

## Paths

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One of the potential benefits of a decomposed and constructivist approach to phrase structure is that generalizations about meaning that have linguistic consequences can be represented within the core symbolic system of language (what we traditionally call the ‘syntax’), thus localizing recursion and generativity to a single module. However, it is not always clear in practice which aspects of meaning should be so represented, or how. Recent cartographic expansions of the prepositional domain and verbal domain respectively turn out to differ crucially in decisions about how to represent the notion of PATH. In this paper, I argue on the basis of linguistic diagnostic evidence that the path-like notions of P and V *are* semantically and syntactically commensurate, and that our cartographies should be adjusted to reflect that. As a point of comparison, I will argue that the scalar structure associated with Adjectives is *not* commensurate with the former two categories in the same way, contra Hay et al. (1999) and Kennedy and McNally (2005).

**Semantic Parallels:** Gradability seems to be a cross-categorial phenomenon: event shape or trajectory of change for V (Zwarts 2006, Rappaport-Hovav and Levin 2008, Beavers 2005), paths for P (Zwarts 2005, Krifka 1989), and of course property scales for adjectives (Kennedy 1999, Kennedy and McNally 2005). Significantly, the scales corresponding to different categories have been argued to interact in semantically predictable and systematic ways when in close syntactic relationship, often via some kind of homomorphism: VP telicity is affected by the boundedness or quantizedness of the direct object for a certain class of verbs (Krifka 1992); VP telicity is affected by the cumulativity of the PP in complement position to the verb (Zwarts 2005); the telicity/boundedness of a deadjectival VP is determined by the boundedness of the scale of the underlying adjectival property (Hay et al. 1999). Arguably, then, the geometric properties of path transcend sortal domain and can be seen to interact with one another, but to what extent do they play out in the same way in the syntax?

**Syntactic Representations of V and P:** Decomposition of verbal paths classifies the event trajectory more in terms of subevental substructure, or predicational substructure with differences in participant role crucially affecting the proposed decompositions. When it comes to ‘paths of change’, events can be classified as having a pure process portion with no result (activities), process leading to result (accomplishments), punctual change leading to result (achievement) (Dowty 1979; Parsons 1990; Pustejovsky 1995; Higginbotham 1999). These notional ‘paths of change’ have been represented explicitly in the syntax by many, based on linguistic evidence, both morphological and semantic. One classic linguistic linguistic test is the von Stechow (1996) test on the scope of *again*, and its equivalents. The existence of a result subcomponent is diagnosed by the presence of a purely restitutive reading, in addition to the expected repetitive one (see also Beck and Johnson 2002).

1. (a) Bob pushed the cart again (*repetitive*)  
(b) Bob opened the door again (*repetitive/restitutive*)

On the other hand, in work on the decomposition of P Koopman (2000), van Riemsdijk (1990), Svenonius (2010), Kracht (2002), den Dikken (2009), it is assumed that it includes at least a Path Projection which dominates a Place Projection for directional PPs. In languages where distinctive morphology is found, the place morpheme is always closer to the root than path morphology (cf. Svenonius (2010), Kracht (2002)). Thus, the decomposition

of Paths into  $P_{path}$  and  $P_{place}$  is syntactically and morphologically grounded crosslinguistically. It has also received support in the compositional semantics literature (Zwarts (2005) and Zwarts and Winter (2000)): paths are systematically constructed from place denotations in a compositional fashion. Within this system, it can be shown that Paths themselves can either be bounded (noncumulative) or unbounded (cumulative) (Zwarts (2005)), but *always* embed a  $P_{place}P$ . The Path heads assumed in this system can be (at least) TO, FROM and VIA (according to Svenonius (2010)).

**Diagnosing Substructure in PP paths:** Classically then, *all* paths, both bounded and unbounded contain a  $P_{place}P$  at the base of the projection. But do we really have evidence that THROUGH paths headed by prepositions like English *through* contain  $P_{place}P$  substructure? I show that if one systematically applies the ‘Again’-Test to the prepositional domain, we get a split that parallels the result verb/non-result verb split in the verbal domain.

2. (a) John pushed the cart into the woods again (*repetitive/restitutive*)

(b) John pushed the cart through the garden again (*repetitive*)

Thus, in addition to the  $P_{path}$  combining with  $P_{place}P$  to create a derived Path based on a location, we should also allow  $P_{path}$  to combine directly with a DP, on analogy with the verbal domain. In the VP case, particularly salient is the parallel to creation/consumption verbs, where dynamic verb and DP ‘Path’ combine under homomorphism, and where the path of change is mapped to the DP’s material part-whole structure. Similarly,  $P_{path}$  in a *through* PP creates a predication of ordered locations from the internal part-whole structure of its DP complement. In this paper, I show with a series of novel tests applied to PPs that a structural distinction needs to be made between so-called TO-paths which genuinely do have resultative substructure, and *via* paths which do not. FROM-paths will be argued to contain resultative substructure in addition to reversative semantics.

**Combinability and Commensurability.** In the second part of the paper, I show systematic effects of matching and composition when elements of P and V are combined, not just in V-PP combinations but also in particle constructions, arguing that the scales involved are syntactically commensurate. Moreover, I argue that a simpler mapping between syntax and semantics is achieved if the syntactic decompositional ingredients of the P and V categories are made more parallel. Thus, the version of PP structure I propose will be a slight departure from the strict templaticity of earlier decompositions of P in the literature, but one that is more sensitive to the linguistic diagnostics for predicational substructure, bringing together verbal and prepositional decompositional criteria for the first time.

**Consequences for Cartography and Grammatical Architecture.** Finally, I turn to the case of scalar structure in Adjectives. This is an important part of the argument because semantic parallelism per se does not require true syntactic commensurability. Using the same strict testing standards on adjectives and verbs, I show that there is no compelling evidence that adjectival scales and scales of change are directly commensurable: boundedness entailments do not go through in general (despite recent prominent claims in the literature to the contrary Hay et al. 1999, Wechsler 2005), and direct modification is impossible. The conclusion will be that either the decomposition of A into general path structure is not motivated in the syntax at all, or that one has to argue that it is strictly encapsulated. The linguistic evidence regarding P and V is importantly different in the regard. The decomposed path structure of V and P, and the parallelism in their cartographies is a robust and exciting result, with deeper consequences for the notion of category.

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