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**Abstract.** Even when linearized after it, *seem* can take scope above the modal *can* in configurations that involve a downward-entailing expression. Though it is tempting to regard this syntax-semantic mismatch as idiomatic, there are strong reasons to aim for a compositional analysis. Not least among these reasons is the unifying property of the triggers of the scope reversal, namely downward-entailingness. The article claims that the main explanandum is the wide scope of *seem* not only over *can*, but also over the trigger. Reordering takes place, covertly: it is shown that *seem* is a mobile positive polarity item, which has the ability to raise above a potential anti-licenser. This movement permits aspectual configurations that are otherwise disallowed in the complement of *seem*. If it is on the right track, this analysis could pave the way for new insights on covert movement, complementation and subordinate tense.

Keywords: Polarity, Raising, Modal, Tense, Infinitive

### 1 Introduction

There is a case of syntax-semantics mismatch in English which has stirred interest since its introduction into contemporary linguistics (Quirk (1965), Langendoen (1970)) but remains ill-understood to this day.

(1) John can't seem to lose weight.

Paraphrasable as: It seems that John can't lose weight.

Scopal relations under this reading:

SEEM

NEG

CAN

The phenomenon, known under the oversimplifying name of 'can't seem to' construction, consists in the reversal of the relative scope of *seem* (for some speakers, *appear* also) and can/could (in the schema below,  $E_{DE}$  is a downward-entailing expression):

(2) Surface order (ignoring V-to-T movement):  $E_{\rm DE}$  ... can ... seem 1 2 3 Scopal relations: SEEM  $\gg$   $E_{\rm DE}$   $\gg$  CAN 3 1 2

Some conditions are necessary (though not sufficient). 1. Only *can* lends itself to the scope reversal (henceforth SR) with *seem*, but it only does so under certain construals (**Property 1**). These are identified as ability *can* by Langendoen (1970), but this is probably too restrictive, witness (3):

- 2 As Simple as It Seems
- (3) There can't seem to be enough vampire movies. SEEM $\gg$ NEG $\gg$ CAN

It is certain though that deontic and epistemic *can* are not involved. 2. The two verbs have to be relatively 'close' to each other (**Property 2**). 3. The reversal only occurs in the presence of an expression (henceforth the 'SR trigger') which denotes a DE function (1)-(4) (**Property 3**):

(4) #John can seem to lose weight. \*SEEM≫CAN

Not paraphrasable as: It seems that John can lose weight.

Furthermore, *seem* achieves wide scope over both the trigger and *can* (in that order) (2) (**Property 4**); contrary to what normally happens in present sentences (5), the predicate embedded under *seem* need not be stative, witness *lose weight* in (1) (**Property 5**).

(5) \*John seems/doesn't seem to lose weight.

I ague that SR is not illusive (contra Jacobson (2006)): SR is due to some reordering, specifically to the covert movement of *seem*, which is positively polarized.

#### 2 Not an Idiom

Restricting attention to the simple case where negation acts as a trigger, e.g. (1), one might get caught into thinking that SR is idiomatic. But there are a number of triggers besides negation: in fact, they form a substantial set, which is included in the familiar natural class of (Strawson) DE expressions:

- (6) a. No one can seem to reach the website.
  - b. Few can seem to fathom how he could be so popular.
  - c. At most five people can seem to understand this.
  - d. John can <u>never</u> seem to speak in full sentences. [Jacobson 2006, ex. 7]
  - e. I just bought this lens, and I can <u>rarely</u> seem to get a clear picture.
  - f. I can hardly ever seem to find any good CD of English choral music.
  - g. Only John can seem to stomach watching reruns of the 6<sup>th</sup> game of the 1986 Series.

They are thus characterized by their variability and their predictability: this allows us to eliminate the hypothesis that *can, seem,* and the trigger jointly form an idiom. Still, a possible rejoinder would be that there really are two parts to consider, a negatively polarized idiom *can seem* (SEEM»CAN) on the one hand, and some licenser (the trigger) on the other. This is a non-starter as well. In effect, the trigger can (and in fact must) take intermediate scope between the other two elements: in (6e) for example, the adverb *rarely* binds the closest situation variable in its scope, which is an argument of *can,* and hence quantifies over situations of being able to get a clear picture, not over *seeming* eventualities. (6e) is paraphrasable as (7a), not as (7b).

- (7) a. It seems that I rarely can get a clear picture.
  - b. It seems upon rare occasions that I can get...

Even if *can seem* were an idiom in its own right, it would be expected to combine with the rest of the sentence in a compositional way. Which means that the trigger would have to scope over the semantic construct *can seem* (SEEM>CAN), contrary to fact. A proponent of the idiom line would then be forced to say that the trigger makes a non-compositional contribution to meaning in combination with *can* and *seem*. In other words, the three elements would have to form an idiom. But we have already rejected this possibility.

# 3 Neg-raising

It is important to eliminate a confound. *Seem* can achieve wide scope over negation and negative quantifiers by the *semantic* route of neg-raising. *Think* offers an example of a neg-raising predicate (NRP): a homogeneity inference, which is responsible for the effect, is attached to it (see Gajewski (2005) for details):

- (8) John does $\underline{n't}$  think that I understand French.
  - Paraphrasable as: John thinks that I don't understand French.
  - a. Assertion: It is not the case that John thinks that I understand French.
  - b. *Homogeneity inference*: John thinks that I understand French or John thinks that I don't understand French.
  - John thinks that I don't understand French.

The neg-raising reading of a sentence containing a negated NRP is often favored, but it is not mandatory. Importantly, when it obtains, negation is syntactically higher than the NRP, it is not transported back into a low position: in fact, the examination of negraising suggests very strongly that movement of negation is simply impossible (Gajewski 2005). A distinctive property of NRPs is that only they pass the *cyclicity test*, as shown for *want* in (9). The test uses a negation and an NRP embedded under another NRP: it is passed when negation is interpreted below the lower NRP although it surfaces above the higher one (Horn 1978, 1989):

- (9) I do<u>n't</u> think that John wants to help me.
- $\sqrt{THINK}\gg WANT\gg NEG$

Seem passes the test too, and is thus an NRP:

(10) I don't think that John seems to understand the situation.√THINK≫SEEM≫NEG

The homogeneity inference has universal force in the scope of quantifiers (and is therefore assumed to be a presupposition by Gajewski (2005)). The quantifier over occasions *rarely* is interpreted above *seem* in (11), but due to homogeneity, its contribution seems to be equivalent to the combination of a high upward-entailing quantifier and of a low negation:

- (11) On its op-ed page, the *New York Times* rarely seems to know that this nation is in major trouble.
  - a. Assertion: There are few occasions z on which the NYT seems at z to know that p(p = this nation is in major trouble).

- b. *Homogeneity inference:* For each occasion z, the NYT seems at z to know that p or the NYT seems at z not to know that p.
- :. Paraphrasable as: It is very often the case that the NYT seems not to know that this nation is in major trouble.

But it is covert raising (syntax), not neg-raising (semantics), which explains the scope reversal SEEM $\gg$ CAN: the predicted neg-raised reading of (1) is (12) (due to the universal projection of the homogeneity inference associated with *seem*), but it is simply not available. Universal quantification over worlds accessible via an ability relation might be barred, witness the lack of ability *must*.

(12) In all worlds w' compatible with J.'s abilities in w\*, it seems in w' that J. isn't losing weight.

# 4 Movement

We have seen that *seem* gives rise to neg-raising readings under DE expressions; these readings require *seem* to be syntactically *under* these expressions. But it also happens that *seem* is interpreted in a higher position than scope-bearing elements linearized before it, a fact that has not been documented yet, as far as I can tell.

We will need to distinguish two kinds of movements: (i.) *seem* can be interpreted in a higher position than certain elements, adverbs in particular (but the identity of the mover and the direction of the movement are unclear); (ii.) *seem*, *qua* positive polarity item (like deontic *must* and *supposed*) raises covertly out of the scope of a potential anti-licenser.

# 4.1 Adverbial Expressions

Because *seem* is a raising-to-subject verb, its wide scope of over quantified subjects can always be due to A-reconstruction. But adverbs are not usually assumed to A-move, let alone reconstruct. Therefore the fact that *seem* can outscope a number of adverbs, e.g. *often, always, easily,* that precede it on the surface, might suggest that it raises covertly past them:

- (13) a. *Context:* Just looking at the hospital's visitors register, a doctor says... People often seem to visit the patient of room 32. SEEM≫OFTEN
  - b. Some of you guys easily seem to forget that football is a team sport.

**SEEM**>EASILY

Remarkably, the only option is surface scope when seem takes a tensed complement:

- (14) a. It often seems that people visit this patient.\*SEEM>OFTEN;OFTEN>SEEM
  - b. It easily seems that some of you guys forget that football is a team sport.

\*SEEM>EASILY; EASILY>SEEM

This fact is compatible with the view that adverbs are generated in the infinitive complement, moved overtly, and interpreted in a reconstructed position in (13a)-(13b). But the next section will describe facts that will make this conclusion hasty.

#### 4.2 Seem is a Mobile PPI

The deontic modal *must* is a mobile PPI (**Property 3**) (as claimed in Israel (1996, 2011), Iatridou & Zeijlstra (2010)): this fact is established in Homer (2010a, 2010b). The property of *must* (*should* and *supposed* as well) that bears directly on the present discussion is its ability to raise covertly past an offending anti-licenser, e.g. negation (*must* is generated under negation, and raises covertly from this position; overt V-to-T is semantically idle, see Chomsky (2000)):

(15) a. John  $must_{deon}$ n't leave. MUST $\gg$ NEG;\*NEG $\gg$ MUST b. LF: [John<sub>1</sub>  $must_{deon2}$  not  $t_2$  [  $t_1$  leave ]]

Evidence for the movement of  $must_{deon}$  comes from occurrences of a quantified subject scopally sandwiched between raised  $must_{deon}$  and a clausemate negation. I show in Homer (2010a) that the particular scopal configuration instantiated in (16) cannot obtain through a purely semantic route and has to be syntactic (in fact, must is not an NRP): the intermediate scope of quantified subjects is a test for movement:

(16) Context: The rules of this bowling game state that exactly one pin must remain standing, no matter which one... Exactly one pin must<sub>deon</sub>n't be knocked down. √ MUST≫EXACTLY\_ONE≫NEG

PPIs can be 'shielded' from an anti-licenser by interveners, e.g. *every, always*, conjunction, because-clauses, etc. Remarkably, when  $must_{deon}$  is shielded, it cannot raise (compare with *a single person*, which is not an intervener):

(17) a. Not everyone  $\operatorname{must}_{deon}$  leave. \*MUST $\gg$ NEG; NEG $\gg$ MUST b. Not a single person  $\operatorname{must}_{deon}$  leave. \*MUST $\gg$ NEG; \*NEG $\gg$ MUST

To sum up, certain intensional predicates (*must, supposed, should*) are positively polarized. And they scope out through covert movement when anti-licensed in their base position. This movement is blocked when unnecessary (due to shielding). I must add that it is also clause-bounded:

(18) You don't think John must<sub>deon</sub> be friendly. \*MUST $\gg$ NEG $\gg$ THINK

The syntactic mechanism whereby PPIs acquire wide scope over potential anti-licensers is not to be confused with the semantic route to wide scope, *viz.* neg-raising. The two processes are distinct but not incompatible: nothing in principle precludes the conjunction of the two properties in a given predicate. Such is indeed the case of *should* and—for some speakers—of *supposed* (Homer 2010b). Such is also the case of *seem*, and I set out to show it.

In preamble, it bears saying that it is generally assumed, and wrongly so, that in order to be a PPI a given expression must be unable to be interpreted under a clausemate negation. In Homer (2011) I propose a theory of polarity item licensing which predicts that PPIs should exist that are licit in such a position. Licensing has three ingredients: (i.) polarity items are sensitive to the monotonicity of their syntactic environment (rather than to c-command by a DE expression), (ii.) to be licensed, a PI needs to find itself in at least one constituent that has the appropriate monotonicity w.r.t. its position (upward

for a PPI, downward for an NPI), and (iii.) only certain constituents are eligible for the evaluation of the acceptability of PIs. For example, the presence of the Pol head, which hosts the polarity operator of the sentence (negation for negative sentences, and a positive operator for positive ones) is required in the constituents upon which the acceptability of *some*, a well-known PPI, is checked. Specifically, for each CP  $\gamma$  that contains *some*, only the constituents that contain the Pol head of  $\gamma$  are eligible. This condition on eligibility is PI-specific, and seems to be lexically determined. The contrast between (19a) and (19b) falls out from this hypothesis:

(19) a. John didn't understand something.
 b. It is impossible that John understood something.
 \*NEG≫SOME
 IMPOS.≫SOME

In (19a), all eligible constituents are DE w.r.t. the position of *some* under negation, whereas in (19b), *some* is acceptable in at least one eligible constituent, e.g. the embedded TP. Just like *must*<sub>deon</sub>, French *devoir*<sub>deon</sub> 'must' is a mobile PPI (Homer 2010a); but unlike *must*, it need not raise, which suggests that the smallest eligible constituents for its evaluation are smaller than the Polarity Phrase. This means that depending on which constituent is chosen for the evaluation (a constituent that contains negation vs. a constituent that doesn't), *devoir* either has to or cannot raise; this alternative gives rise to an illusive air of optionality:

(20) Jean ne doit<sub>deon</sub> pas faire de jogging. NEG≫DEVOIR; DEVOIR≫NEG Jean NEG must NEG do of jogging 'Jean need not jog/must not jog.'

Seem is similar to devoir. It can take scope above or below a clausemate negation. For clarity, I choose to add a presupposition trigger between negation and seem, viz. longer, yet. I assume these presupposition triggers to be fixed points; the make-up of the presupposition that gets computed is an index of the position where seem is licensed and interpreted, i.e. if seem is part of the presupposition, it is interpreted in the scope of the presupposition trigger; if not, it isn't:

- (21) a. *Context:* James Bond is wending his way across a deserted warehouse; he trips over an unidentifiable body and says:

  Well, this man no longer seems to be alive. SEEM

  NEG

  LONGER
  - Presupposition: This man was alive.

SEEM///TIEG//EOTIGER

- b. Uttered in 2006: In view of the latest recording, Bin Laden no longer seems to be dead.

  NEG>LONGER>SEEM

  Presupposition: Bin Laden used to seem to be dead.
- (22) a. Uttered in 2006: In view of the latest recording, Bin Laden doesn't yet seem to be dead. SEEM $\gg$ NEG $\gg$ YET
  - Presupposition: Bin Laden is expected to die.
  - b. Context: Uttered right after a dictator's death by a member of his entourage (everyone in the clique strives to conceal his death from the public):
     So far so good, he doesn't yet seem to be dead.
     NEG>YET>SEEM Presupposition: He is expected to seem to be dead.

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The 'pin' test (16) corroborates the conclusion that *seem* has the ability to raise past negation:

(23) *Context:* There are as many guests as there are seats in an auditorium and the speaker knows it. The speaker takes a quick look and sees that exactly one seat is not taken...

Exactly one guest doesn't seem to have arrived. ✓ SEEM≫EXACTLY\_ONE≫NEG

The PPI hypothesis explains why *seem* only outscopes *can* when both *can* and *seem* are in the scope of a DE expression (the trigger of SR). Compare (24) and (25):

(24) a. #John can seem to lose weight.

- \*SEEM≫CAN
- b. *Context*: John just rose from under the water. Incredible though it may sound... #John can not seem to breathe for 2 minutes. \*SEEM>CAN>NEG
- (25) a. John can't seem to lose weight.

SEEM>NEG>CAN

- b. He can no longer seem to live without her. SEEM»NEG»LONGER»CAN
- c. —How can I get my kids to donate old toys?
  - —When they can't yet seem to part with a favored item, try to respect their wishes but encourage them to look for other options to give.

SEEM>NEG>YET>CAN

We verify that *seem* not only *can* but *has to* outscope the DE expression that gives rise to SR (**Property 4**):

(26) *Context:* John had been bragging that someday he would levitate; and one day he rose above ground at a party, to his friends' amazement. But Peter later demonstrated to everyone that John used a mechanical trick at that party...

#John can no longer seem to levitate. SEEM»NEG»LONGER»CAN *Paraphrasable as (only reading):* John used to be able to levitate and he seems to have lost the ability.

Not as: It no longer seems that John can levitate.

This sets boundary conditions on any account of the phenomenon. And the PPI hypothesis is a natural way of explaining it. The shielding effect of *every* adds direct support to the PPI hypothesis:

- (27) a. #Not everyone can seem to lose weight.
- \*SEEM≫NEG≫CAN
- b. Not a single person can seem to lose weight.
- SEEM>NEG>CAN

The covert raising of *must* (*should* and *supposed*) is constrained: it appears to be clause-bounded; likewise, *seem* cannot raise past a superordinate negation (28a), and also doesn't acquire maximal scope in the sentence (28b):

- (28) a. #You don't think John can seem to lose weight.\*SEEM>THINK>NEG>CAN
  \*THINK>NEG>SEEM>CAN
  - b. You think John can't seem to lose weight. \*SEEM>THINK>NEG>CAN

A superordinate negation doesn't trigger SR at all (28a). SR can occur in weakly negative environments, such as the one created by the strictly DE at most five (6c). The envi-

ronment in the embedded clause in (28a) is one in which all NPIs, of all strengths, can be licensed, therefore it appears to be appropriately negative to precipitate SR whenever the acceptability of *seem* is evaluated in a constituent that contains this superordinate negation. The lack of SR must therefore be due to the presence of a clause boundary.

Lastly, when it takes a tensed complement, *seem* is unable to raise above a potential anti-licenser:

(29) *Same context as* (21*a*)...

#Well, it no longer seems that this man is alive. \*SEEM»NEG»LONGER *Presupposition:* It used to seem that this man is alive.

We observed the same failure to raise in (14), hence by parity of reasoning, it is plausible that wide scope over adverbs (13) is due to a movement of the verb *seem* rather than to the reconstruction of the adverbs.

Since the syntactic route to wide scope is barred, it must be the semantic one (negraising) which gives rise to wide scope in (30):

(30) It doesn't seem that this man is alive.

**SEEM**≫**NEG** 

# 5 Temporal and Aspectual Properties of the Infinitive

The infinitival complement of *seem* has two remarkable properties: (i.) its tense is identical with the matrix tense ((31d) conforms with this generalization, for it has a *present* perfect), and (ii.) when the matrix tense on *seem* is present, the main embedded predicate must be stative, or else receive a generic or habitual reading, just like predicates in present tense clauses (31e), hence the oddness of certain sentences where SR fails ((4), (27a), (28a), etc.); when the matrix tense is past, an embedded eventive is acceptable (31f):

- (31) a. John seems to be happy (\*yesterday/\*tomorrow).
  - b. \*John seems to fall.
  - c. \*John seems to sleep.
- d. John seems to have fallen.
- e. John is happy/\*falls/\*sleeps.
- f. John seemed to fall.

The 'can't seem' constellation provides the only exception to the second constraint (ii.): many of our examples contain non statives in the present, e.g. *lose weight* (1) or reach the website (6a). In the sentences that exhibit SR, the infinitive is undoubtedly c-selected by seem, not can, because of the presence of to. Irrespective of the particular hypothesis developed here (movement for polarity reasons), it seems inevitable that the source of the aspectual restriction under seem is not syntactic (pace Wurmbrand (2011) among many others) but semantic. This constraint remains to be explored, but one thing is already clear: in our perspective, once seem moves out, it no longer composes with the complement, but can does (**Property 5**). This is how the semantic constraint is respected when the complement contains an otherwise illicit non-stative. I emphasize that it wouldn't do to say that seem is a hedge (Jacobson 2006, Wurmbrand 2011), for it would then wrongly be expected to be able to take maximal scope (28b).

The examination of *seem* calls for a revision of the received view on the temporal-aspectual properties of the infinitival complement of *seem*, and of infinitives in general. This received view has an important shortcoming anyway: the problem it addresses is not well defined. For it seems ill-advised to place such a premium on the explanation of the properties of the *infinitival* complement of *seem*, given that the same puzzling contrast holds across complements, tensed or not:

(32) a. \*It seems that John falls.

b. It seemed that John fell.

The eventive predicate in (32b) is interpretable as denoting an eventuality simultaneous with the *seeming* eventuality; (nearly) everywhere else, past tense complements of past tense verbs cannot receive this interpretation. There has to be 'past-shifting': e.g. the time of the leaving is ordered before the time of the saying in (33) (see Stowell (2007); exceptions can be found in the complements of perception verbs, see examples of 'belief based on perception' by B. Partee, cited e.g. in von Stechow (2009)):

(33) Peter said that John left the building.

# 6 A New Distinction among Modals

Given the clause-boundedness of the movement of modals, we are led to hypothesize that there is no clause boundary between *can* and *seem* in SR (**Property 2**). This prompts us to introduce a novel distinction among English root modals: *can* creates a monoclausal structure (**Property 1**), but only under certain construals. Therefore the syntax of *can* varies depending on its modal base and ordering source. *Able* does not enter into SR:

(34) #John isn't able to seem to lose weight.

\*SEEM»NEG»ABLE

Able differs from can in that it takes a complement headed by to; it might also differ from it along the control/raising distinction; but it is too early to venture an explanation. Epistemic modals have been argued to create monoclausal structures (Homer 2010a); yet, they do not allow SR. It is possible that SR is blocked by Epistemic Containment, the constraint whereby an epistemic modal needs to outscope other scope-bearing elements (von Fintel & Iatridou 2003).

# 7 Conclusion

The hypothesis that *seem* can move covertly to scope out of an anti-licensing environment provides a simple explanation to the scope reversal of *can* and *seem*. Ceasing to see the phenomenon as idiomatic brings new light on a number of grammatical facts, among which the temporal properties of infinitives.

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