [VoiceP NP [Voice’ Voice [ vP [ PP ] [v’ [√FOLLOW/√WALTZ v ] Obj ] ] ] ]
7. a. Coach swims the team weekly.      a’. \*John sing himself weekly.
- b. Coach didn’t swim the team today.      b’. \*John didn’t sing himself.

Focussing on (1a): (8) shows the ‘Theme subject’ is not interpreted as holding a result state even at a point in time delimited by the *in X time* PP. The PP is thus not a result location XP. I conclude neither (1a-b) is syntactically or semantically ‘resultative’. Instead, I propose that the PPs in (1a-b) are adjuncts that modify (describe the Path/ trajectory of) the (vP) eventuality. In (1a) PP describes *follow the star* (not *the wise men*); in (1b) PP describes *waltz John*, not (just) *John*. I propose the semantic modification of the Path PP is equivalent to Maienborn’s (2001) ‘external’ Locative PPs, e.g.: *If Ava signed the contract in Argentina*, it is not *the contract* that is in Argentina, but the event.

8. The wise men will follow the star to/into Bethlehem ??in five hours.