

## Morpho-semantics of the progressive

Existing analyses of the English progressive assume a PROG operator defined intensionally to allow *John was dying* to be true even when *John died* is not (cf. Dowty 1979, Landman 1992). Several questions remain unanswered by such an approach. Most basically, why do progressives behave like copular expressions while future, past, and habitual predicates do not, i.e. why the contrast in (1) and between (2&3)? Note in particular the contrast between progressive (2b) and simple present (3c). Also unanswered is why the English progressive construction is itself compatible with future and habitual interpretations as in (4). Finally, and as already mentioned, *John is dying* does not infer an actual death. This is the imperfective paradox of Dowty (1979). Interestingly, some copular sentences present the same kind of phenomena. The truth of (5b) entails the future truth of *John is the chair* while (5a) does not. While there is presumably a link to the semantics of *next*, it alone cannot be the source of the difference.

To account for the parallels between progressives and copular predicates (and the differences between progressives and other tensed predicates), I argue for a shift in focus away from PROG to the actual English morphology: what are the truth conditions for *be -ing*? In traditional grammar the progressive is a combination of the copula and the participle (i.e. the adjective form of the verb). If we assume that *ill* is a predicate of individuals (6a), we should assume that the same might be true of *running* (6b). But this is probably overly-simple. *Running* is derived from the eventive *run* (6c), and while stative, *John is running* can still be modified like other eventive predicates. Consider *John is running around the quad with his dog at noon*.

I take advantage of an obvious property of the representation in (6c). Specifically it includes reference to two variables, *x* and *e*. This means that an eventive predicate can be formalized as one of two kinds of objects: as a set of individuals (7a) or as a set of events (7b). The main hypothesis is that (7a) underlies the progressive; like other copular expressions, the progressive is a predicate of individuals. In contrast, (7b) underlies the tensed sentences in (2). The semantic translations of (1) and (2) are given in (8) and (9). In one sense, it is a matter of scope. *Run* can be formalized as a set of individuals of whom it is true that they have the property of running: *x* takes scope over *e*. This is the stative (progressive) interpretation in (8a). Alternatively, *run* can be formalized as a set of events, events which have participants and which take place at particular times in particular locations, etc. This is the eventive interpretation in (9).

Returning to some of the empirical observations, the pattern in (1) is not a surprise. Copular expressions do not themselves occur in the progressive. Second, copular expressions are true at a moment in time, a “now.” As such, they can be used to describe a static image while eventive expressions (even those in the simple present) can not. Copular expressions can also be used to describe the coming about of a future state in current terms. The parallel between *is the next chair* in (5) and *is dying* is not a surprise. Finally, the range of meanings in (4) (and in (10)) follows from the assumption that simple present *be* is really a non-past form. Considering (11), this is probably true of all simple present tense predicates in English.

In sum, the semantic interpretation of the actual form used to encode the English progressive can a full range of the progressive’s distinctive features. An approach which focuses on the truth conditions of the construction also has cross-linguistic implications. Unless a given language encodes its progressive meaning exactly as in English, i.e. with a *be* + participle construction, one would not expect to find an exact translation of the English progressive in any language. This prediction is easily verified.

## Examples

- (1) a. \*A boy is being ill.  
b. \*A boy is being running.  
c. A boy is running.
- (2) a. A boy is ill in this picture.  
b. A boy is running in this picture.
- (3) a. \*A boy ran in this picture.  
b. \*A boy will run in this picture.  
c. \*A boy runs in this picture.
- (4) a. Jack is running.  
b. Jill is running tomorrow at dawn.  
c. These days my neighbor is running every day at dawn.
- (5) a. John is the next chair of the department.  
b. John will be the next chair of the department.
- (6) a.  $\|ill\| = \lambda x[ill'(x)]$   
b.  $\|running\| = \lambda x[run'(x)]$   
c.  $\|run\| = \lambda x \lambda e[run'(e, x)]$
- (7) a.  $\|run\| = \lambda x[\exists e[run'(e, x)]]$   
b.  $\|run\| = \lambda e[\exists x[run'(e, x)]]$
- (8) Predicates of individuals (stative)  
a.  $\|A\text{ boy is ill}\| = \lambda x[ill'(x) \& boy'(x)]$   
b.  $\|A\text{ boy is running}\| = \lambda x \exists e[run'(e, x) \& boy'(x)]$
- (9) Predicates of events (non-stative)  
a.  $\|A\text{ boy ran}\| = \lambda e \exists x[run'(e, x) \& boy'(x) \& PAST(e)]$   
b.  $\|A\text{ boy will}\| = \lambda e \exists x[run'(e, x) \& boy'(x) \& FUT(e)]$   
c.  $\|A\text{ boy runs}\| = \lambda e \exists x[run'(e, x) \& boy'(x)]$
- (10) a. John is ill.  
b. The meeting is tomorrow.  
c. Recently, John is ill a fair amount.
- (11) a. John runs to first (announcer-speech, obtains “now”)  
b. We leave at dawn!  
c. These days my neighbor runs everyday at dawn.

## References

- Dowty, David (1979) *Word Meaning and Montague Grammar*. Reidel, Dordrecht.  
Landman, Fred (1992) The progressive. *Natural Language Semantics* 1. 1–32.