

On the Syntax of Linking Verb Constructions

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Abstract: Since the 1970s, the syntactic operation *raising* has been providing fertile areas for discussion. More specifically, it is an operation in which a constituent in a non-finite embedded clause moves to the matrix subject position. Given this, there have been attempts in previous studies to extend this analysis to the derivation of linking verb constructions in which raising verbs such as *seem* and *appear* are used as well, under the assumption that the matrix subject originates in the subject position of a *small clause* and raises out of it for Case-licensing reasons (Stowell, 1981; Chomsky 1981). However, when we consider the possibilities of sentential idiom interpretations and *there* subjects in these constructions, it seems that, unlike raising sentences, they fail to be ruled in. Moreover, it is also true that, when quantifiers occur in the constructions under discussion, they are disallowed to take scope under the main verb. These considerations suggest strongly that, contrary to the mainstream analysis, their derivation is not analogous to that of the raising construction, which passes all of these tests. Accordingly, in this paper, I will argue that the movement analysis of these constructions should be abandoned, and that their derivation should be regarded as parallel to that of the subject-control construction, which behaves identically when verified if they pass the grammar tests under discussion.

Keywords: Raising, movement, base-generation, linking verbs, control, predication

1. Introduction

In generative grammar, the operation *subject-to-subject raising* (SSR) has been a heated topic of discussion since the publication of Postal (1974). SSR is an operation that moves the subject of a non-finite embedded clause to the matrix subject position, retaining the proposition of the entire sentence. The following examples illustrate how this works:

- (1) a. Alfred seems to eat his veggies.
b. [TP Alfred_i [T' [VP seems [TP t_i [T' to [VP eat his veggies]]]]]]
(Rooryck, 2000, p. 1)

In this structure, *Alfred* occurs in the specifier position of the embedded TP despite its surface position, and then moves to that of the matrix TP because its Case cannot be licensed in the base position. This movement does not alter the logical proposition of the sentence; thus, it does not differ before and after the operation is applied because the subject position of *seem* is a θ' -position to which no θ -role is assigned.

It is important to note that the postulation of such an operation is motivated by the fact that sentential idioms retain their idiomatic interpretations even when their chunks have raised across clause boundaries and are thus separated, and that the expletive *there* can occur in the subject position instead of raising an argument from the embedded clause. Now, consider the following examples that illustrate these points:

- (2) a. The fur seems to fly. (Radford, 2004, p. 273)
b. There seems to be trouble in the Congo. (Postal, 1974, p. 34)
c. * There {tried / expected / hoped} to be a man here. (Hornstein, 2003, p. 7)

The sentence in (2a) can be interpreted as having the meaning of the sentential idiom *the fur flies* although the predicate *fly* is separated from *the fur* due to the intervening verb *seem*. This puzzle can be captured if we assume that the subject is initially an element in the embedded clause instead of one in

the main clause. However, the infinitival *to* that establishes a Spec-Head relation with the argument (namely, *the fur*) fails as a Case licenser as it inherently lacks such an ability; thus, the relevant nominal is raised to the matrix subject position in which Case can be licensed by finite T^0 . Because this position has no influence on the thematic structure of the sentence, the movement does not alter its meaning to a completely different one. Turning to (2b), the expletive *there* occupies the subject position of *seem*, which explicitly indicates that this position is a θ' -position. On the other hand, as illustrated in (2c), the expletive is excluded in the subject position of verbs such as *try*, *expect*, and *hope* because it is a θ -position.

Moreover, there are instances in which raising verbs are used in *subject-verb-complement* (SVC) sentences such as the one in (3a) below:

- (3) a. John seems happy.
 b. John_i seems [_{SC} t_i [_{AP} happy]]

Stowell (1981) and Chomsky (1981) argued that such sentences are derived by raising from the subject position of a so-called *small clause* (SC), and are thus analyzed as parallel to SSR sentences. If this is correct, SVC sentences should allow sentential idiom interpretations and *there* subjects as well, as in (2), but it is interesting that they do not do so in practice when tested.^[1]

- (4) a. # The cat {seems / sounds} out of the bag.
 b. * There seems someone sick. (Den Dikken, 2017, p. 33)

These data strongly indicate that the sentence in (3a) does not involve movement in its derivation. Therefore, how should we analyze it? One possibility is to follow Williams' (1983) analysis that it is derived by means of *predication*.

- (5) John [_{VP} seems [_{AP} sick]] (Williams, 1983, p. 300)

The Williamsian predication theory, traced back to Williams (1980), assumes that the subject position of a verb such as *seem* is a θ -position. This in turn suggests that the verb's subject is derived by base-generation rather than by movement. This is the approach that we adopt in this paper, and I will argue why it should be so in the next section. It is important to note here that, because we subscribe to such an analysis as in (5), the verb *seem* used therein needs to be regarded not as a raising verb but as a linking verb that serves to 'bridge' a subject and a predicate. Given this, I will refer to this type of sentence as the *linking verb-predicate construction* (LVPC).

However, given the assumption that predication is a grammatical relationship established between a predicate θ -marking an argument and the argument c -commanding the predicate (Williams, 1980), it follows that *John* in (5) is doubly θ -marked because it c -commands both the predicates *seem* and *sick*, which would surely result in violating the θ -criterion (Chomsky, 1981). To overcome this issue, Williams (1983) proposed that the θ -criterion be weakened, the analysis of which eventually led him to assume that the main verb in the LVPC does not contribute to predication. However, this analysis would face a critical challenge: it is extremely difficult to justify. Given this, I attempt to resolve this issue by proposing that the predication structure or derivation of the LVPC can be reduced to *control* and *secondary predication* without having to posit any difficult assumptions. More specifically, I will adopt the approach that assumes the presence of an SC but rejects the idea that movement is involved in the derivation of the LVPC.

This paper is organized as follows. Section 2 argues against the standard view that the LVPC is derived through the movement of the subject argument in an SC, claiming the necessity of another lexical entry in addition to *seem* as a one-place predicate. Section 3 proposes that the derivation of the LVPC be paralleled with that of subject-control rather than that of SSR. Finally, Section 4 provides a brief conclusion.

2. The Two Approaches to the LVPC

To begin, let us compare the Stowellian movement analysis and the Williamsian base-generation analysis. I reproduce the relevant derivations below for the ease of exposition:

- (6) a. John_i seems [_{SC} *t*_i [_{AP} happy]]
 b. John [_{VP} seems [_{AP} sick]]

Notice that the lexical property of *seem* must be different in each derivation because the one in (6a) selects an SC and thus a proposition as its internal argument, but the one in (6b) selects a predicate that builds up a predicative relation with the argument *John*. This is tantamount to saying that it is necessary to assume not only the one-place use of *seem* (which corresponds to the use in SSR), but also the two-place use thereof (which corresponds to the use in the LVPC). Using lambda notations, the relevant lexical entries can be represented as follows.

- (7) a. *seem*₁: $\lambda p.$ SEEM(*p*)
 b. *seem*₂: $\lambda P.\lambda x.$ SEEM(*x*)(*P*(*x*))

Take *x* to be an entity, *p* a proposition, and *P* the predicative variant of *p*. It should also be noted that, in the latter lexical entry, the predicative proposition is necessarily bound by the argument *x*, as can be observed in the ungrammaticality of sentences such as *John seems Bill happy*.

Given these lexical entries, let us now consider how they are used in actual sentences. As mentioned above, the former is used in raising constructions and the latter in linking verb constructions. The following examples depict the relevant uses:

- (8) a. ___ seems [_p John to be in trouble]
 b. [_x John] seems [_{P(x)} sick]

However, the question that arises here is whether we really need to assume the second lexical entry. As it turns out, we are led to argue for its presence. This is motivated by the fact that, in addition to the possibilities of sentential idiom interpretations and *there* subjects argued in Section 1, linking verb constructions in general do not allow narrow scope readings when they contain quantifiers (Lappin, 1984; Potsdam & Runner, 2001). Some examples are provided below:

- | | | |
|--------|--|--|
| (9) a. | Someone seems sick. | [$\exists >$ seem, *seem $>$ \exists] |
| b. | =There is someone who seems sick. | [$\exists x$ (<i>x</i> seem sick)] |
| c. | ≠There seems to be someone sick. | [*seem($\exists x$ (<i>x</i> sick))] |
| d. | Something sounded nice. | [$\exists >$ sound, *sound $>$ \exists] |
| e. | =There was something which sounded nice. | [$\exists x$ (<i>x</i> sound nice)] |
| f. | ≠It sounded as though something was nice. | [*sound($\exists x$ (<i>x</i> nice))] |
| g. | Something remained unaccounted for. | [$\exists >$ remain, *remain $>$ \exists] |
| h. | =There was something which remained unaccounted for. | [$\exists x$ (<i>x</i> remain unacc.-for)] |
| i. | ≠ There remained something unaccounted for. | [*remain($\exists x$ (<i>x</i> unacc.-for))] |

Let us focus on those in (9a-c) for discussion. The LVPC sentence in (9a) can be paraphrased as (9b), but not as (9c). The difference between them is that the *someone* in the former is required to be someone who can be specified in a certain set of people in a particular context, whereas that in the latter is a completely arbitrary someone, who cannot be specified pragmatically in terms of the referent.^[2] The problem that then arises is that, if the LVPC is derived in such a way as in (6a), the surface subject should be available for a reconstruction in the position between the verb and the adjectival predicate. However, the fact that such a reconstruction is impossible suggests strongly that the derivation of the LVPC does not pertain to movement; hence, the examples in (9) are obvious counterexamples to the movement analysis of the construction.

Moreover, if the lexical entries for *seem* can be unified into one and the LVPC is thus derived by movement as well as SSR sentences, we predict that these two constructions can be conjoined

because they should be derived in the same way by means of the same lexical entry. Now, consider the following examples:

- (10) a. John seems sick.
 b. John seems to have skipped today's class.
 c. * John seems sick and to have skipped today's class.

As illustrated, such a conjunction turns out to be impossible when tested. This lends further plausibility to assume the second lexical entry in (7b). In addition, this also indicates that the derivation of the LVPC involves base-generation of a subject argument into a θ -position. However, as discussed in Section 1, this argument will be assigned two θ -roles in this regard because it dominates two predicates, although the θ -criterion requires a one-to-one correspondence between an argument and a predicate (or a θ -marking constituent). Accordingly, we are led to address the question of how the LVPC is derived under the assumption that the lexical entry used therein is different from the one used in the raising construction. In the next section, I will delve into the relevant question and argue that the derivation of the LVPC can be paralleled with that of the subject-control construction.

3. The Syntax of the LVPC

In the previous sections, I argued that it is difficult to relate the derivation of the LVPC to that of SSR for various empirical reasons. Furthermore, given that we are going to have to partially adopt and partially abandon Williams' (1983) analysis of the LVPC, how should we approach the syntax of this construction?

To address this question, let us consider the difference between the analysis that assumes raising of the surface subject and the one that assumes base-generation of the matrix subject into the verb's subject position in more depth. The most notable difference lies in whether the matrix subject originates from an SC or from the matrix clause. It is interesting that this is reminiscent of the motivation to distinguish between the *exceptional-case marking* (ECM; or *raising-to-object*) and *control* constructions. This is because these constructions are distinguished according to whether the argument following the main verb belongs to the matrix clause or to the embedded clause, which is parallel to the distinction between the two possible analyses for the LVPC. More specifically, in generative syntax, it has been argued that there is a clear structural difference between them, which is illustrated in (11) below.^[3]

- (11) a. John believed [Mary to be aggressive]. [ECM]
 b. John persuaded [Mary] [PRO to leave]. [Control]
 (Kuwabara & Matsuyama, 2001, p. 94)

The structure in (11a) exemplifies the ECM construction in which the relevant argument belongs to the embedded clause, and the one in (11b) shows the object-control construction in which the relevant argument belongs to the main clause. This distinction is thus essential when we consider the possibilities of sentential idiom interpretations and the expletive *there* as (quasi-)arguments in each construction. Consider the following contrast:

- (12) a. We believed the cat to be out of the bag.
 b. We expected the fur to fly so quickly.
 c. We believed there to be no alternative to that analysis.
 d. We considered there to be no good reason for that behavior.
 (13) a. # We persuaded the fur to fly so quickly.
 b. # We convinced the cat to be out of the bag.
 c. * We persuaded there to be a strike at the company.
 d. * We asked there to be no riot in Chicago.

(Kuwabara & Matsuyama, 2001, p. 93)

Because idiomatic interpretations cannot be made if the components of the idiom are separated, the argument in the object position of (12a, b) must be derived from the embedded clause. Moreover, because the expletive *there* can only occur in a θ^2 -position, it can never occur in the complement position of an accusative verb, which is always θ -marked. This indicates that the *there* arguments in (12c, d) that do not comply with this restriction originate from the embedded clause. By contrast, the object-control examples in (13) show the completely opposite behavior: they all fail in these tests. This indicates that the idiom chunks and the *there* arguments are elements in the main clause in these examples.

Furthermore, the same line of reasoning can be extended to the subject-control construction. Just as the object argument in (11b) stems from the main clause, so the matrix subjects in the following examples belong intrinsically to the main clause:

- (14) a. Mary tried [PRO to win the contest].
 b. Bill failed [PRO to pass the exam].

As is clear, this is tantamount to saying that there is no movement relationship between the subject argument and PRO in these examples.^[4] This then leads us to predict that subject-control sentences do not pass the tests in (12) and (13) either, which is indeed the case, as shown below:

- (15) a. # The cat tried to be out of the bag.
 b. # The fur failed to fly.

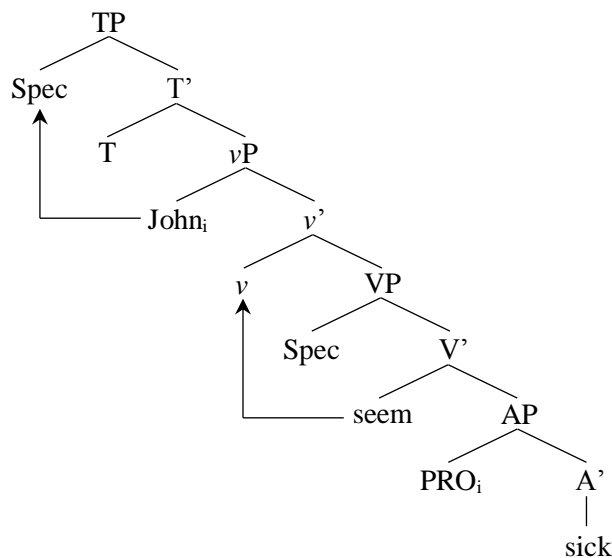
Notice that this characteristic of the relevant verbs completely matches that of linking verbs. The relevant example is reproduced as (16) below:

- (16) # The cat {seems / sounds} out of the bag.

The sentences in (15) and (16) being unacceptable as bearing the meanings of the idiomatic expressions provide us with a simple but crucial piece of information: The underlined arguments are elements belonging to the matrix clause. Furthermore, note that this automatically excludes the possibility of derivation by movement in the LVPC.

Given these observations, it may be assumed that the derivation of the LVPC is parallel to that of the subject-control construction. Accordingly, I propose the following structure for the derivation of the LVPC:^[5]

- (17) a. John_i seems [AP PRO_i sick].
 b.



As illustrated, it can be assumed that the LVPC is derived through the base-generation of the subject argument in a θ -position in the matrix clause, and through control. Note that this configuration is

precisely analogous to the derivation of subject-control, except that the position occupied by AP would be occupied by TP instead. It is important to note that this structure naturally captures the data in (16) only in terms of structural factors; it also accounts for the word order in the LVPC, in which a predicate appears immediately following the main verb, without having to posit any difficult assumptions. This is because the predicates AP and *vP* are associated appropriately with PRO and with *John*, respectively, which adheres to the principle of the θ -theory. With regard to Case, the *vP* analysis (Chomsky, 1995) assumes that structural Case is assigned under Spec-Head agreement; hence, *lexical government* in GB theory can also be regarded as a grammatical relationship licensed under Spec-Head agreement. Accordingly, it would not pose a problem even if the PRO were to occur in the c-command domain of the governor V (see the PRO theorem).

In summary, the derivation of the LVPC may be captured by paralleling it with the derivation of the subject-control construction, given their similarity in disallowing narrow scope readings, sentential idiom interpretations and *there* subjects. Because we assume the presence of PRO in the current analysis, the issue of θ -role assignment in Williams' (1983) predication theory is automatically accounted for, as there are now one-to-one correspondences between the arguments (that is, *John* and PRO) and the predicates (*seem* and *sick*). Therefore, I conclude that the SC analysis can be maintained, but that it is impossible to assume movement from the relevant clause in the derivation of the LVPC. This also means that it is necessary to posit two lexical entries for verbs such as *seem*, namely one as a one-place predicate and the other as a two-place predicate. Notice that the second lexical entry is completely analogous to the lexical entry for subject-control verbs such as *try*. This is strong evidence for regarding the derivation of the LVPC as being parallel to that of the subject-control construction.

4. Concluding Remarks

In this paper, I argued against the standard movement analysis of the LVPC, considering whether the construction accepts narrow scope readings, sentential idiom interpretations and *there* subjects. It is important to note once again that SSR rules all of these in on one hand, but that the LVPC rules all of them out on the other. Moreover, as expected, it is impossible to conjoin an SSR and an LVPC sentence. This further strengthens the idea that the latter is derived in a different manner from the former. Presumably, it would be best to reconsider the construction by comparing it to the subject-control construction because it displays a close similarity with regard to its grammatical properties.

Notes

[1] I represent pragmatically unacceptable sentences and sentences uninterpretable as idiomatic with a hash mark in this thesis.

[2] It is interesting that the copula *be* does not exhibit such a restriction on scope relations. If one utters *someone is sick*, it is obvious that we can interpret the *someone* as referring to a specific someone in a humorous way, as well as referring to a completely arbitrary entity in a given set of people. This indicates that the copula and other linking verbs need to be differentiated, but I refrain from meddling in this topic too much because it is beyond the scope of this paper.

[3] I do not depict *raising-to-object* in the configuration in (11a) because of its irrelevance to the purpose of this example.

[4] I do not assume control to be an instance of movement, as argued by Hornstein (1999, 2003), Boeckx and Hornstein (2003, 2004), and Boeckx, Hornstein and Nunes (2010), advocating the standard non-movement analyses in GB theory instead.

[5] I tentatively adopt the Predicate-Internal Subject Hypothesis.

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