Reconsidering Raising and Experiencers in English

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Abstract

In this paper, structures involving the raising verb *seem*, are examined. Specifically, it is shown that previously-proposed elementary trees for *seem* with an experiencer argument are inadequate, based upon syntactic testing. In Storoshenko (2006), new articulated structures for the *seem* predicate are proposed, modelled upon the treatment of ditransitive verbs. This paper recapitulates and further motivates the ditransitive-style analysis, while illustrating its potential value in issues surrounding extraction and the raising construction in TAG.

1 Introduction

The raising predicate *seem* is often cited as one of the core examples in discussions of TAG's application to natural language syntax. Under a generative/minimalist account, a sentence such as (1a) will have the underlying structure in (1b):

(1) a. John seems to like coffee.

  b. John$_i$ seems [t$_i$ to like coffee].

In TAG, the subject *John* remains local to the elementary tree headed by *like*, the elementary tree in which its theta role is assigned. The observed displacement effect is a result of the extension of the *like*-headed tree after the adjunction of an auxiliary tree headed by *seem* (Kroch and Joshi, 1985). In the more recent analysis of Frank (2002), a sentence such as (1a) is derived through the composition of the elementary trees of Figure 1 to derive the final tree in Figure 2.
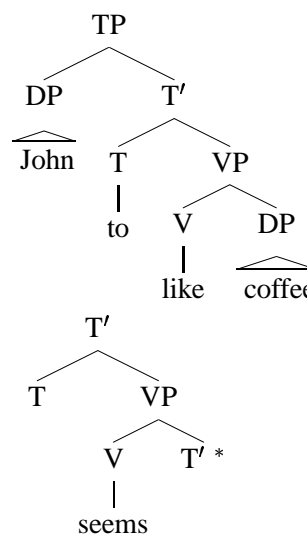

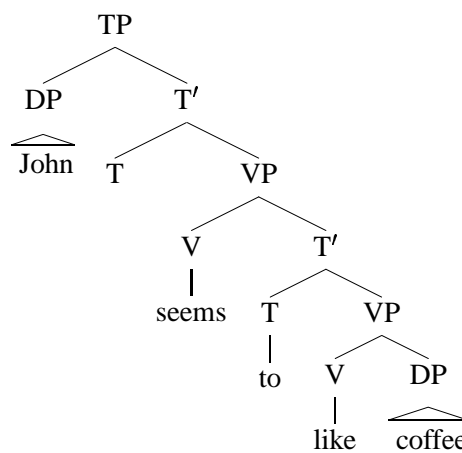Figure 1: Elementary trees to derive *John seems to like coffee.*

Figure 2: Derived tree for *John seems to like coffee.*

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1.1 Defining the Problem

At issue in this paper will be the structure of sentences such as those in (2):

(2)   a.   John seems to me to like coffee.

       b.   John seems to like coffee to me.

Here, a prepositional phrase *to me* now appears in the clause; as illustrated, its position is variable. The individual introduced in this prepositional phrase is interpreted as being an experiencer of the verb *seem*, in no way dependent upon the embedded *like* predicate. As such, according to the Fundamental TAG Hypothesis (Frank, 2002), this experiencer must be composed as a part of the *seem* auxiliary tree. For discursive ease, the case in (2a) will be termed a medial experiencer, and the (2b) case will be a final experiencer. What is now required is an auxiliary tree for *seem* which retains the desired recursivity, and supports this experiencer in either possible position. Further syntactic diagnostics will be used to determine the necessary shape of such an auxiliary tree.

1.2 An Existing Account

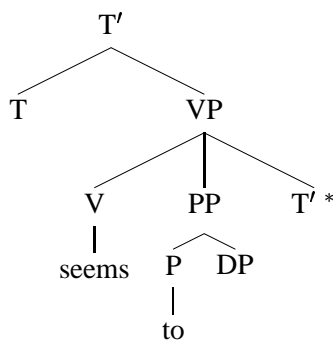In Frank (2002), a structure is given for this type of raising verb with an experiencer, as in Figure 3.

Figure 3: Auxiliary tree for *seem* with an experiencer (Frank, 2000)

This tree would adjoin into the T′ node of an infinitival clause tree, as in Figure 1, yielding the correct string order (after substitution of the frontier DP-experiencer), for a raising sentence with a medial experiencer (2a). Frank's discussion of this ternary structure is essentially limited to the well-formedness of its functional architecture, and the fact that a stipulation will need to be put in place to obviate the satisfaction of the T head's EPP feature by the experiencer. While a valid point, there are still two key unanswered questions with regards to

this structure: first of all, are the complements of the verb straightforwardly interchangeable (to account for the variable position of the experiencer), and is there any evidence for or against the ternary branching structure? These questions emerge to be inter-related, and in exploring the consequences of the ternary structure, it will be shown that simple transposition of the verb's complements is not an option within a flat ternary structure.

2 Establishing Argumenthood

Before embarking upon a discussion of the consequences of Frank's ternary branching structure, a more straightforward solution must be considered. Instead of treating it as a part of the *seem*-headed tree, one could attempt to formulate an argument that the prepositional phrase bearing the experiencer is introduced as a syntactic adjunct. This could be conceivably be accomplished through the use of one of the two trees of Figure 4. These are adjunct auxiliary trees, recursive on VP, which would introduce an experiencer prepositional phrase at either the left or right periphery of the VP, respectively.
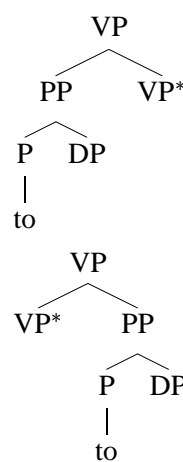

Figure 4: Possible adjunction structures for an experiencer prepositional phrase

While an anonymous reviewer points out that considering the experiencer to be an argument of *seem* is quite uncontroversial, there does appear to be some evidence that a prepositional phrase of this form, serving to introduce something akin to an experiencer, can exist independent of the predicate *seem*:

(3)   a.   ? John to me likes coffee.

       b.   John likes coffee to me.

While the first example here sounds quite marginal to the ears of most native speakers, the second sentence is perfectly acceptable, and is a likely paraphrase of a sentence such as *John seems/appears to like coffee to me*. This suggests at least the possibility that the prepositional phrase bearing the experiencer might be considered an adjunct[1].

However, in the case of a sentence such as (2a), it can be easily demonstrated that adjunction of the prepositional phrase as an independent auxiliary tree is not an option. Adjunction of the right-recursive VP tree of Figure 4 into the VP node of either tree of Figure 1 would, after all the trees were composed, yield one of the following string orders:

(4) a. * John seems to *to me* like coffee.

  b. * John *to me* seems to like coffee.

As shown, there is no way to derive the medial experiencer string-order using a simple VP-adjunction tree. This provides clear evidence that the mechanics of TAG derivation force an analysis where at least the medial experiencer must enter the derivation as a part of the *seem* auxiliary, giving further thrust to the contention that the experiencer here is indeed an argument of *seem*.

In turning to the experiencer in final position, matters are less clear-cut, as there is a viable structure in which the prepositional phrase can adjoin to the *seem* auxiliary and appear at the end of the sentence, using the left-recursive tree of Figure 4. Recalling the examples of (3), it is possibly even more important to establish the argumenthood of this position, as there are strikingly similar sentences in which the equivalent prepositional phrase appears to be a *bona fide* adjunct. For the final experiencers of *seem*, evidence can be provided to show that the prepositional phrase is not opaque to extraction, and therefore not an adjunct:

(5) a. The woman whom$_i$ John seemed to like coffee to t$_i$ kept refilling his cup.

  b. John seems to like coffee to the waitress. Her boss, too.

[1]The possibility that sentences such as those in (3) are derived from a raising structure from which the raising predicate *seem* was subsequently elided can be easily dismissed. Aside from employing a host of tests to identify elision phenomena, one must simply observe that the verb *like* appears with finite tense, a distinct anomaly if one were to treat it as having been part of a raising structure.

c. Who$_i$ is it that you saw the woman who seemed to like coffee to him$_i$?

In (5a), it is quite clear that the experiencer can be relativised out of the final position with no difficulty at all. Similarly, the stripping case in (5b), where it also seems to Mary's boss that John likes coffee, indicates that the experiencer *her boss* can be extraposed from the sentence final position, and the rest of the sentence stripped away. Finally, the use of a resumptive pronoun to repair the complex noun phrase constraint violation in (5c) provides further proof that the final-position prepositional phrase is not opaque to extraction. This is thus an argument position, part of the *seem*-headed auxiliary. As such, the question left at the end of Section 1 must now be answered: can the ternary-branching auxiliary tree account for independent syntactic observations related to this particular structure?

3 An Alternative View

At first glance, Frank's ternary branching structure is reminiscent of early accounts of ditransitive verbs. Such structures were famously argued against in Larson (1988), and subsequently re-examined in Harley (2002). In these treatments, a ternary structure is replaced with a VP-shell structure, as schematised in Figure 5.
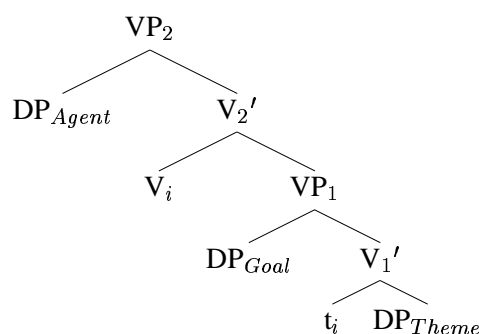

Figure 5: Schematic tree for a ditransitive verb phrase

In the lower VP, the goal and theme of a ditransitive verb are projected as the specifier and complement, respectively. The verb itself then raises to an upper VP, which supports the agent of the ditransitive predicate. The motivation for adopting this structure lay in the observation of c-command phenomena between the goal and theme

positions. In a flat ternary structure, mutual c-command between these two positions would be expected, however Larson gives considerable data to argue that mutual c-command does not exist between these two positions.

In looking at the tree from Figure 3, it is clear that straightforward considerations of mutual c-command will not be informative, as one of the ternary branches of the *seem*-headed tree will contain the remainder of the embedded clause material which exists below the T' adjunction site. However, what can be observed is whether or not a c-command relation exists between the experiencer of *seem* and the embedded clause theme. This will speak to the matter of the possible transposition of the VP complements: if they do indeed exist in a flat structure, then the experiencer should c-command the embedded clause theme from both the medial and final positions[2].

In Storoshenko (2006), it is argued that a *seem* auxiliary with an experiencer should be analysed with a similar VP-shell analysis. Among the evidence provided, three of Larson's c-command tests are employed to illustrate that the experiencer of *seem* does c-command the embedded clause object when in the medial position:

(6) a. John seems to nobody to like anything. (NPI Licensing)

b. John seems to every boy_i to like him_i. (Bound Variable)

c. * $What_i$ does John seem to whom to like t_i? (Superiority)

For negative polarity licensing and bound variable readings to obtain in these cases, the experiencer must c-command the direct object. Similarly, the fact that extraction of the embedded clause theme (which would not in itself be the product of an ill-formed elementary tree), is ungrammatical here. This is a straightforward superiority violation, again illustrating that the experiencer c-commands the embedded theme.

The opposite is demonstrated to be the case where the experiencer is in the final position:

(7) a. * John seems to like anything to nobody.

b. John seems to like him_{*i} to every boy_i.

[2]The observed ability of an argument DP to c-command out of its PP in this type of structure is noted in Jackendoff (1990)

c. $What_i$ does John seem to like t_i to whom?

Here, the negative polarity item is not licensed, and a bound variable reading does not obtain. However, the embedded theme can be extracted in the case where the experiencer is in the final position. These results demonstrate that in the final position, the experiencer does not c-command the embedded object, contrary to what would be expected of a flat ternary structure like that of Figure 4. The experiencer must not be in a position where it c-commands the embedded clause material beneath T'. The elementary trees for *seem* with an experiencer in medial and final position, respectively, are given in Figure 6.
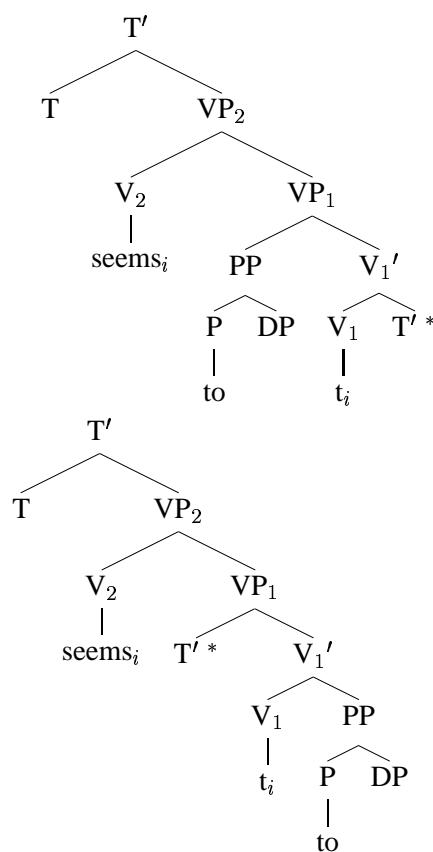

Figure 6: Two *seem*-headed trees with experiencers (Storoshenko 2006)

As in the case of the ditransitive structure of Figure 5, there is verb movement here. The lower VP supports the experiencer and the T' foot node, essential if recursivity is to be maintained, while *seem* itself raises to an upper VP projection. Unlike the ditransitive case, *seem* projects no position for an agent argument, which retains Frank's argumentation for having an elementary tree rooted in

T′ . Crucially, this movement is licensed within TAG, as it remains local to this one elementary tree, and has no impact upon the recursive nature of the tree.

In terms of the relationship between the two experiencer positions, there are two possibilities, both of which have been explored in the parallel literature on ditransitives. In the pattern of Larson (1988), the two trees of Figure 6 would be derivationally related, one having been derived from the other. Countering this is the approach of Harley (2002), in which similar alternations are argued to be the result of lexically distinct (yet phonetically indistinguishable) predicates projecting different syntactic structures. The second argument is taken in Storoshenko (2006): there is no derivational relationship between the two trees Figure 6. Each is headed by a *seem* predicate which specifies whether the experiencer appears in the medial or final position.

Beyond c-command facts, there is additional evidence that such an articulated structure for *seem* may be required. An anonymous reviewer comments that the opening of potential adjunction sites is a common motivation for binarism over ternary structures in TAG-based syntax. In this case, neither the *seem*-headed tree of Figure 1 or 3 will account for the position of a VP-adjoined manner or temporal adjunct modifying the raising predicate:

(8) a. John seems *for all intents and purposes* to be a professor to me.

b. John seemed *for as long as we knew him* to like coffee.

Assuming these adjuncts to be introduced through elementary trees recursive on VP, only the presence of the lower VP node in the shell structure allows for an adjunction into the *seem* auxiliary which yields the correct string order. Indeed, (8b) may indicate that the shell structure is required even in cases where there is no experiencer.

4 Extending the Analysis

Thus far, this discussion has been limited to cases in which *seem* is adjoined into an infinitival clause. There are at least two other types of structure on which this analysis needs to be tested: those where *seem* adjoins into a small clause, and those where *seem* takes a finite clause complement:

(9) a. John seems happy.

b. It seems that John likes coffee.

In exploring these cases, a further challenge to the ditransitive-style analysis arises. While the experiencer is licit in both positions where the *seem*-headed tree is adjoined into an infinitival clause, apparent asymmetries can be noted in these other constructions, calling into question the broader applicability of the structures in Figure 6. Where the *seem* auxiliary has adjoined into a small clause, the experiencer is degraded in the position immediately following *seem*, and is more acceptable in the sentence-final position, as in (10). Conversely, in the finite complement case, the experiencer is marginal at best in the sentence-final position, illustrated in (11).

(10) a. ? John seems to me happy.

b. John seems happy to me.

(11) a. It seems to me that John likes coffee.

b. ? It seems that John likes coffee to me.

However, it has been pointed out (Tatjana Scheffler, p.c.) that considerations of phonetic weight may be at work in these cases. For the small clause cases, replacing the simple adjective with a more complex element yields a more comfortable sentence with the medial experiencer, and the experiencer in final position now seems more awkward:

(12) a. John seems to me competent enough to finish the task at hand.

b. John seems competent enough to finish the task at hand to me.

The same reversal can be observed with the finite clause cases where a heavier experiencer appears alongside the complement clause. The sentence final experiencer is made to seem much more natural than in the simpler case above:

(13) a. It seems to all of the cafe's customers that John likes coffee.

b. It seems that John likes coffee to all of the cafe's customers.

Taking this into consideration, these apparent variations are nothing more than red herrings, with the relative positioning of experiencer and embedded material demonstrating sensitivity to considerations of phonetic weight. Such considerations may determine which *seem*-headed auxiliary is the better choice for native speakers in a given context.

Furthermore, difficulties in the case of (11b) may be a function of ambiguity. An alternative derivation does exist in which the PP *to me* is not an argument of *seem*. Recalling the cases where a "pseudo-"experiencer appeared without an accompanying raising predicate, it is possible that the *to me* of (11b) and *to all the cafe's customers* of (13b) are adjuncts to the embedded clause VP, in the same pattern as (3b). Extraction tests along the lines of those employed earlier can be used to show that the experiencer can be an argument, but this still will not negate the fact that a derivation exists wherein it may simply be an adjunct.

5   Conclusion and Implications

With the elimination of challenges to this new analysis of *seem*, the conclusion is that the structures in Figure 6 are justified, and generalisable to many uses of the verb. Potential counterexamples are either functions of weight considerations, or interference from ambiguous analyses.

Having used extraction-based tests to reach this conclusion, it is worth noting that accounting for extraction from the *seem* auxiliary tree remains a problem for TAG (Frank, 2002). A *Wh*-question formed through the extraction of the experiencer argument would necessarily be extended all the way to CP, thus sacrificing recursivity. While this problem has not been solved here, the refinements to the structure of *seem* will contribute to future accounts. Specifically, any account of extraction which is sensitive to issues such as superiority or crossover will benefit from this analysis. Consider the sentences in (14):

(14)   a.   Bill seems to John$_i$ to like him$_i$.

   b.   Bill seems to like him$_{*i}$ to John$_i$.

   c.   To whom$_i$ does Bill seem to like him$_i$?

In theory, either of (14a) or (14b) could represent the underlying structure of (14c). Binding, as shown in (14c), is possible for this question, though only the (14a) sentence shows equivalent binding. Extraction of the experiencer in the (14b) case would result in a weak-crossover violation, should the extracted experiencer bind the embedded object. This asymmetry between (14a) and (14b) would not be predicted by a ternary-branching analysis, but is captured by the structures in Figure 6. These sorts of alternations, and their implications, will need to be kept in mind as further work on extraction from raising predicates progresses.

References

Robert Frank. 2002. *Phrase Structure Composition and Syntactic Dependencies*. Cambridge, MA: MIT Press.

Heidi Harley. 2002. Possession and the double object construction. *Linguistic Variation Yearbook*, 2:29–68.

Ray Jackendoff. 1990. On Larson's treatment of the double object construction. *Linguistic Inquiry*, 21(3):427–465.

Anthony Kroch and Aravind Joshi. 1985. The linguistic relevance of Tree Adjoining Grammar. Technical Report MS-CS-85-16, Department of Computer and Information Sciences, University of Pennsylvania.

Richard Larson. 1988. On the double object construction. *Linguistic Inquiry*, 19(3):335–391.

Dennis Ryan Storoshenko. 2006. Seems like a double object. In *Proceedings of the 22nd NorthWest Linguistics Conference*.