Inversion and Equation in Copular Sentences

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1 Introduction: The problem of copular sentences

The apparent ambiguity of the copula in English and other languages has long posed a problem for linguists and philosophers. In (1a), where the postcopular phrase is clearly predicative, *be* appears to make no semantic contribution other than bearing tense information; in (1b), where the postcopular phrase is referential, *be* appears to be a predicate of identity or equation.

(1) a. Kim is happy/a nurse/president of the association
 b. The cause of his illness was this virus here.

As first pointed out in Higgins 1973, whatever analysis is given to copular sentences like (1b) should also be given to pseudoclefts like (2):

(2) What caused his illness was this virus here

A central question that has to be resolved in the analysis of copular sentences, then, is whether the copula is indeed ambiguous between these two interpretations. Settling this question is crucial to understanding pseudoclefts. Only when the basic structure of copular sentences has been established do we have a foundation for the explanation of the well-known but highly problematic connectivity facts that make this construction so important to understanding the syntax/semantics interface.

The outline of our talk is as follows: We will briefly review recent analyses that resolve the ambiguity of the copula by proposing that it has only the first of the two readings discussed, that is, that it is always an essentially meaningless element bearing only tense information. Under these analyses there are no equative sentences: apparent cases of equation, including pseudoclefts, are treated as inverted predications. We will present evidence that some copular sentences, at least, have to be treated as instances of equation rather than as inverted predications, and that pseudoclefts belong to the class of equatives. Having established the existence of equatives, we will then address the question of whether inverted copular sentences also exist. The strongest evidence for the existence of inverted sentences appears to be the inverted agreement pattern noted for Italian in Moro 1990, 1997. We will argue that these sentences are indeed inverted—but that they are inverted equatives, not inverted predicative sentences. In fact it will emerge that the canonical/inverted distinction is orthogonal to the distinction between predicative and equative sentences. Crucially for the analysis of connectivity, pseudoclefts turn out to behave as equatives rather than inverted predicates with respect to all the phenomena that we discuss.

2 Copular sentences as inverted or uninverted predications

We will begin by reviewing very briefly the work of Williams 1983, 1994, 1990, 1997, Heggie 1988, Moro 1990, 1997. Although these accounts vary to a greater or lesser extent, they have in common that they attempt to reduce either some (Heggie 1988, Williams 1997) or all (Moro 1990, 1997, Williams 1997) copular sentences to the predicative type, thus avoiding the problematic ambiguity of *be*. This analysis has also been extended by Williams to cover pseudoclefts as well as non-cleft copular sentences. Thus, an example like (3a) is taken to involve the leftward movement of the underlying predicate *what I want a man to be* past its subject *honest*, just as (3b) involves the leftward movement of *the culprit* past *John*.

(3) a. [what I want a man to be]$_i$ is [$_{SC}$ honest t$_i$]
  b. [the culprit]$_i$ is [$_{SC}$ John t$_i$]

In addition to the fact that this approach allows for a unified analysis of the copula, it has been argued to have other advantages; we have reviewed these elsewhere (Heycock and Kroch 1996) and will not discuss them here. For the moment we wish to concentrate on the question of the reduction of apparent equatives to inverted predicative sentences.

3 Reasons not to reduce equation to predication

3.1 Pseudocleft free relatives

The first problem with reducing pseudoclefts to inverted predications is that the free relatives in pseudoclefts do not consistently behave like predicates. Recall that under the inversion analysis the pseudocleft in (4a) is produced by "inverting" (1b)—in both orders the predicate is the free relative *what she did*:

(4) a. What she did was run the marathon.
  b. Run the marathon was what she did.

One might expect that this free relative predicate would have show atypical behaviors when it has moved to the initial position, as this is not the default position for predicates. However, in (b) it is in the canonical predicate position and should, therefore, undergo the same syntactic operations as other predicates. In fact, however, it does not. As the following contrast shows, pseudocleft free relatives do not undergo predicate preposing:

(5) a. She said that she would run the marathon; and run the marathon, she did.
b. She said that she was honest, and honest she was.
c. * She said that run the marathon was what she would do; and what she did, run the marathon was.

Further, ordinary predicates standardly appear in small clauses. Thus, corresponding to the copular sentence in (6a), we find the small clause constructions in (6b,c)

(6) a. John is honest.
b. I consider John honest.
c. With John so honest, we have nothing to fear

Higgins and subsequently Williams note that pseudoclefts do not appear in small clauses:

(7) a. * I consider what John is honest.
b. * With what John is honest, we have nothing to fear

Williams' explanation for this pattern is that small clauses have no landing site for the inverted free relative predicate. Conversely, we would expect a pseudocleft which has not undergone inversion (the so-called "reverse" pseudocleft, as in *Honest is what John is*, to have a small clause counterpart. However, the examples in (8) and (9) are ungrammatical:

(8) a. Honest is what John is.
b. * I consider honest what John is.
c. * With honest what John is, we have nothing to fear.

(9) a. Read poetry is what he does best.
b. * I consider read poetry what he does best.
c. * With read poetry what he does best, he'll be a great success.

Interestingly, the examples in (10) and (11) are significantly better:

(10) a. This book is what you should read next.
b. I consider this book what you should read next.
c. With this book what everyone is reading, we'll have to discuss it.

(11) a. That it was raining was what he should have said.
b. ? I considered that it was raining what he should have said.
c. ? With that it was raining what he believed, I expected him to take an umbrella.

On an inversion account, the contrast is unexpected: all of the small clauses should be perfect. What seems to be going on is that the examples where the small clause subject is a noun phrase or a *that*-clause have a secondary interpretation as predicative structures. Like other definite noun phrases, free relatives can function as predicates. When they do, however, they must have ordinary noun phrase subjects (hence the ungrammaticality of (8b,c) and (9b,c)), and the resultant sentence is not a pseudocleft. The distinction between this case and the pseudocleft case is not available to an analysis that treats pseudoclefts as predicative sentences.

Finally, Williams notes the contrast in (12):

(12) a. Proud of himself seems to be what John is.
 b. * What John is seems to be proud of himself.

He claims that the (a) sentence is just an instance of subject-to-subject raising, and that the ungrammaticality of the (b) sentence follows directly under the inversion analysis if such raising is limited to subjects: specifically, if it cannot apply to predicates. The facts regarding raising, however, are more complex and make it impossible to maintain his simple dichotomy.

Firstly, there is ample evidence that unequivocal predicates will raise from a fronted position, as illustrated in (13):

(13) Especially dishonest seems to have been the Rockefeller family.

Given this example, we no longer expect (12b) to be ungrammatical.

Secondly, an inversion analysis of copular sentences in general treats an example like (14a) as inverted—that is, derived by predicate fronting. However, these examples freely also freely allow raising, as shown in (14b):

(14) a. The best player is Kim.
 b. The best player seems to be Kim.

In light of these facts, it appears that the failure of raising in canonical order pseudoclefts is not part of a general ban on raising predicates, whether or not the inversion analysis is correct. Under any presently available analysis of pseudoclefts it remains a mystery.

3.2 Type ambiguity

By analyzing pseudoclefts and non-cleft "specificational" sentences like (3a,b) as involving leftward movement of an underlying predicate to the Spec(IP) position, the authors we have mentioned appear to simplify the grammar. There is only one, unambiguous *be*, and small clauses are invariably Subject–Predicate; the only variation that exists is that either the subject or predicate can raise.

As happens so frequently in linguistics, however, this simplification is bought at the expense of complication elsewhere, as shown by the examples in (15):

(15) a. Honest is what I want a man to be.

b. John is what I want a man to be (i.e. he's honest).

Since these sentences are both grammatical, an approach that denies the existence of equatives is forced to allow the free relative *what I want a man to be* to be ambiguous as to logical type, so that it can not only be of type $\langle e, t\rangle$ as required by (15b), where the subject translates as a constant, but also of type $\langle\langle e, t\rangle, t\rangle$, as required by (15a), where the subject translates as a predicate. If on the other hand we allow for the existence of both predicative and equative copular sentences, the type of the free relative can be $\langle e, t\rangle$ in both (15a) and (15b). The difference between them is simply that in the first the two properties are equated, while in the second the property is applied to the subject. This result is attractive since $\langle e, t\rangle$ must be the type of the position out of which *what* is extracted.

3.3 Tautologies

This problem arises in an even sharper form in the case of tautologies, like those in (16):

(16) a. When it comes down to it, honest is honest.

b. In the end, long is long.

c. You can dress it up if you like, but in the end being dishonest is just being dishonest.

The syntactic problem here is the same: the adjectives *honest*, *long*, *dishonest*, etc. will have to be ambiguous as to type: as well as being of their normal type ($\langle e, t\rangle$) in these sentences one of them must be of the higher type $\langle\langle e, t\rangle, t\rangle$. By hypothesis, this might be the first or the second one in the sentence, depending on whether it is interpreted as inverse or canonical.

These sentences however make it clear that there is also a semantic problem. In (16a), for example, honesty is not being ascribed to the property of being honest in the way that honesty is ascribed to John in the sentence *John is honest.* Instead, this sentence is a tautology, in which the *honest* property is asserted to be identical to itself. In order to get this interpretation from a predicative analysis of (16a), it will be necessary to associate with type-raising of the adjective a change in its meaning, from *honest*(x) to *be identical to honest*(x). In other words, if equation is removed from the syntax, it has to be put back into the semantics.[1]

Notice that adopting a predicational analysis of tautologies actually obviates the need for syntactic inversion in so-called inverse copular sentences including pseudoclefts. Consider the following example:

(17) What John is is honest

On an inversion analysis of this sentence, the free relative has the type $\langle\langle e, t\rangle, t\rangle$. But as Williams (1990) acknowledges, the same free relative must sometimes have the type $\langle e, t\rangle$, as in the example:

[1]Why speakers are reluctant to equate lexically different predicates (in comparison to their relative willingness to equate entities), however, we do not at present understand.

(18) I am what John is

We have shown that under the predicative analysis one of the occurences of *honest* in the tautology (16a) must be of type $\langle\langle e,t\rangle,t\rangle$. We can now assign the type $\langle e,t\rangle$ to the free relative in example (17) and the type $\langle\langle e,t\rangle,t\rangle$ to the postcopular adjective. With this assignment of types, the sentence is no longer inverse. Like the tautologies, it has become syntactically predicative and semantically equative.

3.4 The order of the logic of natural language

Williams (1990) has noted that the type raising operation needed to generate sentences like (15a) cannot be allowed to apply freely. If it did, we could construct a free relative like (19):

(19) what honest is

out of (15a) in the same way as we can construct the free relative *what I want a man to be* out of (20):

(20) I want a man to be honest.

The free relative (19) should then be a predicate over predicates over predicates (*i.e.*, a third order predicate); and with it we should then be able to construct sentences like (21):

(21) * What John is is what honest is.

However, such sentences are always ungrammatical and uninterpretable.[2]

Williams himself gives no reason why such third order predicates are not constructable, supposing their non-existence to be a primitive property of natural language. Since Williams's higher order predicates are constructed syntactically, however, and since syntactic operations are generally recursive, the absence of recursive type raising is actually surprising if the operation is available to natural language syntax. Under an equative analysis, there is no type raising, hence no need to stipulate a limit to its application.

3.5 Overgeneration of inverted predicates

The inversion analysis for sentences like (15a) also leads to serious difficulties in constraining the relevant transformational movement. If phrases of type $\langle e,t\rangle$ may occur in subject position (as they must for (15a) to be grammatical), and if predicates can move past their subjects (as this analysis crucially assumes) there is no simple way to account for the contrast between (15a) and the ungrammatical (22):

[2]This example would be possible under an equative analysis of the post-copular free relative's internal structure through relativization on the second argument. However, the free relative clause itself is equative under this analysis and we know that extraction out of equatives is not possible (see Heycock and Kroch 1996).

(22) * Honest is John

Given an equative analysis of (15a), however, there is an easy explanation for the impossibility of (22). Suppose we assume, along with Williams and Moro, that within a predicative small clause—whether the complement to *be* or elsewhere—the order Subject–Predicate is fixed. Under an equative analysis, we may further assume, Contra Williams and Moro, that Spec(IP) in copular sentences is restricted to being the landing site of the subject of the small clause complement of I, just as it is when I takes a VP complement with an overt subject, presumably for reasons of minimality. Movement of the predicate to Spec(IP) is never possible. This analysis is attractive in its simplicity and we have adopted it in previous work (Heycock and Kroch 1996).

By constraining movement to Spec(IP) in copular sentences in this unmarked way, we directly explain the contrast between (15a) and (22) and also that between (23a) and (23b):

(23) a. What I want a man to be is honest.
b. * What I want a man to be is John.

These examples contain the same phrases as (15a,b), except in the other order. Under the inversion analysis, there is no explanation for the clear difference in grammaticality between them.[3] They should both be equally acceptable as inverse predications—note in particular that the grammaticality of (23a) shows that the phrase *what I want a man to be* can occur happily in initial position. Under our equative analysis (23a) is fine because it is an equation of two predicates (just as (15a) was); (23b) is ungrammatical because it can neither be interpreted as a predicative copular sentence (since *John* cannot be a predicate) nor as an equative (since the first argument *is* a predicate and therefore cannot be equated with a constant). It fails then for precisely the same reason as (22).

Our account has the further advantage of explaining a hitherto unnoticed gap in the inversion paradigm that a Moro-style analysis predicts. Long ago, Higgins 1973 noted that pseudoclefts behave in almost every way like sentences where a headed relative clause replaces the pseudocleft free relative. Compare (24a,b) to (15a,b) above:

(24) a. Honest is the one thing I want a man to be.
b. John is the one thing I want a man to be (i.e. he's honest).

Clearly, in these examples the postcopular expression is a definite NP; and under Moro's analysis it is just such predicates that should invert. But the "inverted" variant of (24b) is ungrammatical:

(25) * The one thing I want a man to be is John.

Of course, for us, (25) is excluded for the same reason as (23b) and as (22): Predicates can't move to Spec(IP) past their subjects.

Finally, we also have a straightforward account for the failure of inversion in cases like (26) and (27):

[3] (23b) is possibly marginally grammatical on the reading where *John* denotes some kind of property, but of course this is entirely consistent with our argument, as it involves coercing the postcopular phrase into a first-order predicative interpretation so that it can be equated with *what I want a man to be*.

(26) a. I consider Kim the best candidate.
b. Kim is considered the best candidate.
c. * The best candidate is considered Kim

(27) a. % Kim seems the best candidate.
b. * The best candidate seems Kim.

On the assumption that the small clause complements to *consider* and *seem* are unambiguously subject–predicate structures, it is not obvious how to prevent the movement of the predicate past the subject in the passive cases if predicates are in general able to move past their subjects. For us, on the other hand, the ungrammaticality of (26c) and (27) follows straightforwardly from the ungrammaticality of the examples in (28):

(28) a. * I consider the best candidate Kim.
b. * The best candidate seems Kim.

4 Where we now stand

4.1 Equatives are not reducible to inverted predicatives

To summarize our discussion to this point, we have established the following facts:

1. Copular sentences are unavoidably ambiguous; the ambiguity must reside either in the logical type of the predicate or in the interpretation of the copular relation.
2. The inversion analysis, which assumes a univocal copular relation, overgenerates and provides no explanation for why only those copular sentences in which the predicate is not of the normal predicate type ($\langle e, t\rangle$) allow the "inverted" order.
3. An analysis under which the copular relation is ambiguous between predication and equation correctly predicts, without the need for stipulative constraints on type shifting, the observed pattern of grammaticality and interpretation.

4.2 Ambiguous copular sentences without ambiguous "be"

It might seem that we are now in the position of having to posit ambiguity for the copula itself, given that we argued that both predicational and equative copular sentences exist. However, we believe that the source of the two interpretations should not be traced back to the copula: rather there is evidence that the copula is always semantically vacuous. The difference between the two types of copular sentence is due instead to the existence of two types of small clause, one predicative and the other equative.

The existence of a distinction among small clauses of the relevant sort was argued for in Heycock 1994 (although the analysis given in that paper differs from the one that we have now arrived at). In that paper it is shown that, alongside the more familiar predicational small clauses like (29a), we can find in the English *make* construction "inverse" small clauses like (29b,c), which have the typical equative interpretation:

(29) a. I consider John the real murderer.
 b. But if what you say is true, that would make the real murderer John!
 c. But if what you say is true, that makes your attitude towards Jones my attitude towards Davies!

As in the case of copular sentences, the first noun phrase in these equative small clauses must not be interpreted as a predicate, as would be the case with a non-specific indefinite:

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

¿From the examples in (29), we must conclude that equative semantics is independent of the presence of the copula. Indeed, there is also evidence, first noted in Heycock 1994, that equative small clauses also occur as the complements to raising verbs other than *be*. The verbs *remain* and *become*, to cite the two clearest examples, also subcategorize for equative small clauses, as illustrated in (31) and (32):

(31) a. The real problem remains what to do next.
 b. The best solution remains instant retreat.

(32) a. At this point our real problem becomes John.
 b. The critical problem now becomes how to set the parameters.

We will not discuss these examples in detail here. But their existence reinforces the point that the predicative/equative distinction is independent of *be*,[4] and allows us to maintain that *be* is a raising verb in all cases. Of course, some verbs select only for predicative small clauses, while others can select for either type.[5] ; We conclude, therefore, that there are both equative and predicative small clauses. The copula (like the aspectual verbs *become* and *remain*) can take either type as its complement: hence the ambiguity of copular sentences. Clearly a question that now arises is the nature of the difference between predicative and equative small clauses. We have not yet fully resolved this question. Our speculation is that the equative small clauses involve some functional head, absent from the predicative cases (this conclusion is reached for copular sentences in Irish in Carnie 1995, and for independent reasons in Heycock 1994). More research is needed on this question. What we do take to be established, however, is the location of the ambiguity of copular constructions in the ambiguity of the small clause complement to the copula, and not in any lexical ambiguity of the copula itself.

[4]Other arguments, based on data from Hebrew and Irish, against deriving the two readings of copular sentences from lexical ambiguity of the copula can be found in Doron 1983, Rapoport 1987, and Rothstein 1995 (for Hebrew), and Carnie 1995 (for Irish).

[5]We are not aware of any heads that select *only* equative small clauses. We have not yet explored possible reasons for this implicational asymmetry.

5 Do inverse copular sentences exist?

At this point, we might want to claim that inverted copular sentences simply do not exist and are ruled out by ordinary locality constraints on movement. But while this conclusion is correct for many of the cases discussed under the rubric of copular inversion, there are cases that force us to a more nuanced position. It turns out that there are indeed inverted predicative copular sentences; but these can be shown not to involve A-movement to the Spec(IP) position. Furthermore, there is evidence that the most interesting class of inverted copular sentence is not the inverted form of a predicational sentence, as the standard treatment of copular inversion claims, but rather an inverted equative sentence, surprising though this may seem.

5.1 Predicate fronting in English

Before discussing the most interesting cases, we will first deal with the clearest case of "inversion", the predicate fronting described in Birner 1992 that is found in examples like (33):

(33) a. The paintings by O'Keefe were wonderful. ??(Even more) impressive were the murals by Rivera.

b. My last guest was a charming woman. ??(Also) a charming woman is my next guest.

c. Voting *for* the amendment were the senators from Maine.

d. Delinquency is a menace to our society. Also a menace are/*is factory closings and fascist propaganda.

As these examples show, such predicate fronting requires special discourse context and typically includes an explicit indicator of comparison. The fact that predicates of all categories can front points to inversion as the correct analysis of this case.

There are other reasons, some discussed in Heycock 1998 and Heycock and Kroch 1996, that lead to an analysis of this construction as movement of the predicate to a left-peripheral A-bar position, which we assume to be Spec(CP), rather than to Spec(IP).

1. **Agreement**: In contrast to the "inverse" copular sentences that we have analyzed as equatives, in this construction the copula agrees with the postcopular nominal, even when it is a noun phrase that has been fronted. This can be seen in the examples (33) above. Note that sentences like (34), which lack the pragmatics of predicate fronting, also lack the inverse agreement pattern:

   (34) The biggest problem is/*are factory closings

   This example, however, is a standard case of a Moro-type "inverse copular sentence," which we have analyzed as equative (see Heycock and Kroch 1996).

2. **Binding of pronouns**: Again in contrast to the Moro-style "inverse" sentences that we analyze as equatives, these predicate fronting cases allow a pronoun in the fronted element to be bound by a postcopular quantifier. Thus for example we find the contrast in (35), where (35a) is an ordinary predicative sentence, (35b) is an equative (but under the Williams/Moro analysis the inverse form of (35a)), and (35c) is an instance of the predicate fronting construction we are now discussing.

   (35) a. Every country in Western Europe was the enemy of its neighbor

   b. * The enemy of its$_i$ neighbor was [every country in Western Europe]$_i$.

   c. (In the late 19th century Japan became a threat to its neighbors.) Also a threat to its$_i$ neighbors was [every country/more than one country in Western Europe]$_i$.

   The possibility of binding is identical between the canonical predicative sentence in (a) and the predicate-fronting example in (c). This suggests that (c) involves leftward A-bar movement of the predicate, since it is known that such movement does not interfere with binding relations.

3. **Embedded contexts**: As expected if the predicate fronts to Spec(CP), this construction cannot in general appear in embedded clauses, as shown in (36)–(37)

   (36) a. If the Picasso paintings are also interesting, we'll stay on.

   b. * If also interesting are the Picasso paintings, we'll stay on.

   (37) a. I wonder whether the Picasso paintings are also interesting.

   b. * I wonder whether also interesting are the Picasso paintings.

   Again as expected, the construction *does* appear in one embedded context—precisely where we have independent evidence for CP-recursion (Iatridou and Kroch 1992):

   (38) a. I think that the Picasso paintings are also interesting.

   b. I think that also interesting are the Picasso paintings.

4. **Subject-Aux Inversion**: Finally, the fronted predicate cannot invert with the auxiliary in a yes-no question, again as expected if it occupies Spec(CP):

   (39) a. Are factory closings also a menace to society?

   b. * Are also a menace to society factory closings?

   Note that the patterns in (36)–(39) contrast sharply with the behavior of equative sentences, which occur freely in these environments:

   (40) a. If the biggest problem is factory closings, then we're ok.

   b. I wonder whether the biggest problem is factory closings.

c. Is the biggest problem factory closings?

The contrast between the behavior of the predicate fronting cases and the Moro-style "inverse copula" cases supports our analysis of the latter as equative and as non-inverted. As far as we know, there are no other cases to consider in English. Hence, we conclude that English has both inverted and canonical order predicative sentences but only canonical order equative sentences. The agreement facts show that there are no inverted equatives, that is to say, equative sentences in which the second argument of the equation function is fronted, as predicates are fronted. We might ask, then, whether this gap in the paradigm is language particular or follows from properties of UG. To answer this question, we must look at other languages. A crucial case turns out to be Italian, where the facts are just different enough from English to be interesting.

Compare the English sentences in (41) with their Italian counterparts in (42):

(41) a. I am the King of France.
b. The King of France is me.

(42) a. (Io) sono il re della Francia.
(I) am the king of France
I am the king of France.
b. Il re della Francia sono io.
the king of France am I
The king of France is me.

The canonical order (a) sentences are exactly parallel but the (b) sentences show the opposite patterns of agreement. We have claimed that the English (41) and sentences like it are equative; and Moro claims that the Italian (42) and its ilk are inverted predications, an analysis that is certainly suggested by the agreement pattern and case marking on the pronoun. At least partly in the pursuit of theoretical simplicity, Moro has further claimed that the English example, despite its agreement pattern and the case marking on the pronoun, is an inverted sentence. This latter claim our evidence has undermined; what are we then to make of the Italian case in (42b)?

5.1.1 Predicate inversion in Italian

Given the agreement pattern in (42), one obvious move would be to propose that the Italian example in (42b) is not in fact parallel to its purported English "counterpart" (41b), but rather that it *does* involve predicate inversion: that is, *il re della Francia* originates as the predicate of a small clause, as proposed by Moro for both the English and the Italian case. There are however reasons to reject this proposal.

First, the constraints on what kind of element can occur in the precopular position in Italian appear to mirror exactly the constraints that we discovered in English: that is, adjectives and non-specific indefinites cannot occur freely in this position. In the English case we argued

(Section 3.5) that this constraint demonstrated that the predicate of a small clause cannot in fact move past its subject into the Spec(IP) position; the only cases that are grammatical are those that can be interpreted as equatives. But this argument should then also hold for Italian.

Second, the point just made is strengthened considerably by the observation that Italian *does* have the type of predicate fronting that we have seen for English (Section 5.1)—and it behaves in the same way in contrasting with the construction in (42b), in all respects except agreement:

1. **Binding of pronouns**: As we saw in the English examples in (35), in clear cases of predicate fronting a pronoun in the fronted predicate can be bound by a postcopular quantified noun phrase, as is typical of A-bar movement. The same phenomenon can be observed in Italian, as exemplified in (43):

(43) a. Ogni paese nell'Europa dell'Est era il nemico del proprio
every country in-the-Europe of-the-East was the enemy of-the own
vicino.
neighbor

Every country$_i$ in Eastern Europe was the enemy of its$_i$ neighbor.

b. * Il nemico del proprio vicino era ogni paese nell'Europa dell'Est.
the enemy of own neighbor was every country in-the-Europe of-the-East

The enemy of its$_i$ neighbor was [every country in Eastern Europe]$_i$.

c. Alla fine del 19-esimo secolo il Giappone divenne una minaccia per
at-the end of-the 19th century the Japan became a menace for
i propri vicini. Una minaccia per i propri vicini era anche ogni
the own neighbors a menace for the own neighbors was also every
paese nell'Europa dell'Est.
country in-the-Europe of-the-East

At the end of the nineteenth centry Japan became a threat to its neighbors. Also a threat to its$_i$ neighbors was every country$_i$ in Eastern Europe

2. **Embedded contexts**: Just as in English, the construction in (42b) shows no subordinate/main clause asymmetry, while the the predicate-fronting construction does:

(44) a. Se tu sarai il vincitore, ne sarò lieto.
if you are the winner of-it will-be glad.

If you are the winner, I'll be delighted.

b. Se il vincitore sarai tu, ne sarò lieto.
if the winner are you of-it will-be glad.

If the winner is you, I'll be delighted.

(45) a. Se gli affreschi di Giotto sono pure imponenti, noi rimaniamo.
if the frescos of Giotto are also impressive we will-stay

If the frescos by Giotto are also impressive, we'll stay on.

b. ?? Se pure imponenti sono gli affreschi di Giotto, noi rimaniamo.
if also impressive are the frescos of Giotto we will-stay
If also impressive are the frescos by Giotto, we'll stay on.

Again exactly as in English, and exactly as expected if the construction in (45b) involves A-bar movement to Spec(CP), the asymmetry disappears in contexts where CP-recursion can occur:

(46) a. Penso che gli affreschi di Giotto siano imponenti.
think that the frescos of Giotto are impressive
I think that the frescos by Giotto are impressive.

b. Penso che pure imponenti sono gli affreschi di Giotto.
think that also impressive are the frescos of Giotto
I think that also impressive are the frescos by Giotto.

We conclude that predicate fronting does exist in Italian, but that it contrasts with the construction in (42b), leaving us to search elsewhere for an analysis of the latter.

5.1.2 Equative inversion

Given that we cannot analyze the Italian example (42b) as predicate inversion, and also given that it shares many properties with the English example in (41b) which we have analyzed as an uninverted equative, we might attempt to make Moro's move of assimilating the English and Italian examples, but in the other direction, and claim that (42b) is an uninverted equative, despite the agreement pattern and case marking on the pronoun. However, while it would certainly be possible to design a system of case marking and agreement that would allow this analysis, the move seems implausible. This intuition is strengthened by the following striking set of data.

In English, we find a clear contrast in the acceptability of the examples in (47)–(48). If the antecedent is an equative sentence, then the subject of the consequent may be coreferential with the subject of the antecedent and produce a natural continuation, as in the (a) examples. If, however, the subject of the consequent is coreferential with the postcopular noun phrase in the antecedent, the resulting sentence is infelicitous, as in the (b) examples:

(47) a. If I were the king of France, I would be rich.
b. # If I were the king of France, he would be rich.

(48) a. If the king of France were me, he would be poor.
b. # If the king of France were me, I would be poor.

In Italian, there is also an asymmetry in interpretation. In canonical order sentences, the asymmetry is identical to the one found in English:

(49) a. Se (io) fossi il re della Francia, sarei rico.
if (I) were-1s the king of France would-be(1s) rich
If I were the king of France, I would be rich.

b. # Se (io) fossi il re della Francia, sarebbe rico.
if (I) were-1s the king of France would-be(3s) rich
If I were the king of France, he would be rich.

By contrast, in the cases Moro calls inverted, the natural example has the subject of the consequent coreferential with the *postcopular* noun phrase:

(50) a. Se il re della Francia fossi io, sarei rico.
if the king of France were(1s) I would-be(1s) rich
If I were the king of France, I would be rich.

b. # Se il re della Francia fossi io, sarebbe rico.
if the king of France were(1s) I would-be(3s) rich
If I were the king of France, he would be rich.

This pattern suggests that in Italian examples like (50) the postcopular noun phrase is the grammatical subject, as Moro claimed.

For at least some speakers of Italian, there *are* Italian examples that parallel the English ones in both word order and interpretation of the consequent clause:[6]

(51) a. Se il re della Francia fosse me, sarebbe povero.
if the king of France were(3s) me would-be(3s) poor
If the king of France were me, he would be poor.

b. # Se il re della Francia fosse me, sarei povero.
if the king of France were(3s) me would-be(1s) poor
If the king of France were me, I would be poor.

In these examples, which are non-standard in flavor, agreement follows the English rather than the standard Italian pattern. The data in (49)–(51), taken as a whole, argue that agreement in Italian is a reliable indicator of subject status. We must therefore conclude that in our original example (42b), just as in (50a,b), the postcopular noun phrase is in fact the subject of the clause, hence that the clause is inverted.

At this point, we have reached the following conclusions about Italian examples like (42b):

1. These sentences are not examples of predicate inversion.

[6] All our informants agree that the option of having a canonical order equative in which the postcopular, accusative-marked noun phrase is a pronoun is significantly worse in main clauses than in subordinate clauses. Some reject this pattern in main clauses outright, others consider it merely degraded. We speculate that this type of canonical order equative may be stigmatized in the standard language.

2. These sentences are not examples of canonical order equatives.

3. The subject of these sentences is the postcopular noun phrase

We are, therefore, led to the following hypothesis: examples like (42b) and (50a,b) in Italian are the case that has been missing so far: they are inverted equatives. The fact that they are equatives explains why the initial noun phrase is subject to the same kind of constraints as the initial noun phrase in the (canonical order) English equatives; the fact that they are inverted explains why the agreement is with the postcopular noun phrase.

5.1.3 The nature of equative inversion.

Having proposed that examples like (42b) are inverted, we are left with the obvious question of why this construction occurs in Italian but not in English. And having concluded that the word order in these examples is not due to predicate inversion, we need a mechanism for generating the inverted order. Since whatever mechanism we propose to handle the Italian case must be prevented from applying to English, these two issues are inextricably related.

Ideally the solution to our problems should follow from an independently attested difference or differences between the two languages. Indeed, when we compare the structure of simple clauses in Italian to the structure of corresponding English clauses, the most striking difference we find is in the position of the subject. In English, the subject always appears in Spec(IP), hence preverbally. But in Italian the subject is often lower in the structure, and postverbal (Burzio 1986):

(52) a. John arrives.

b. Arriva Giovanni.
arrives Giovanni

Giovanni arrives.

The obvious conclusion is that the subject in an inverted equative sentence in Italian occupies the same postverbal position as the subject in sentences like (52b). Indeed, we find that in copular sentences both noun phrases may occur after the copula, an order ruled out in English:

(53) Se fossi io il re della Francia ...
if were(1s) I the king of France

If I were the king of France ...

At this point we have an answer to the question of why English doesn't allow inverted equatives: in English the feature content of Infl is such as to force movement of the subject to Spec(IP), a preverbal position.

What now remains to explain is the leftward movement of the noun phrase *il re della Francia* in (42b), and the failure of such movement in English. Suppose that we take this movement to be an instance of scrambling. As we have seen, this movement cannot affect predicates—the only way that predicates move leftward is by the type of A-bar movement that we have already discussed, which has quite distinct properties. It is a known fact about scrambling that it essentially only applies to definite noun phrase arguments; just the type of expression that is moving in these inverted equatives.

Further, a scrambling analysis can offer some insight into the following curious gap in the paradigm. We have analyzed example (42b), repeated here as (54), as involving scrambling of the second noun phrase in an equative small clause past the (unmoved) subject:

(54) Il re della Francia sono io.
the king of France am I
The king of France is me.

We have also indicated that some of our informants also accept the type of canonical order equative in (55):

(55) Il re della Francia è me.
the king of France is me
The king of France is me.

We would then expect to find an inverted version of (55); even those informants who allow (55), however, reject (56):

(56) * Me è il re della Francia.
me is the king of France
The king of France is me.

Note, however, that the independent pronoun *me* is a tonic pronoun. It is a general fact about scrambling that it does not affect stressed elements, but rather correlates with destressing. Given than a tonic pronoun cannot be destressed, this conflict can at least begin to explain the ungrammaticality of (56) for all speakers.

Unfortunately, the analyses of scrambling that are available do not make entirely clear the relation between scrambling and standard cases of A or A-bar movement. So we cannot rely on established theory to explain why scrambling is possible in Italian but not in English. Note that if scrambling were possible in English we would expect to find examples like (57):

(57) ?? The king of France that man is.

While this word order is marginally possible in English, it arises out of A-bar movement of the postcopular noun phrase, not via scrambling, as can be shown by the ungrammaticality of (58):

(58) * ... because that man the king of France is

6 Conclusion

In summary: we have argued in this paper that copular sentences can be either predicative or equative, and that the latter cannot be reduced to an inverted version of the former. We have, however, claimed that this distinction should not be attributed to any lexical ambiguity in the copula itself, but rather to the existence of two types of small clause, both of which can occur as complements to the copula (as well as to some other heads). Inversion, in the sense of movment of the second element in a small clause past the subject of that small clause, does however occur. In the case of predicative small clauses, the only way that inversion can arise is through A-bar movement of the predicate to a position higher than Spec(IP)—presumably Spec(CP). This kind of predicate fronting we have seen in both English and Italian. Inversion out of equative small clauses also occurs, but this is only possible if the subject of the small clause is not forced to move (as is true in Italian) and if the language allows the operation of scrambling.

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