Motion Predicates and the Compounding Parameter

William Snyder (with Diane Lillo-Martin)
University of Connecticut and Haskins Laboratories

The [+/- TCP] typology of (Snyder 1995, 2001; "The Compounding Parameter") overlaps considerably with the verb-framed / satellite-framed typology of Leonard Talmy (1985, 1991, 2000). For example, both separable-particle constructions (e.g. *John lifted the box up*) and transitive resultatives (*Mary beat the metal flat*) are possible only in [+TCP] languages, and only in [satellite-framed] languages. Moreover, a telic path-PP (*under the bridge*) converts an activity predicate of motion (*swim*) into an accomplishment (*Sue swam under the bridge in 15 minutes*) only in [+TCP] languages (Beck & Snyder 2001b), and only in [satellite-framed] languages. Can the two typologies be unified?

Important differences between the two typologies include the following: The Compounding Parameter encompasses cross-linguistic differences in the availability of fully productive (or "creative") root compounding of the endocentric type (e.g. *zoo book* for 'a book about the zoo'), a point of variation on which Talmy's typology is silent. Talmy's typology, for its part, extends to the compatibility of atelic path phrases (*in circles*) with activity verbs of motion (*The plane flew in circles*) specifically in satellite-framed languages, a point of variation not considered in previous publications on TCP. Is the distribution of atelic path phrases linked to the availability of root compounding?

The time course of child language acquisition is an important "testing ground" for this question. Note that children learning English consistently acquire verb-particle constructions at the same point when they begin to produce novel, endocentric compounds (Snyder 1995, 2001). Moreover, the first uses of English *to*-phrases as telic path phrases appear at the same time as particles and compounds (Beck & Snyder 2001a). Hence, Snyder, Felber, Kang & Lillo-Martin (2001) examined the time course of acquisition using longitudinal corpora for ten children from CHILDES (MacWhinney 2001). As predicted by the proposal to unify the typologies, each child first began using atelic path phrases (e.g. *I'm running round you!*) at the same time as novel root compounds (r=.91, $t(8)$=6.26, p<.001).

The next question is why: Why exactly are the [+TCP] languages unique in allowing separable particles and transitive resultatives? Why do both telic and atelic path phrases have a more liberal distribution precisely in those languages that freely allow endocentric root compounding? Our proposals are as follows:

(1) Verbs normally take a Davidsonian event argument. We propose that a path PP introduces its own, separate event argument.

(2) Yet, a VP is permitted to have only one open event argument. Hence, the two event predicates (V and PP) need to be combined in some way.

(3) There is only one form of semantic composition that can combine two separate event-descriptions into the description of a single, complex event: We call this operation "Rule C."

(4) Rule C
　　　If a = [b c], and b' and c' both have an open argument position of the same semantic type, then (ignoring any other open argument positions):

　　　　　a' = c' OF THE KIND ASSOCIATED WITH b'.

(5) We propose that Rule C applies only within complex words. Yet, the fundamental effect of the [+TCP] parameter-setting is to allow syntactic sisters to be interpreted semantically as if they formed a complex word. Thus, precisely in the [+TCP] languages, Rule C is available for interpreting phrasal syntax.

(6) Therefore, only in [+TCP] languages is it possible to have a true path PP.

Examples:

(7)　　*frog man* 'man of the kind associated with frogs'

(8)　　a. John painted [the barn]$_1$ [t$_v$ + [PRO$_1$ Φ_{BECOME} red]]
　　　b. There exist events e$_1$ and e$_2$, where e$_1$ is an event of John's painting the barn, e$_2$ is an event of the barn becoming red, and e$_2$ is of the kind associated with e$_1$.
　　　c. There exist events e$_1$ and e$_2$, where e$_1$ is an event of John's painting the barn, e$_2$ is an event of the barn becoming red, and e$_2$ is caused by e$_1$.

(9)　　a. [The bottle]$_1$ floated [PRO$_1$ under the bridge]
　　　b. There exist events e$_1$ and e$_2$, where e$_1$ is an event of the bottle floating, e$_2$ is an event of the bottle moving along a path that ends (but does not begin) under the bridge, and e$_2$ is of the kind associated with e$_1$.
　　　c. There exist events e$_1$ and e$_2$, where e$_1$ is an event of the bottle floating, e$_2$ is an event of the bottle moving along a path that ends (but does not begin) under the bridge, and e$_2$ is caused by e$_1$.

Crucially, we take the "association" in (8b) and (9b) to be one of causation. Here we are adapting an idea from (Talmy 1991): We take the possible "associations" between two events to be drawn from a universal set of "S(upport)-relations" that includes (most prominently) causation and manner.

To conclude our talk we consider two problem cases for Talmy: Russian and Japanese. Both of these languages have an ambiguous status in Talmy's typology, because Talmy's diagnostics give contradictory results. Russian verbs often permit a directional prefix that Talmy treats as a type of satellite. Yet, Russian does not allow true path PPs to occur with unaffixed motion verbs, nor does it allow transitive resultatives. In our view, the directional prefixes of Russian should not be treated as "satellites," because they are never syntactically separate from the verb and therefore do not require Rule C for their interpretation. Hence, Russian is simply a verb-framed, or [-TCP], language. As expected, then, Russian lacks the fully productive endocentric root compounding found in a language like English.

As for Japanese, most researchers working within Talmy's framework (e.g. Tsujimura 1996) classify it as verb-framed. Japanese lacks separable particle constructions, and has few if any true path PPs. For example, Japanese lacks direct counterparts to the English prepositions *down* and *under* in *The child slid down the banister* or *The boat floated under the bridge* (on the path reading). Yet, Japanese does allow (some) transitive resultatives (Washio 1997).

We propose that Japanese is "by rights" a satellite-framed (or [+TCP]) language, but that this fact is obscured by an independent property: Japanese has an extremely limited inventory of adpositions. In particular, the eventive Ps needed for path PPs and English-type particles are mostly, if not entirely, missing. As expected on this approach, Japanese does allow speakers to create novel endocentric root compounds fairly freely. Furthermore, Sugisaki & Isobe (2000) have found a close acquisitional connection between novel compounding and transitive resultatives in children learning Japanese.

In conclusion, we believe that a unification of Talmy's and Snyder's typologies is well supported by the comparative and acquisitional evidence. Moreover, we have offered an explanation (1-6) of the resulting typology. The leading ideas are that path phrases require an event argument, and that two syntactically separate event predicates can be combined semantically only if they can be viewed as forming a complex "word" at the point of semantic interpretation.

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e-mail addresses:

William Snyder: william.snyder (at) uconn.edu
Diane Lillo-Martin: lillo.martin (at) uconn.edu