A Constructional Extension to Syntactic Control: Enter Semantics and Metaphor
Michael Ellsworth and Russell Lee-Goldman
International Computer Science Institute and University of California-Berkeley

Familiar syntactic control involves identification of syntactic roles between governing and subordinate predicates: subject-subject in *I tried to leave*, object-subject in *I want her to stay* and prepositional object-subject in *I said to them to go*—the semantics of each bolded item thus fills roles associated with two different predicates. Raising operates in a similar way, but the NP in the upper predicate (the “controller”) is not assigned a semantic role by the upper predicate (*There seems to be a problem*). From a construction-grammar point of view, however, every role is constructional, and thus characterized semantically as well as syntactically. Under this view, traditional control can be modeled as co-identification of constructional roles mediated by the roles’ syntactic features, an analysis fully in line with Jackendoff & Culicover 2005.

There is, however, no a priori reason why all argument co-identification should be mediated by syntactic features. This paper has two goals: first, it will demonstrate the reality of “semantic control,” a phenomenon in which the meaning of an argument of a higher predicate (the “control predicate”) is identified with an unexpressed *semantically*-selected argument of a lower predicate. Second, it will show that such cross-predicate argument linking may be mediated by conceptual-metaphorical mappings, the details of which may differ on a construction-to-construction basis.

Semantic control is demonstrated by sentences like (1a–c) below. In each sentence, the bold argument fills an Undergoer role of the control predicate *undergo*. This role is then co-identified with a Patient argument of the subordinate Event. In this case, we cannot claim that the identification could equivalently be made on the basis of the syntactic role within the subordinate constituent, both because the subordinates are nominals (which only questionably assign syntactic roles) but also because (1a) and (1b), when compared to the syntax of corresponding verbs *maintain* and *move*, contrast in syntactic assignment: in (1a) *our site* is the object of *maintain*, while in (1b) *each machine component* is the subject of *move*.

An interesting proof that control can be semantically mediated is that, in certain cases, metaphorical mappings serve as the input to the semantic construal process. First, consider *need* as a transitive verb (2a). The literal sense involves a Needer requiring possession of a Sought (entity). Contrast this with state-of-affair-denoting objects. In (2b), *smack* evokes a frame with an Agent and a Patient, and Jan must be identified as the Patient. Since there is no recourse for overt expression of such an argument locally to *smack* (at least in this construction), this is clearly semantic control. In (2c), *look* has a notional Agent and Patient, but in this case Jan must be identified as the Agent. This semantic linking can be related to the literal sense via one of two metaphors: UNDERGOING IS RECEIVING (UiR) or BENEFITTING IS RECEIVING (BiR). Literal *needing* evokes a receiving scenario, where the Needer is a Receiver and the Sought is the Theme. In (2b), the concept of *smack* unifies with the UiR metaphor. UiR maps the Patient to the Recipient role, i.e. the subject of the sentence, and so Jan is the Patient (and metaphorical Recipient) of the blow. On the other hand, (2c) requires that Jan benefit, and so BiR is a better fit. This ambiguity of role-assignment is thus attributable to differences in metaphorical mapping and cannot be explained in a purely syntactic theory. A constructional approach is required.

1a. *Our site* undergoes regular *maintenance*.  
   b. Prior to the actual testing, *each machine component* must undergo *motion*.  
   c. The percentage of *abortions undergone by teens* in this period decreased.

2a. Jan needs a stopwatch.  
   b. Jan really needs a good *smack*.  
   c. Jan needs another *look* at the problem before we can be sure it's good.