

Prominence Alignment: Constraints on Lexicalization

In English, lexical semantics largely dictate which non-prepositional argument of a verbal predicate is realized as subject and which as first- or second-object:

- (1) [John]_{cause} killed [the plant]_{patient}.
- (2) [John]_{sentient} liked [peas]_{theme}.
- (3) [John]_{cause} frightened [Mary]_{sentient}.
- (4) [John]_{cause} asked [Mary]_{sentient} [a question]_{theme}.

Crucially, there are no verbs which reverse the patterns of (1)–(4).

Perhaps the most influential explanation of this phenomenon is the prototype theory of Dowty 1991. Dowty 1991 holds that verbs can make proto-agent and proto-patient entailments on their arguments. The argument receiving the most proto-agent entailments is realized as subject, while the argument receiving the most proto-patient entailments is realized as object. Primus 1997 adds a set of proto-recipient entailments, which similarly determine the first-object in a double-object construction like (4).

I critique Dowty 1991 at length, showing that it is needlessly complex and theoretically heavy-handed. Dowty 1991 and Primus 1997 combined rely on a large set of 13 grammatically relevant entailments. Re-examining their data, I show that only three entailments are grammatically relevant—causation (in a broader form), sentience, and possessor. Further, I demonstrate that alignment of non-prepositional arguments can be predicted by a simple set of ordered rules, each having a parallel form:

- (5) first: causative → highest unoccupied A-position
- (6) second: sentience → highest unoccupied A-position
- (7) third: possessor → highest unoccupied A-position
- (8) fourth: other → highest unoccupied A-position

Rule (5) captures the categorical generalization that causation is sufficient for alignment with subject (Koenig & Davis 2001). Rule (6) captures the generalization that in non-causative psychological predicates such as (2), sentience is sufficient for alignment with subject, while in causatives, such as (3) and (4), sentience is sufficient for alignment with first-object. Rule (8) takes care of any argument lacking the grammatically relevant entailments (i.e. “themes,” “patients,” etc.).

These ordered rules, I argue, should be recast as ranked constraints. I consider the possibility of formalizing them using Harmonic Alignment (Prince & Smolensky 1993), following Gutiérrez-Bravo 2002, before showing that this formalism will not work for two reasons. First, as noted in Zeevat & Jäger 2002, Harmonic Alignment cannot align the two non-binary scales I posit ({subject, first-object, second-object} & {causative, sentient, possessor}) with one another. Second, though Harmonic Alignment can model subject alignment, it is ill-equipped to model the alignment of first-objects in a principled way.

Instead, I posit a new formalism called Prominence Alignment. Prominence Alignment is similar to gradient edge alignment (McCarthy & Prince 1993), except that Prominence Alignment is sensitive to syntactic prominence and not prosodic precedence. With evidence from existential *there* constructions and double-object constructions like (4), I demonstrate that prominence alignment constraints must be gradient, with marks assigned based on “distance” (computed in terms of asymmetric c-command) from the surface subject position. If an EPP constraint is assumed (as in Gutiérrez-Bravo 2002), all of Dowty’s data can be accounted for without an “else” constraint corresponding to rule (8).