Morpho-Semantics of the Progressive

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1. Introduction

Traditional analyses of tense and aspect assume a series of semantic operators that take scope over sentences as in example (1). A sentence with no operator is assumed to be in the present tense.

(1) Tradition (for example, Dowty, Wall, and Peters 1981)
    a.   PAST ϕ
    b.   FUTURE ϕ
    c.   PROG ϕ
    d. ϕ

With respect to the correct interpretation of the progressive, the question boils down to, what are the truth conditions for the PROG operator? There is a substantial literature on this topic (amongst many others, see Bennet and Partee 1978, Dowty 1979, Parsons 1990, Landman 1992). And although much is now understood about the nature of the PROG operator, several questions (at least about English) remain unanswered by such an approach.

First, it seems safe to say that the English progressive construction is a stative of some kind, but this property does not follow naturally from any existing analysis.[1] Consider the examples in (2) through (5). Given the central role of the copula in both *is dancing* and *is ill*, what we find is that progressive constructions behave like other copular constructions, in particular like predicate adjectives. Contrary to the approach outlined in (1) which groups the progressive with tensed expressions, (2) through (5) make it clear that progressive predicates are fundamentally different from predicates in the simple past, the simple future, and even the simple present.

(2) a.   My brother is dancing.
      b.   *My brother is being ill.
      c.   *My brother is being dancing.

(3) a.   My brother is ill.
      b.   My bother is dancing.
      c.   My brother stinks.
      d.   My brother dances (every day, very well…)

(4) a.   My brother is ill in this photograph.
      b.   My brother is dancing in this photograph.

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[1] Rather, it seems that the stative nature of the progressive is usually taken as given and not in need of further explanation. Consider Parsons (1990) who states without comment: "changing an event verb to the progressive form requires that it be treated as a state verb" (p.171) or Rothstein (1999) who notes "the much discussed idea that the progressive is a stativizer" (p.416), again without comment. In addition to the tests in (2) through (5), see Rothstein (2004: 14–17) for further tests of stativity all of which confirm the stative nature of the English progressive.

(5) a. *My brother danced in this photograph.
   b. *My brother will dance in this photograph.
   c. *My brother dances in the photograph.

(2a) is progressive. *Be ill* in (2b) is a predicate adjective, and like most such predicates it is odd in the progressive. Importantly, in (2c) *is being dancing* is also pretty bad; like predicate adjectives (and most stative verbs), the progressive *is dancing* cannot itself occur in the progressive. In (3a-c), we see that predicate adjectives, progressives, and stative verbs in the simple present all have non-habitual (non-generic) readings; they can all be used to describe the "now" of the moment of speech. In contrast, such a reading is not (generally at least) available for the simple present verb in (3d). Again, progressives pattern with non-eventive predicates. Now consider (4) and (5). When describing a photograph, *is ill* and *is dancing* in (4a&b) are both fine. In contrast, *danced* which is in the past, *will dance* which is in the future, and *dances* which is in the simple present are all strange. (5c) is particularly striking as the simple present in English (which has a habitual or generic interpretation) is usually thought to be stative. So, the contrast between (4b) *is dancing* and (5c) *dances* leads one to conclude that perhaps simple present *dances* is in fact not stative, or at the very least, we must conclude that *dances* is in some important way different from *is dancing*.

   A final parallel between sentences in the progressive and simple copular sentences (in this case a predicate nominal) is given in (6).

(6) a. John will cross the street.
   a' John is crossing the street.
   b. John will be the next chair of the department.
   b' John is the next chair of the department.

The predicate in (6a) is in the future tense. (6a) is true if and only if John actually makes it across the street at some point in the actual future. (6a') on the other hand is progressive. (6a') is true even if John is hit by a truck before he makes it to the other side, and the truth conditions for (6a') typically allow the in-progress event of crossing the street to finish in a world similar to but not identical to the actual world, for example, in a world without a truck. (This is the Imperfective Paradox of Dowty 1979 addressed as well in Landman 1992.) Now consider the future copular sentence in (6b) which is true if and only if John eventually becomes chair of the department. In contrast (6b') is felt to be true "now," once, say, John has been elected. It remains true (when viewed from the perspective of "now") even if John gets a better job and leaves before assuming the chairmanship. (We might dub this the Stative Paradox.) And while the word *next* seems to play a role in (6b&b'), since it is in both sentences it alone cannot be responsible for the differences in interpretation. The point, however, is that (6a') and (6b') are both considered truthful even if the situations they describe never come about (the "paradox" in both cases). Of course, (6a') is a progressive while (6b') is a predicate nominal. While the two constructions are not generally treated as a natural class, they are both basically copular, and they seem to have this "paradox" in common. In section 4, I argue that this is not an accident.

   Returning to (1), *danced, will dance,* and *be dancing* are all associated with a semantic operator while predicates like *dances* and *be ill* are not. The evidence presented in (2) through (6) would seem to support a different grouping. On the one hand, we have *be ill*, *be the next chair,* and *be dancing*; on the other, we have *danced, will dance,* and *dances*. The main goal of this paper is to give one possible analysis in support of this distribution.

   In addition to the parallels between progressives and other copular predicates discussed so far, there is a further fact that remains unaddressed by the operator analysis. Consider the examples in (7). The operator analysis does not explain why present progressive morphology is itself compatible with future and habitual interpretations as in (7b&c).

(7) a. My brother is dancing.
   b. My brother is dancing tomorrow at dawn.
   c. These days my brother is dancing every morning at dawn.

(8) a.   PROG ϕ
     b.   FUTURE ϕ
     c.   HABITUAL ϕ

(7b) is the well-known future progressive, extremely common in English, often very confusing for students of the language. (7c) is habitual (unambiguously so because of the adverbial *every morning at dawn*). For those who associate future and habitual readings with their own operators as in (8), the availability of these readings with progressive morphology needs to be explained. Do we say that *My brother is dancing* is simply ambiguous? But if this is the approach, the question is raised, why exactly this set of interpretations? In section 3, I argue that the range of readings in (7) is not an accident. I demonstrate first that simple present tense verbs in English are also associated with this same range of readings. I then suggest that it is something about the truth conditions of progressive morphology as well as simple present tense verbs that allows exactly these interpretations.

To recap so far, I have illustrated a variety of parallels between progressives and other copular predicates, and in doing so I have also illustrated differences between progressives, on the one hand, and tensed predicates (including those in the simple present), on the other. This distribution would seem to contradict the traditional operator analysis of tense and aspect outlined in (1). I have also noted that English progressive morphology is semantically ambiguous; it can be progressive, future, or habitual. To account for these facts, I now argue that a shift away from the progressive operator and to the actual morphology of English is instructive. Rather than asking what are the truth conditions for PROG, we should ask what are the truth conditions for *be –ing*?

2. An analysis

In traditional grammar, the progressive is a combination of the copula and a participle, where a participle is the adjective form of the verb. Given the facts in (2) through (6), might we say that the semantics of the progressive is exactly like the semantics of any other adjective? So, for example, if we assume that *is ill* is a predicate of individuals as in (9a), might we assume that the same is true of *is dancing* as in (9b)?[2]

(9) a. $\|$be ill$\| = \lambda x[\text{ill}'(x)]$
     b. $\|$be dancing$\| = \lambda x[\text{dance}'(x)]$

(10) a. $\|$dance$\| = \lambda x\lambda e[\text{dance}'(e, x)]$
     b. $\|$dance in the park at dawn$\| = \lambda x\lambda e[\text{dance}'(e, x) \wedge \text{in.the.park}(e) \wedge \text{at dawn}(e)]$

Clearly, however, this is too simple. *Dancing* is presumably derived from the eventive *dance* in (10a), and while stative, *John is dancing* can be modified like any other eventive predicate. We can say that John will dance in the park at dawn, and we can also say that John will be dancing in the park at dawn. The representation in (10b) with the adverbials *in the park* and *at dawn* predicated of the event

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[2] Although the representations in (9a) and (10a&b) reflect the basic ideas found in Parsons (1990) and Kratzer (1995) amongst others, the nature of the difference between states and events is far from being a settled matter. Rothstein (1999) argues that the semantic representations of all verbs (stative or not) include reference to events, and that all *be* + predicate adjective constructions include reference to both states and events (the latter introduced by *be*). Rothstein focuses on examples like *be clever*, *be well-behaved*, or *be quiet* (all of which can in fact be temporally modified and can occur in the progressive relatively easily). I am happy to believe that a subset of stative predicates can themselves be eventive. Some of these are verbs (*I am living in New York*), some are predicate adjectives (*John is being good*), some are predicate nominals (*John is being the daddy today)*. However, there are at last as many stative predicates which cannot under any natural interpretation be eventive (many are individual level predicates (Carlson 1977)). Consider *belong* (*I belong to a country club*), *be blue* (*My eyes are blue*), *be an even number* (*Six is an even number*). Given this difference in behavior, I am reluctant to believe that *be* is in general the source of an extra event argument, and for the purposes of this paper, I assume the older distinction between states and events. For the record, Rothstein (1999) also explicitly rejects the idea of a parallel between predicate adjectives and progressive morphology (p.416) explored in this paper.

argument (as is standard in event semantics) presumably underlies both the future and the progressive sentences. The evidence would seem to suggest that both the tensed *John will dance* and the progressive *John is dancing* contain an event variable.

So, what to make of the parallel between a copular expression (which has the semantics in (9a)) and the progressive of an eventive predicate (which is derived from the semantics in (10a))? I begin by noting that (10a) actually makes reference to two variables, an individual x and an event e. And although x and e are used to refer to different kinds of objects (individuals and events, respectively), both variables are still first-order, i.e., they are used to refer to particular kinds of entities (and not to sets or to sets of sets or any other more complex object). Independently, of course, there is a general requirement that in a well-formed semantic formula, all variables must be bound. For simplicity's sake, in the discussion that follows here, I assume that this is done by existential closure.

In (11a) (which is repeated from (10a)) we have a formula with two variables, an x and an e. Given that both variables must at some point be existentially bound (but absent any other kinds of restrictions), this means that an eventive predicate can be formalized as one of two kinds of objects. Consider the contrast between (11b) and (11c).

(11) a. $||\text{dance}|| = \lambda x \lambda e[\text{dance}'(e, x)]$
      b. $||\text{dance}|| = \lambda x \exists e[\text{dance}'(e, x)]$
      c. $||\text{dance}|| = \lambda e \exists x[\text{dance}'(e, x)]$

(11b) is a set of individuals (predicated of some event of dancing). (11c) is a set of events (predicated of a given individual). The only difference between (11b) and (11c) is the order in which existential closure obtains. Given that both variables must be bound, and given that they are bound one at a time, either (11b) or (11c) must obtain at some point in the derivation. The main hypothesis in this paper is that (11b) underlies the progressive; like other copular expressions, the progressive is a predicate of individuals. In contrast, (11c) underlies tensed sentences in the simple past, the simple future, and the simple present.

Given this proposal, the semantic translations of the kinds of sentences discussed in (2) through (6) are given in (12) and (13).

(12) Predicates of individuals
      a. $||\text{a boy is ill}|| = \lambda x[\text{boy}'(x) \wedge \text{ill}'(x)]$
      b. $||\text{a boy is dancing}|| = \lambda x \exists e[\text{boy}'(x) \wedge \text{dance}'(e, x)]$

(13) Predicates of events[3]
      a. $||\text{a boy danced}|| = \lambda e \exists x[\text{boy}'(x) \wedge \text{dance}'(e, x) \wedge \text{PAST}(e)]$
      b. $||\text{a boy will dance}|| = \lambda e \exists x[\text{boy}'(x) \wedge \text{dance}'(e, x) \wedge \text{FUTURE}(e)]$
      c. $||\text{a boy dances}|| = \lambda e \exists x[\text{boy}'(x) \wedge \text{dance}'(e, x)]$

(12a&b) are both predicates of individuals. They are both copular. (13a-c) are predicates of events. They are all tensed. In one sense the difference between (11b) and (11c) is a matter of scope. *Dance* can be formalized as a set of individuals of whom it is true that they have the property of "being the agent of an on-going dancing event" (or something to this effect): x takes scope over e. This is the stative (progressive) interpretation in (12b). Alternatively, *dance* can be formalized as a set of events,

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[3] A comparison of (1a&b) and (13a&b) raises an interesting (but presumably theory-internal) question: Are semantic operators such as PAST and FUTURE (or CAUSE—compare Dowty 1979 to Rothstein 2004) predicates of propositions or predicates of events (or possibly predicates of another kind of variable, say states)? Since I take a mixed view of things (i.e. some predicates make reference to events while some do not), and since I would prefer to have only one PAST operator, it would be more accurate to recast (13a), for example, as $\lambda e[\text{PAST}[\exists x[\text{boy}'(x) \wedge \text{dance}'(e, x)]]]$ with PAST taking a proposition (containing an event variable) as its argument (I don't do this only because the representations in (13) are the familiar ones from Parsons). This enables a uniform treatment of tensed verbs (predicates of events) and tensed adjectives (predicates of individuals). The general question about the nature of the operators is beyond the scope of this paper.

events which have participants and which take place at particular times, in particular locations. This is the eventive (tensed) interpretation in (13a-c). The general point is that a basic sentence such as *a boy dance* with the representation $\lambda x \lambda e[\text{boy}'(x) \wedge \text{dance}'(e, x)]$ may be predicated of its individual or of its event, and nothing in the theory imposes an order in which these predications must occur.[4]

Returning to some of the empirical observations, it is not a surprise that progressive constructions do not themselves occur in the progressive: copular expressions typically are not themselves predicated of other copular expressions (and sentences like *John is is ill* are nonsense). Second, a predicate adjective (and in fact any predicate of individuals) refers to a collection of individuals who have a particular property in common, i.e. they are all *tall, in front of the train station, in need of money*, or, I am claiming, *an agent of dancing*. Crucially, the members of such a set can be determined at a moment in time, for example, at the moment of speech or even, say, at the moment that a photograph is taken. As such, predicates of individuals can be used to describe a current state. They can also be used to describe a static image. In contrast, it is unlikely that the reference of an event argument (i.e. an event) obtains at a moment in time. Events take time, and we might say that they are necessarily evaluated over intervals. It is therefore odd to use a tensed sentence (even a sentence in the simple present) to describe a static image.

3. Ambiguity

So far I have argued that *be –ing* in English patterns with other copular predicates, and I have given a semantic analysis that can explain this behavior. *Be –ing* like all copular predicates is a predicate of individuals. I have also noted that the *be –ing* construction is semantically ambiguous. I return now to this ambiguity. Recall example (7), repeated here as (14).

(14) a. My brother is dancing.
 b. My brother is dancing tomorrow at dawn.
 c. These days my brother is dancing every morning at dawn.

The predicate *is dancing* can have three interpretations. It can be present (meaning it is in progress) as in (14a), future as in (14b), or habitual as in (14c). The first thing to notice is that this set of interpretations is not limited to the *be –ing* construction; other copular expressions can also have this range of interpretations.

(15) a. John is ill.
 b. This is the view from my new living room.
 c. Recently, John is ill a fair amount.

(15a) is a simple predicate adjective which obtains at the moment of speech, i.e. in the present. If I'm building my dream home, and take you to its future location, (15b) is a statement in the present tense about a future fact. (Compare (15b) to *This will be the view from my new living room* and recall *John is/will be the next chair of the department*.) Finally, (15c) is habitual (again, unambiguously so because of the adverbial *recently*). Given the hypothesis that progressives are just a particular kind of copular expression, the interpretive parallels between (14) and (15) are presumably a good (even a necessary) thing. We can now ask more generally, what is it about the truth conditions of copular expressions that allows exactly this range of interpretations?

More interestingly, however, eventive verbs in the simple present tense also allow this set of three interpretations. Compare (16) with both (14) and (15).

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[4] In much the same way a transitive verb can be reduced to an intransitive verb by predicating over the subject or the object. The fact that we normally predicate objects before subjects reflects tests for syntactic constituency; the semantic theory is neutral.

(16) a. John rounds first and runs to second!
     b. We leave at dawn.
     c. These days, my brother jogs every morning at dawn.

Beginning with the easy ones, (16b) is future and (16c) is habitual. (16a) is more difficult but still very interesting. This is an example of "announcer-speech." Like (14a) and (15a), the sentence in (16a) obtains at a "now," but because the verb is eventive, even in the simple present the so-called "now" must be an interval of time which corresponds to the duration of the event. As such (16a) can be uttered only as the event of John rounding first and running to second is actually taking place. The two events (the act of speaking and the event being described by the act of speaking) must occur at the same time. This seems right for announcer-speech. It must obtain at a "now" but the now in this case must correspond to an interval of time.[5]

Given the parallels between (14), (15) and (16), we now see that the question of why English progressive morphology can have three distinct interpretations is too limited. The question is more accurately stated: why do copular expressions as well as verbs in the simple present tense all have present, future, and habitual interpretations? More formally, is there something about the truth conditions of (14), (15), and (16) that allows these predicates to share the interpretations normally associated with PROG, FUTURE, and HABITUAL operators?

As already stated, all of the predicates in (14), (15), and (16) are in the simple present tense. Now, contrast (17b) with (17a&c). In the usual semantics, past *danced* and future *will dance* are associated with particular semantic operators while the simple present *dance/dances* is not. Similarly for the copula in (18).

(17) a. danced   (past)   PAST[dance']
     b. dance/dances   (present)   dance'
     c. will dance   (future)   FUTURE[dance']

(18) a. was ill   (past)   PAST[ill']
     b. be ill   (present)   ill'
     c. will be ill   (future)   FUTURE[ill']

Comparing the morphology and the semantic representations in (17) and (18), we again have the inkling of a mismatch between morphology and semantics. It is easily observed that English verbs and the English copula have past and present tense forms but no morphologically distinct future form. Given the presence of modal *will* in (17c), it seems more likely than not that the future meaning associated with *will dance* comes from the combination of *will* and *dance*, rather than from either word on its own. Similarly for the copula which has distinct past and present forms (*was* and *is*), but no distinct future (*will be*). Assuming that *will* makes a contribution to the truth conditions associated with a future interpretation, English would seem to lack simple verbal and copular forms which are future. I therefore suggest that, rather than past versus present versus future, the basic distinction encoded in English verbal (and copular) morphology is past versus non-past. And the predicates in (14), (15), and (16) are all in the non-past.

It is a theory-internal question as to whether the non-past is best understood as the absence of PAST (as in (19) and (20)) or whether it is encoded by an operator, with possible truth conditions for such an operator found in (21a) (ignoring for the time being the differences between moments of time and intervals of time).[6]

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[5] An interesting example brought to my attention by Graham Katz (personal communication) is *Madonna dances in this video*. While verbs in the simple present cannot be used to describe photographs (i.e. static images), they can be used to describe a movie or a video (i.e. dynamic images). Presumably this is true in part because movies take time and tensed verbs (even verbs in the simple present) must be evaluated over an interval of time. It is not completely clear to me if *Madonna dances in this video* is otherwise more similar to (16a) or (16c).

[6] The idea of non-past may seem foreign to English (where we are used to thinking about the contrast between past, present, and future), but it is pretty common in other languages. Consider Japanese where the form *odoru* can

(19) a. danced   (past)   PAST[dance']
      b. dance/dances   (non-past)   dance'

(20) a. was ill   (past)   PAST[ill']
      b. be ill   (non-past)   ill'

(21) a. NON-PAST ϕ is true at a time i iff ϕ is true at any point of time i'
such that $i \leq i'$.
      b. PAST ϕ is true at a time i iff ϕ is true at any point of time i'
such that $i' < i$.
      c. PROG, FUTURE, HABITUAL

Given all this, the relationship between the non-past, on the one hand, and the present, progressive, future, or habitual, on the other, is relatively straightforward. First, it is important to distinguish between the semantics of tense and aspect and the meanings encoded by the morphology of a particular language. It seems safe to say that semantic notions such as past, future, progressive (themselves associated with semantic operators like those in (21c)) are generally available, quite likely to all speakers of all natural languages, and there is, perhaps, a "perfect" system of tense and aspect which is a part of the human cognitive system. But it is clearly false that every notion in this "perfect" system has a unique realization in every language. As shown in this paper, the meaning of FUTURE in English can be expressed with *will* (*will dance tomorrow*), with *be –ing* (*is dancing tomorrow*), and with the simple present (*We leave at dawn*). It is also obviously wrong that the various morphological forms of a language encode one and only one meaning, the ambiguity of *be –ing* being the topic of the present discussion. In contrast, I have argued that the semantic concepts PAST and NON-PAST do in fact have specific and regular realizations in the morphology of the English predicate. Again, (19a&20a) are past forms while (19b&20b) are non-past forms.

I suggest that the English non-past predicate has present, progressive, future, and habitual interpretations exactly because the truth conditions of the various operators in (21c) are consistent with the truth conditions of the non-past in (21a). In other words, that a predicate is true in the non-past does not preclude it being true at the more specific moments or intervals of time required by the present, the progressive, the future, or the habitual, and all four interpretations are logically available for any token of a non-past predicate. Of course, which reading is most likely to obtain of a particular token is a different question. There are default readings. Other things being equal, *be ill* and *be dancing* obtain at the moment of speech. Simple present *dance* has a habitual interpretation. Arguably there are modal differences between the future *John will dance at dawn* and the future progressive *John is dancing at dawn*. Adverbs such as *every day* or *now* or *tomorrow at noon* will likewise influence the most likely interpretation. But a particular token of a non-past predicate does not on its own determine anything more than non-past.[7]

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refer to habitual dancing or to a specific future event of dancing. Adverbials such as *asita* "tomorrow" serve to disambiguate. *Odoru* contrasts with *odotta* which is past (or possibly complete). There is no unambiguously future form.

[7] The observations here raise interesting questions with respect to the relationship between form and meaning. In English abstract concepts such as "is in progress" or "is true now" or "happens on a regular basis" are all mapped to the same non-past form. It also seems true that there are in general a lot more abstract concepts (in the "perfect" system) than there are distinct forms in a given language. This predicts a lot of ambiguity, and particular forms in particular languages tend to have a number of different interpretations. Examples of this many-to-one mapping are given below.

a. English *be –ing*   (present, progressive, future, habitual)
b. Japanese *–te iru*   (progressive, habitual, perfective, experiential)
c. Chinese *zai*   (progressive, locative marker, habitual)
d. Italian "stay" + the *–ndo* form   (progressive)

4. "Paradoxes" and statives

Recall example (6), repeated here as (22).

(22) a.   John will cross the street.
    a'   John is crossing the street.
    b.   John will be the next chair of the department.
    b'   John is the next chair of the department.

In section 1, I argued that (22a'&b') are evaluated at the moment of speech, and both can be judged true even if the end-states they seem to entail do not actually come about. In this they contrast with (22a&b), respectively; sentences in the future are true if and only if they actually obtain at some point in the future. (22a') is an example of the Imperfective Paradox (Dowty 1979), while (22b') is an example of what I have dubbed the Stative Paradox. The main focus of the literature on the progressive is examples like (22a') (in addition to Dowty 1979, see Landman 1992). Because of examples like (22b'), I would suggest that this focus is perhaps too narrow.

Both *be crossing the street* and *be the next chair* are copular. They are both in the non-past. Under the analysis being explored in this paper, they are both predicates of individuals (and are therefore stative) as in (23).

(23) a. $\|\text{be ill}\| = \lambda x[\text{ill}'(x)]$
    b. $\|\text{be crossing the street}\| = \lambda x \exists e[\text{cross the street}'(e, x)]$
    c. $\|\text{be the next chair}\| = \lambda x[\text{the next chair}'(x)]$

I believe that the "paradox" in (22a'&b') occurs for the following reason. As predicates of individuals, particular tokens of the predicates represented in (23) can be evaluated at a moment in time, i.e. membership in a set can be checked at a moment in time. The difference between (23a) and (23b&c) is that the correct identity of the relevant state can be correctly determined only for *be ill* in (23a). In contrast, the states described by *be crossing the street* and *be the next chair of the department* necessarily obtain for intervals of time. *Be crossing the street* is derived from an eventive predicate; its semantic representation contains an event variable which must obtain for an interval. *Be the next chair* obtains for an interval of time not because it is an event, but because of the word *next*. The intuition (which is not formalized in (23c)) is that *be the next chair* refers to the period between the moment of speech and the moment when the person in question actually becomes chair.

The paradox in (22a'&b') arises from the fact that, as predicates of individuals, truth conditions for *be crossing the street* and *be the next chair* are determined at moments of time. But because of details of their semantic representations, both *be crossing the street* and *be the next chair* are fully realized only over intervals. In addition, the predicates are in the non-past; it must be the case that these intervals are not fully realized at the moment of speech (or they would be under the scope of a PAST operator). As such, the claim that *John is crossing the street* is forced to be no more than a best guess, one presumably based on a reasonable expectation of the circumstances under which the interval in question will end.[8] Likewise, the claim that John is the next chair is also a guess. The current state (if

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The state of affairs exemplified in these examples is a very interesting puzzle. The main point of this paper is to suggest that a close investigation of the structure and truth conditions of *be –ing* might help explain the exact distribution of its behavior and interpretation in English. The same is presumably true of all of the constructions here. Most interestingly, given that all of these forms have progressive kinds of interpretations (at least some of the time), one would also expect their various truth conditions to overlap just enough to allow them all to encode the notion "is in progress."

[8] At the same time, the future interpretation of the English progressive complicates the question. Although it seems straightforward to say that the future reading of *John is crossing the street* is false if John is hit by a truck and never makes it to the other side, the fact that even with a future reading, the morphology is in the present tense seems to complicate the interpretation (and also seems to distinguish it from modal *will*). The question can be

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allowed to continue) will end when John assumes the chairmanship. In both cases, a state that must obtain for an interval of time is identified by the evidence available at a moment. In both cases, the guess might be wrong, but as long as it is reasonable (or possibly just not contradicted by the facts at hand), it is taken as true at the "now" of speech. The "paradox" is felt to obtain because of this conflict between when the predicate is evaluated (at a moment) and when it actually can be evaluated (over an interval).[9]

5. Conclusion

I believe that exploring the parallels (morphological and otherwise) between progressive constructions and predicate adjectives in English gives insight into both, and I have given one possible analysis in support of the claim that both constructions are states, i.e. predicates of individuals. I have also argued that (i) English verbal (and copular) morphology might be best understood in terms of the notions of past and non-past and that (ii) states are evaluated at moments in time while events are evaluated over intervals.

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raised, is an example like *John is crossing the street* really progressive or actually future? Beyond this speculation, the modal details of the various realizations of future in English are not addressed in this paper.
[9] In some sense this is the inverse of the announcer-speech phenomenon discussed in section 3. Recall that, there, an act of speaking (normally thought of as occurring at an instantaneous "now") is stretched out to match the interval of time corresponding to the event argument in a non-past verbal form. Here, there is a conflict between the semantics of predicates of individuals (normally evaluated at moments) and the interval of time entailed by the states in question.

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