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## The Internal Structure of Small Clauses: New Evidence from Inversion\*

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### 0. Introduction

In this paper I wish to explore one aspect of what has been called the “inverse copular construction”—a construction in which the subject of a copular sentence appears to have many of the properties of a predicate, and vice versa.<sup>1</sup> In particular, I hope to shed some further light on the still unresolved problems raised by this construction by looking in more detail at the behavior of other instances of DP predicates. A good deal of recent work on inverse copular constructions has taken it as axiomatic that the copula has some unique property that allows it alone to function as the “pivot” around which inversion of subject and predicate can occur. In this paper I will show that there is reason to question this assumption, and hence that an analysis must be found that can derive the distribution of the inverse construction without an appeal to any property unique to the copula. Finally, I outline such an analysis, and indicate a direction for further research.

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\*I would like to thank Anthony Kroch, Bob Ladd, Young-Suk Lee, and audiences in York and Paris for their comments on some of the work presented here.

<sup>1</sup>In previous work (Heycock 1991, 1992, 1994) I have referred to this construction as the *reverse* copular construction; this however was an inadvertent alteration of the terminology in Moro 1990. I therefore revert to referring to the *inverse* copular construction.

## 1. Background—predicate raising

### 1.1. Canonical and inverse copular constructions

Since the publication of Ruwet 1967, a considerable amount of attention has been devoted to the existence of pairs such as those in (1) and (2):

- (1) a. John is the culprit.  
       b. The culprit is John.  
 (2) a. His attitude is the real problem.  
       b. The real problem is his attitude.

In these examples both of the DPs are definite, but this is not essential, as illustrated in (3) and (4):

- (3) a. That comment you just made is one good example.  
       b. One good example is that comment you just made.  
 (4) a. This would be a possible solution.  
       b. A possible solution would be this.

Although the terms beg the question of the analysis to some extent, I will refer to sentences of the type in (a) as instances of the *canonical copular construction*, and examples of the type in (b) as instances of the *inverse copular construction*.

Roughly speaking, the inverse copular construction is characterized by the occurrence of an initial DP being used attributively, and a postcopular DP used referentially, in the sense of Donnellan 1966 (Frank 1992, citing Dan Hardt, p.c.).

A second characteristic of inverse copular sentences is that the pattern of focus is fixed: the postcopular DP must be in focus (Heggie 1988, Guéron 1993). In the canonical construction, on the other hand, focus can vary. So, for example, the same canonical copular sentence can be used felicitously in both (5a) and (5b):

- (5) a. A: Was the culprit John or Bill?  
       B: JOHN was the culprit.  
       b. A: Was John the culprit or the victim?  
       B: John was the CULPRIT.

In contrast, the inverse construction only allows focus on the postcopular DP:<sup>2</sup>

- (6) a. A: Was the culprit John or Bill?  
       B: The culprit was JOHN.

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<sup>2</sup>As always, it must be borne in mind that it is definitional of the inverse construction that the first DP is being used attributively, and the second referentially. The focus pattern in (6b) is possible if *the culprit* is being used referentially (in which case this is not the inverse construction):

- (i) A: So far I've met the culprit and the victim both. But I still don't know which one is John and which one Bill.  
       B: The CULPRIT is John.

- b. A: Was John the culprit or the victim?  
 B: # The CULPRIT was John.

A third characteristic, first pointed out in Ruwet 1967 for French, and subsequently in Heggie 1988 for English, is that the precopular DP in the inverse construction cannot be in the focus position of an *it*-cleft, as illustrated in (7):

- (7) a. *Canonical*: It's Simon's brother that's the problem.  
 b. *Inverse*: \*It's the problem that's Simon's brother.

### 1.2. Possible analyses of the inverse copular construction

A central question that arises from the existence of the inverse and the canonical construction is the relation between them. Here I will simply summarize: this question is dealt with in much greater detail in Heggie 1988, Moro 1990, and Heycock 1992.

The first possibility is that the canonical and the inverse sentences have identical structures, the only difference being in the distribution of lexical items: (1a,b), for example, would then be essentially parallel to (8a,b):

- (8) a. John met the culprit.  
 b. The culprit met John.

If we adopt the proposal of Stowell 1978, Couquaux 1982, and many others, that *be* is a raising verb, then the structures for (1a,b) would be roughly as in (9a,b):

- (9) a. John<sub>*i*</sub> is [<sub>SC</sub> *t<sub>i</sub>* the culprit]  
 b. The culprit<sub>*i*</sub> is [<sub>SC</sub> *t<sub>i</sub>* John]

Since the D-Structure subject of the small clause thus always becomes the S-Structure subject of the full clause, I will refer to this as the *consistent subject* analysis.

The second possibility is that the canonical and inverse examples have completely different structures; this essentially amounts to saying that there are two different verbs *be*. As suggested in Bowers 1993, p. 605, an obvious possibility is that the *be* in the canonical construction is a raising verb while the *be* in the inverse construction is a transitive verb, as illustrated roughly by the S-Structures in (10):

- (10) a. John<sub>*i*</sub> is [<sub>SC</sub> *t<sub>i</sub>* the culprit]  
 b. The culprit is John.

I will refer to this as the *ambiguous "be"* analysis.

The third possibility is that there is only one verb *be* (as under the *consistent subject* analysis), but that the canonical and inverse constructions have a different derivational history. This is the essence of the proposal in Moro 1990, and of a number of researchers who have followed his lead. Moro's idea is that in both cases *be* selects a small clause complement: in the canonical construction it is the subject of this small clause that moves to the left; in the inverse construction it is the predicate. This is illustrated schematically in (11):

- (11) a. John<sub>i</sub> is [<sub>SC</sub> t<sub>i</sub> the culprit]  
 b. The culprit<sub>i</sub> is [<sub>SC</sub> John t<sub>i</sub>]

I will refer to this as the *predicate raising* analysis.

An analysis that involves only one subcategorization for the copula is clearly to be preferred to one that requires two, all things being equal; thus either the consistent subject or the predicate raising analyses have an advantage. There are in addition empirical arguments against proposing that the copula that appears in the inverse construction takes two DP arguments like other transitive verbs (see Moro 1990 and Heycock 1992 for discussion).

The consistent subject analysis—according to which the canonical and the inverse sentences have maximally similar derivations—may further appear more simple than the predicate raising analysis. Nevertheless, there are a number of arguments in favor of some variant of the predicate raising analysis. Two of the most telling, due to Moro 1990, will be reviewed briefly in the following two sections.

### 1.3. Extraction Asymmetries

First, there are striking extraction asymmetries between the postcopular phrase in the canonical and in the inverse construction. The postcopular phrase in the canonical sentence can be extracted; the postcopular phrase in the inverse sentence cannot:

- (12) a. *Canonical*: Which of the themes do you think that phrase of music was?  
 b. *Inverse*: \*Which phrase of music do you think one of the themes was?

Further, not only is extraction of the entire postcopular phrase unacceptable in the inverse construction; extraction of some element from out of the postcopular phrase is also unacceptable:

- (13) a. *Canonical*: What do you think the photograph of the president may have been the cause of?  
 b. *Inverse*: \*What do you think the cause of the riot may have been the photograph of?

These asymmetries are completely mysterious if there is no structural difference between the canonical and the inverse constructions. Under Moro's analysis, however, the postcopular phrase in the inverse construction is actually in a subject position: it is the subject of the small clause complement to the copula. Thus the impossibility of subextraction from within this phrase reduces to a Subject Condition effect. The impossibility of the extraction of the entire postcopular phrase can also be explained as an ECP violation under this analysis, on the assumption that the copula is not an L-marker (see Moro 1990, Heycock 1992).

### 1.4. Non-occurrence of inverse small clauses

The second empirical argument supporting the predicate raising analysis concerns the small clause source for the inverse order. If we want to maintain that the copula is

a raising verb, under the consistent subject analysis, before the subject of this small clause has raised past *be* the structures for (1a,b) must be along the lines of (14a,b):

- (14) a. is [<sub>SC</sub> John the culprit]  
 b. is [<sub>SC</sub> the culprit John]

As pointed out in Moro 1990, however, the order in (14b) does not occur in small clauses where there has been no raising:<sup>3</sup>

- (15) a. I consider [<sub>SC</sub> John the culprit]  
 b. \*I consider [<sub>SC</sub> the culprit John]

Note that it is just when the complement is a small clause that the inverse order is impossible: (15b) contrasts not only with the tensed copular clause in (1b), repeated here as (16a), but also with the infinitival complement to *consider* in (16b):

- (16) a. The culprit is John.  
 b. I consider the culprit to be John.

As we have seen, under the consistent subject analysis, the small clause that occurs in the ungrammatical (15b) is required for the derivation of the grammatical inverse construction in (1b)/(16a). Unless some reason can be found why raising should “rescue” the construction,<sup>4</sup> the simplest analysis appears to be that the only possible order for the small clause is that in (14a); that is, the one in which the attributive DP follows the referential DP.<sup>5</sup> The “inverse” order arises only if there is

<sup>3</sup>Example 15b and others like it are grammatical if given the intonation associated with Heavy-NP Shift. The point here is the unacceptability of such examples in the absence of this intonation.

<sup>4</sup>Heggie 1988, pp. 149–151, proposes that an inherently referential DP like *John* cannot remain in predicate position but must extrapose to a VP-adjoined focus position. If the subject of the small clause does not raise, the “referential predicate” *John* would not be c-commanded by its subject, violating the constraints on predication proposed in Williams 1980. This explanation is not sufficiently general, however: (i) is no more grammatical than (15b), despite the fact that *the culprit* has been raised by passive to a position where it should be able to c-command the focused *John*:

- (i) \*The culprit<sub>i</sub> is considered *t<sub>i</sub>* John.

<sup>5</sup>A possible objection to this conclusion is that *consider* requires that its small clause complement have a predicate that is in some sense “gradable” (see Heycock 1994, p. 149 for some discussion). Thus for example (ia) is unacceptable in most contexts, while (ib) is good:

- (i) a. \*I consider John off my ship.  
 b. I consider John at the peak of his career.

The acceptability of (ib) shows that the problem with (ia) is not simply that the predicate is a PP, *contra* Stowell 1983.

Given that the distinction between (ia) and (ib) appears to be semantic, it might be proposed that whatever constraint rules out (ia) in the most obvious reading also rules out (15b). However, there is a significant difference between the two cases: while (15b) is restored to full grammaticality if the complement is an infinitival with *be*, (ia) is hardly, if at all, improved:

- (ii) a. I consider the culprit to be John.  
 b. ?\*I consider John to be off my ship.

a landing-site for the predicate to raise into. Since *be* is a raising verb it does not assign a  $\theta$ -role to its subject position, and this then is available for the predicate. If we adopt the assumption that movement has to be to a specifier position, on the other hand, there will be no position within the small clause for the predicate to move to, accounting for the ungrammaticality of the “inverse small clause” in (15b) (see Frank 1992, den Dikken 1993 for different variants of this idea).

### 1.5. The structure of the inverse construction

Given the discussion above, I adopt the predicate raising analysis of the inverse copular construction. There are a number of questions that remain concerning the exact structures involved. I will assume here that the subjects of small clauses can occupy a position adjoined to the small clause predicate. An alternative, of course, is to assume the existence of a functional projection whose specifier is the position for the small clause subject: in den Dikken 1993, for example, it is assumed that the subject occupies the specifier of AgrP. Reasons for maintaining that only a subset of small clauses are headed by a functional category will be discussed in Section 4.<sup>6</sup>

In the canonical construction the subject DP raises to the Spec(VP) position, as illustrated in (17a); in the inverse construction it is the predicate DP that raises, as illustrated in (17b) (the structure in (17b) will be revised):

- (17) a.  $[_{VP} DP_i \text{ be } [_{DP} t_i \text{ DP}]]$   
 b.  $[_{VP} DP_i \text{ be } [_{DP} \text{ DP } t_i]]$

### 2. Limited distribution of the inverse construction

As we have seen, the “inverse” order does not appear in small clauses. There are limitations on its occurrence beyond this: a number of constructions that are often considered to involve a raising verb that takes a small clause complement do not allow the inverse order. It is noted in Ruwet 1982 for French that while *être* (be) allows the inverse construction, this is not possible with, among other verbs, *sembler* (seem); the impossibility of the inverse construction with *seem* and *be considered* is noted in Heycock 1994 as an unresolved problem. Consider the contrasts in (18)–(20):<sup>7</sup>

- (18) a. *Canonical*: His attitude is the worst problem.

<sup>6</sup>The postulation of AgrP within all small clauses does raise some problems of its own. Notice that it must generally be assumed that the features of Agr that check off the features of the head moving into it have to match the features of the DP in its Spec position (otherwise subject-verb agreement, for example, would not obtain); but in the case of nominal small clauses there is no such obligatory agreement:

- (i) a. I considered [<sub>SC</sub> them my only hope].  
 b. We will make [<sub>SC</sub> you all the symbol of peace].

<sup>7</sup>The contrast in (19) can only obtain for those speakers who allow *seem* to take a small clause complement headed by a DP predicate (typical of British, but not American English)

- b. *Inverse*: The worst problem is his attitude.
- (19) a. *Canonical*: His attitude seems the worst problem  
 b. *Inverse*: \*The worst problem seems his attitude
- (20) a. *Canonical*: His attitude was considered the worst problem.  
 b. *Inverse*: \*The worst problem was considered his attitude.

The impossibility of the inverse construction with these other predicates is not accounted for in Heggie 1988, Moro 1990, or Heycock 1994, and to the extent that these appear to be raising constructions this limitation seems to be a problem for the predicate raising analysis.

## 2.1. Possible solutions

### 2.1.1. Frank 1992

Frank derives the exceptional behavior of the copula from its status as a functional, rather than a lexical head. Frank assumes that a small clause is in fact the projection of an empty verb, whose *extended projection* (Grimshaw 1991) includes the overt copula (since this is taken to be generated as the head of some functional projection FP, intermediate between IP and VP). Thus the predicate can raise to the specifier position of the overt copula while remaining within the same extended projection.

A lexical verb like *seem* or the passive *be considered*, on the other hand, is not functional, but heads its own extended projection. Thus movement of the predicate to the specifier of the extended projection of such a verb would involve movement out of one extended projection into another; this non-local movement is, in Frank's system, the source of the ungrammaticality of the inverse construction with anything other than the copula.

### 2.1.2. Den Dikken 1993: Minimal distance

The analysis in den Dikken 1993 is similar, although cast in a different framework, in that again it is the exceptional status of the copula that allows for the domain of locality for movement of the predicate to be extended. Den Dikken argues that the failure of the inverse construction in the general case is to be expected, assuming the Minimalist framework of Chomsky 1993. The pre-movement structure that he proposes for a VP headed by *seem* and its small clause complement is given in (21):

- (21) [<sub>VP</sub> Spec seem [<sub>AgrP</sub> NP<sub>Subj</sub> [<sub>Agr'</sub> Agr NP<sub>Pred</sub>]]]

The idea is that movement of the predicate to Spec(VP) has to cross Spec(AgrP), the position of the small clause subject. But since this is a potential landing-site, this movement violates Minimality. Under this view, it is the grammaticality of the inverse construction with *be* that is in need of explanation, as it would appear that Minimality is violated equally in this case. Den Dikken proposes, however, that the copula has the ability to incorporate Agr, which he takes to be the head of the small clause. This incorporation extends the domain of locality for movement (Spec(AgrP) and



Spec(VP) are now *equidistant*, in the terminology of Chomsky 1993). The structure of an inverse copular VP after movement is given in (22):

$$(22) \quad [_{VP} NP_{Pred/i} \text{ be} + Agr_j [AgrP NP_{Subj} [Agr' t_j t_i]]]$$

This ability to incorporate the Agr head of the small clause is limited to the copula; main verbs like *seem* do not allow this. The contrast between (18b) on the one hand and (19b) and (20b) on the other then follows from a Minimality violation.

### 3. Other cases of the inverse construction

The basis of both of the analyses just discussed is the distinction between *be* on the one hand, and all other verbs on the other: only the copula allows the inverse construction. In fact, however, in English there are other verbs that allow the inverse construction (albeit none quite as productively as *be*).

While *seem*, even for British speakers who accept it with DP small clauses, does not allow the inverse construction, it is possible both with *remain* and *become*. Consider for example the sentences in (23) and (24):

- (23) a. The real problem remains what to do next.  
 b. The best solution remains instant retreat.
- (24) a. At this point our real problem becomes John.  
 b. The critical problem now becomes how to set the parameters.

These sentences satisfy standard diagnostics for the inverse construction.

First, the initial DP may be understood attributively and the second referentially. This may be brought out by an example that is ambiguous between a canonical and an inverse construction:

- (25) His favorite horse remains the winner.

On one reading the first DP is being used purely referentially and the second purely attributively/predicatively. On this reading the sentence can be paraphrased:

- (26) A horse, which I happen to be able to identify by the fact that it is his favorite, has not lost its winning position.

There is another reading, however, in which the second DP is being used referentially and the first attributively. On this reading the sentence can be paraphrased:

- (27) It is the horse that I happen to be able to identify by the fact that it won that he likes best.

This second reading is that of an inverse construction. Further, as we saw for the inverse copular construction, this reading requires focus on the postcopular DP.

Second, the order of the DPs in (23) and (24) is not possible in an intact small clause after *consider* unless interpreted as Heavy NP Shift:

- (28) a. i. I consider what to do next our real problem.

- ii. \* I consider our real problem what to do next.
- b. i. I consider instant retreat the best solution.
- ii. \* I consider the best solution instant retreat.
- c. i. I consider John our real problem.
- ii. \* I consider our real problem John.
- d. i. I consider how to set the parameters the critical problem.
- ii. \* I consider the critical problem how to set the parameters.

Third, clefting on the initial DP is impossible, as is typical of inverse constructions (Ruwet 1967, pp. 327–329, Heggie 1988, pp. 80–83):

- (29)
- a. i. It is what to do next that remains/is our real problem.
  - ii. \* It is our real problem that remains/is what to do next.
  - b. i. It is instant retreat that remains/is the best solution.
  - ii. \* It is the best solution that remains/is instant retreat.
  - c. i. It is John that/who becomes/is our real problem.
  - ii. \* It is our real problem that becomes/is John.
  - d. i. It is how to set the parameters that becomes/is the critical problem.
  - ii. \* It is the critical problem that becomes/is how to set the parameters.

Finally, the post-verbal DP resists extraction and subextraction, just as in the inverse copular construction:

- (30)
- a. *Canonical*: What does the picture now become?
  - b. *Inverse*: \*Which picture does the cause of the problem now become?
- (31)
- a. *Canonical*: What does the picture now become the cause of?
  - b. *Inverse*: \*Who does the cause of the problem now become the picture of?

These data show that the possibility of the inverse construction cannot follow from properties unique to *be*. The problem now is that instead of a split between the (arguably) functional head *be* and the lexical raising verbs, we have a split with *be*, *remain*, and *become* on one side, and *seem* and *be considered* on the other. How can this be accounted for?

#### 4. The internal structure of small clauses

##### 4.1. A solution for the distribution of inversion

I propose that while the complement to *seem* and *consider* really is a minimal structure—the projection of a lexical predicate—the complement to *be*, *remain*, and *become* has more internal structure: these verbs select a projection of a null aspectual head that takes the lexical projection as its complement:<sup>8</sup>

<sup>8</sup>The idea that small clauses may contain a projection of a null aspectual head that can provide the landing site for inversion is due to den Dikken 1993, who proposes this as part of his analysis of the type of predicate inversion found in sentences like (i):

(32) ... be/remain/become [<sub>AspP</sub> [<sub>Asp'</sub> Asp [<sub>DP</sub> John [<sub>DP</sub> our real problem]]]]

Note that I do not assume that the lexical head of the small clause has to move to Asp to check its features; rather, I assume that Asp adjoins at LF to the governing verb. This movement is motivated by the necessity for a predicate to be governed by Tense, as proposed in Guéron and Hoekstra 1988, 1992, Guéron 1993, although I depart from the assumptions of these authors in considering that government by Tense cannot be transmitted in a chain from the matrix verb to the head of the small clause that it governs; instead the head (in this case Asp) must adjoin to the matrix verb at LF:

(33) ... be/remain/become+Asp<sub>i</sub> [<sub>AspP</sub> [<sub>Asp'</sub> t<sub>i</sub> [<sub>DP</sub> John [<sub>DP</sub> our real problem]]]]

Similarly, in the case of *seem* and *consider*, the head of the small clause (in this case presumably the determiner, unless the head of the NP has first adjoined to the determiner) must also adjoin to the governing verb in order to reach a position where it is governed by Tense:

(34) ... consider+Det<sub>i</sub> [<sub>DP</sub> John [<sub>DP</sub> t<sub>i</sub> real problem]]]

Given these structures, there is nothing preventing the predicate in (33) moving past the subject, yielding the inverse construction:<sup>9</sup>

(35) Our real problem<sub>i</sub> remains+Asp<sub>j</sub> [<sub>AspP</sub> [<sub>Asp'</sub> t<sub>j</sub> [<sub>DP</sub> John t<sub>i</sub>]]]

In the case of *seem*, *consider*, however, the lexical head of the small clause itself has to incorporate into the governing verb at LF, but this is impossible if it has already moved into the matrix subject position by A-movement (making reconstruction impossible). Thus the inverse construction is ruled out with these verbs.

#### 4.2. The interpretation of the small clause subject

The proposal that small clauses differ in their internal structure in the way outlined above receives independent support from data concerning the interpretation of small

- 
- (i) Down the hill rolled the baby carriage.

Den Dikken argues that in this case the verb selects a small clause complement headed by an abstract head Res[ult], which he suggests is an instantiation of Aspect. This category does not occur as the complement to *seem* and *consider*, on the other hand, because in these cases there is no reading of resultativity. It appears that even for the cases of predicate inversion that den Dikken considers, however, the concept of resultativity is too narrow. As pointed out in Hoekstra and Mulder 1990, the construction in (i) is not syntactically distinct from that in (ii) (from Emonds 1976):

- (ii) a. In each hallway is/hangs/has long stood a large poster of Lincoln.  
b. Upstairs is/stands/lies all the wine we brought from France.

<sup>9</sup>The movement of the predicate past the subject might constitute a violation of Minimality, in the system of Chomsky 1993, as pointed out in den Dikken 1993. In this case the problem could be obviated by assuming that the subject is generated as the specifier of Asp itself; incorporation of Asp into the governing verb will make Spec(AspP) and Spec(VP) *equidistant*. This is, it will be recalled, the proposal that den Dikken makes for *be*. However, if we assume that it is impossible for a category to adjoin to itself, then the subject position of the lexical small clause is ruled out as a possible landing site and this therefore will not be considered as a possible derivation.

clause subjects. As noted in Williams 1983, p. 293, *seem* does not allow the subject to take narrow scope when it does not take an infinitival complement. In particular, while *several new books* in (36a) can receive a cardinal reading, as well as a presuppositional one, *several new books* in (36b) can receive only the presuppositional interpretation:

- (36) a. Several new books seem to be available.  
 b. Several new books seem available.

The same is true of *be considered*, as noted also in Stowell 1991. (37) is odd because the only possible reading is the less plausible presuppositional one:

- (37) Several new books were considered available.

The cardinal interpretation is, however, possible with *become* and *remain*, as illustrated by the contrast in (38):

- (38) a. Several new drugs may become available for general use.  
 b. Several new drugs may remain available for general use.  
 c. Several new drugs may seem available for general use.

The first two are ambiguous with respect to the reading of the subject, but in (38c) the subject may only receive a presuppositional reading, not a cardinal one.

Related to this last point is the fact that bare plural subjects can only receive a generic interpretation with *seem* and *be considered*, whereas they can receive an existential reading with *become* and *remain*, just as they can with *be*:

- (39) a. Firemen seem available. (*Generic only*)  
 b. Firemen are considered available. (*Generic only*)  
 c. Firemen have become available. (*Generic or existential*)  
 d. Firemen remain available. (*Generic or existential*)

What these examples show is that the subjects of *seem* and *be considered* behave unambiguously like the subjects of individual-level predicates—even when the small clause predicate is a quintessential stage-level predicate like *available*—while the subjects of *remain* and *become* do not have this reading forced on them.

In Diesing 1992 it is proposed that the distinction between presuppositional and cardinal readings in full clauses follows from the LF position of the subject: if an indefinite is within the VP at LF it receives a cardinal reading; if it is outside the VP it receives a presuppositional reading. Similarly, if a bare plural is within the VP it receives an existential reading; if it is outside the VP it receives a generic reading. These different LFs can arise because there are hypothesized to be two different types of Infl. One type is essentially a control verb, which assigns a  $\theta$ -role to its subject position and controls a PRO subject within the VP. In this case the subject is generated outside the VP. The other type is essentially a raising verb, which has no D-Structure subject. In this case the subject is generated inside the VP and

can therefore lower there at LF. Crucially, individual-level predicates cannot occur with this latter type of Infl, hence the limitations on their interpretation.

Now one might claim that *seem* and *be considered* are individual-level predicates, and *become* and *remain* are stage-level predicates, and that the differences that we have observed somehow follow from this. However, it turns out that the subject of the small clause complement to *consider* receives the interpretation of an individual-level subject even when the small clause is intact: (40a) can only be interpreted as a statement that drugs as a class typically have the property of being available; similarly, *many drugs* in (40b) can only get the presuppositional reading:

- (40) a. She considered drugs available.  
 b. She considered many drugs available.

The different behavior of small clause predicates to *be*, *remain* and *become* on the one hand and *seem*, *be considered* on the other, then, must follow from different properties of the small clauses themselves.

I propose a slight variant of Diesing's analysis that will allow us to apply it to small clauses as well as full clauses. Let us assume that lexical predicates are inherently individual-level. What allows them to be interpreted as stage-level is the possibility of them being predicated, not of the ostensible subject, but rather of an abstract Davidsonian event argument, as suggested in Kratzer 1989. This event argument, however, is not licensed directly by the predicate itself, but is associated with the Aspect category. One possibility is to suppose that the event argument can actually be generated in the specifier of this category:

- (41) ... [<sub>AspP</sub> *ev* [<sub>Asp'</sub> Asp [<sub>AP</sub> many drugs [<sub>AP</sub> available]]]]

If the event argument occurs in this position, the ostensible subject will be generated within some projection of the lexical predicate. What determines the reading of the subject is whether it is generated lower than the event argument (that is to say, this is how the *nuclear scope* is defined, rather than being merely a question of generation inside or outside the VP). Crucially, if there is no event argument (either because there is no AspP projection at all, or because Spec(AspP) does not contain any event argument) the subject can only be interpreted generically (if a bare plural) or presuppositionally (if an indefinite).

In this way, the presence of the Aspect projection in the complement of *be*, *remain*, and *become* is what allows for the subjects of these clauses to be interpreted as within the nuclear scope; because no such category is present in the complement of *seem* and *consider*, the subjects of these small clauses cannot be so interpreted.

### 4.3. An inverse small clause in English

Above I have argued that the subject of a small clause headed by Aspect may be generated lower than Aspect—if the event argument is present, this is what allows the narrow scope interpretation, as illustrated in (41) above. This possibility gives rise

to the question of what would happen if the subject of the small clause was generated in the lower position but there were no event argument occupying Spec(AspP):

(42) ... [ $_{AspP}$  [ $_{Asp'}$  Asp [ $_{DP}$   $_{DP_{subj}}$   $_{DP_{pred}}$ ]]]

One possibility, of course, is that the subject of the lexical small clause would simply raise into this position. On the other hand, there is nothing preventing the predicate raising into this position. This leads us to expect the possibility of inversion *within* a small clause.

We saw above (Section 1.4) that inverse constructions do not appear in intact small clause complements to *consider*. But of course we have already established that *consider* does not select AspP as a complement, so this is as predicted by the analysis presented. What we also predict, however, is that it is possible for there to be a verb like *be*, *remain*, and *become* in selecting an AspP complement, but like *consider* in being a case-assigner (hence providing an environment where the small clause can remain intact). Such a verb should allow inversion in its complement when *ev* is not present.

It turns out that there is a verb in English that has these properties. The verb *make* allows the subjects of its complement small clauses to behave as though within the nuclear scope:

- (43) a. The institute made several drugs available.  
b. The institute made drugs available.

Thus, in (43a) *several drugs* does not have to receive a presuppositional reading (contrast (44)):

(44) The institute considered several drugs available

Similarly, the bare plural *drugs* in (43b) can receive an existential reading (contrast (45)):

(45) The institute considered drugs available

It was argued above that this type of reading within a small clause is only possible when there is an Aspect projection that can license the event variable associated with stage-level predicates.

Further, there is a use of *make* that allows the reverse construction. This use carries the interpretation that a certain situation holds. Examples are given in (46):

- (46) a. If Bill has an alibi for 6pm, that makes the murderer John!  
b. If that's so, that would make the most likely cause of the problem the pictures of Stalin.

These examples have the typical inverse interpretation where the initial DP is interpreted attributively and the second referentially. Notice that these examples do not need to receive the intonation association with Heavy NP Shift to be felicitous: this point can perhaps be brought out best by comparing (46a) with (47a), where the initial DP in the small clause is an indefinite of the kind that is not felicitous as the subject of an inverse construction, as illustrated in (47b):

- (47) a. ?? If the child dies, that would make a murderer John.  
 b. ?? A murderer was John.

Since the small clause in (47a) cannot be interpreted as an inverse construction, the only way it can be made acceptable is to treat it as an instance of Heavy NP Shift, but in fact even on this reading it is quite marginal, and stands in sharp contrast to the fully acceptable (46a). It follows, then, that (46a) is not an example of Heavy NP Shift, but rather an example of the inverse construction.

Notice further that the extraction possibilities for an example like (46b) seem to be parallel to those of the closely related inverse copular sentence given in (48).

- (48) The most likely cause of the problem is the pictures of Stalin.

Extraction of the entire DP cannot be tested since in the case of an inverse small clause there is no overt indication of the launching site of the moved phrase. But subextraction from the second DP is possible only in the canonical order, in both cases:

- (49) a. *Canonical*: What do you think the pictures of Stalin are the cause of?  
 b. *Inverse*: \*Who do you think the most likely cause of the problem is the pictures of?
- (50) a. *Canonical*: What does that make the pictures of Stalin the cause of?  
 b. *Inverse*: \*Who does that make the most likely cause of the problem the pictures of?

We must therefore conclude that the small clause in this construction can be “inverted”: this is possible because *make* selects AspP, which, when its specifier is empty, provides a landing site for the predicate:

- (51) ... make [<sub>AspP</sub> DP<sub>i</sub> [<sub>Asp'</sub> Asp [<sub>DP</sub> DP *t<sub>i</sub>*]]]

These examples with *make*, then, provide an example of the inverse construction within a small clause, a possibility predicted by the analysis presented here, according to which a subset of small clauses contain an abstract Aspect projection.

## 5. Conclusion

In this paper I have looked more closely at the inverse copular construction, and have presented evidence suggesting that the possibility of “inverting” the subject and predicate of the small clause in this type of construction is not in fact limited to clauses with the copula, but occurs both with other raising verbs and also, in the case of *make*, within the small clause itself. I have argued that the difference lies in whether the matrix verbs select (and subsequently incorporate) a projection of an abstract Aspect category, or the head of a lexical small clause. Independent evidence for this analysis, I have argued, comes from the differing interpretations of the subjects of the small clause complements. This analysis leads to the possibility of considering that *be*, *remain*, and *become* in English are really instances of the same verb, the difference arising from the different instantiations of the aspectual head that they incorporate at LF.

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