Specification, equation, and agreement in copular sentences

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1. Introduction

It is a commonplace—and like many commonplaces, probably misleading—that sentences built around the copula may be predicational (the postcopular phrase contributes a predicate, the subject is its argument), as in (1), or they may be equative/equational (the copula is flanked by two expressions of the same semantic type) as in (2).

- (1) a. Su is clever.
 - b. Su is a clever woman.
 - c. Su is the cleverest woman in the room.
- (2) a. Fernando Pessoa is Alberto Caeiro.
 - b. Gold is gold.
 - c. Peace is War.

The work of Higgins (1973) introduced two more types: identificational and specificational. For the purposes of this article I will set aside the issue of identificational sentences, and concentrate instead on the specificational type, illustrated in (3):

- (3) a. The winner is Laura.
 - b. The cleverest woman in the room is Su.
 - c. The murderer is one of those men over there.
 - d. One gang member turned out to be someone I knew.

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Characteristically, specificational copular sentences involve two noun phrases, of which the first is typically—but not necessarily, as illustrated in (3d)—definite. This first noun phrase does not appear to refer straightforwardly to an individual, while the second typically does, *pace* arguments to the contrary in Higgins (1973). Specificational sentences have a number of other interesting syntactic and semantic properties (explored in various works, including Williams 1983; Heggie 1988; Declerck 1988; Moro 1990, 1997, 2000; Heycock 1991, 1994a, 1994b; Heycock and Kroch 1997, 1999a, 1999b, 2002; den Dikken 1995, 1997, 1998, 2006; Pereltsvaig 2001; Mikkelsen 2002, 2005; Lahousse 2009; Patten 2010), only some of which will be dealt with here.

A great deal of work since Higgins' dissertation has been devoted to the question of whether the taxonomy Higgins proposed can be reduced, and in particular whether specificational sentences are a special case of equatives (the position taken by Heycock and Kroch 1997, 1999a, 1999b, 2002; Lahousse 2009), or whether they can be reduced to "inverted predications", as suggested by the relation between examples such as (1c) and (3b) (the position, very roughly, taken by most of the authors cited in the last paragraph). There are a number of different variants of the "inversion" analysis. Most have in common the basic idea that the copula takes a small clause complement; if the subject of this complement moves past the copula the result is a predicative sentence with "canonical" order; if the predicate moves, the result is a specificational sentence (angle brackets indicate the pre-movement position):

- (4) be [SC Subject Predicate]:
 - a. Subject be [SC < Subject > Predicate] Canonical predicative sentence
 - b. Predicate be [SC Subject<Predicate>] Inverse predicative (= specificational) sentence

In this article I would like to focus on three properties of specificational sentences that I believe are very important for understanding how they fit into the linguistic system, and what they may tell us about it. These properties are the pronominalisation pattern found in specificational sentences, their information structure, and, centrally here, the agreement possibilities that they display. I will argue that when taken together, the facts support treating specificational sentences as involving a species of "inversion", with the initial noun phrase having moved from its original position on the right of the focussed noun phrase. *Contra* Moro, Heycock (1994b), den Dikken, and Mikkelsen, however, I will maintain the position of Heycock and Kroch (1999b) that these sentences nevertheless are a type of equative, albeit a type in which only one of the two noun phrases is a simple individual. In the course of the discussion I will set out in some detail some of the variation in agreement found in these sentences within Germanic, and outline an analysis that can account for at least some of this variation (and variability).

¹Some but not all of the authors who have proposed that specificational sentences are simply inverted forms of predicational sentences have gone further to claim that there are in fact no equative sentences at all; any putative cases can be reduced to canonical or inverted predication.

2. ORDER AND DISORDER IN SPECIFICATIONAL SENTENCES

This section presents in detail the facts concerning agreement and information structure in specificational sentences, concentrating on data from Germanic.

2.1 Agreement

One striking fact that supports an "inversion" analysis of specificational sentences—an analysis in which the postcopular noun phrase is the subject—is that in some languages it is this noun phrase with which the finite verb agrees. The point was made forcefully in Moro (1997), since the pattern in Italian is very clear:²

(5) II colpevole sono /*è io /*me. the culprit be.PRES.1SG /*be.PRES.3SG 1SG.NOM /*1SG.ACC 'The culprit is me.'

A number of languages pattern with Italian in showing this NP2 AGREEMENT in specificational sentences. Alsina (2003) for example discusses the same pattern in Catalan:

- (6) a. El seu fort són /*és les matemàtiques. the his strong point be.PRES.3PL /*be.PRES.3SG the mathematics(PL) 'His strong point is mathematics.'
 - b. El firmant de la carta sóc /*és jo. the signer of the document be.PRES.1SG /*PRES.3SG I.NOM 'The signer of the document is me.'

And Costa (2004) shows that it holds in both Brazilian and European Portuguese (with some interesting differences between the two):

- (7) O problema são /*é os teus pais. the problem be.PRES.3PL /*be.PRES.3SG the your parents 'The problem is your parents.'
- (8) A culpada sou /*é eu. the culprit be.PRES.1SG /*be.PRES.3SG 1SG.NOM 'The culprit is me.'

Spanish appears to show the same pattern (Martha Robinson, personal communication).

In this article, however, I will focus on the less discussed patterns found in Germanic. In this language family, the NP2 agreement pattern is also found in German:

(9) a. Das eigentliche Problem sind /*ist deine Eltern.
the real problem be.PRES.3PL /*be.PRES.3SG your parents
'The real problem is your parents.'

²Inflectional morphology in the examples is glossed only where relevant. The abbrevations used are as follows:

ACC accusative NOM nominative singular subjunctive DAT dative PLplural SUBJ DEF definite PRES present infinitive REFL reflexive INF

b. Die Königin von England bin /*ist ich.
 the queen of England be.PRES.1SG /*be.PRES.3SG 1SG.NOM
 'The queen of England is me.'

In Dutch:

- (10) a. %De brandoorzaak waren de brandenden kaarsen in de woonkamer. the cause of the fire be.PAST.PL the burning candles in the living room.' The cause of the fire was the burning candles in the living room.'
 - b. %De konigin van Engeland ben ik.
 the queen of England be.PRES.1SG 1SG.NOM
 'The queen of England is me.'

In Icelandic:

- (11) a. %Hið raunverulega vandamál eru foreldrar þínir. the real problem be.PRES.3PL parents your.NOM 'The real problem is your parents.'
 - b. %Sökudólgurinn ert þú.
 culprit.DEF be.PRES.2SG 2SG.NOM
 'The culprit is you.'

And in Faroese:

(12) %Orsøkin til eldin vóru tey brennandi kertiljósini í stovuni. cause.DEF to fire.DEF be.PAST.PL the burning candles.DEF in room.DEF 'The cause of the fire was the burning candles in the living room.'

Judgements in Dutch, Icelandic, and Faroese show a significant amount of variation, as indicated by the "%" annotation; this will be discussed in more detail in section 2.3. The other Scandinavian languages (at least the standard varieties of Swedish, Norwegian, and Danish) have lost all traces of agreement on finite verbs (for a discussion of the variation in case on the postcopular nominal, see Sigurðsson 2006).

English of course behaves quite differently from the languages just discussed: agreement is overwhelmingly with the initial noun phrase, when confusion with the A' predicate fronting construction exemplified in (14) and discussed in Heycock and Kroch (1997, 1999a, 1999b) is controlled for:³

- (i) a. What he saw behind him was/were two men.
 - What makes something a pencil are superficial characteristics such as a certain form and function.
 - c. All I could see was/were two staring eyes.

It seems likely that this pattern is due to the possibility of *what* and *all* (or the empty noun it modifies) being underspecified for number, as may also be the case in (formal written) French for *ce*. In my judgement, while plural agreement in (i) is relatively acceptable, the minimally

³One further type of apparent exceptions to the NP1 agreement pattern of English consists of cases where the initial DP is either a free relative or a relative introduced by *all* (the second example is due to Roger Higgins, cited in Partee 1998):

- (13) a. The culprit is me.
 - b. The real problem is/*are your parents.
- (14) Delinquency is a menace to our society. Also a menace are/*is factory closings and house repossessions.

English is not alone in showing consistent NP1 agreement; this is also the rule in French:

- (15) a. L'état, c'est moi. the state it be.PRES.3SG me 'The state is me.'
 - b. *L'état, ce suis je/moi. the state it be.PRES.1SG I/me
- (16) a. Le coupable, c'est toi. the culprit it be.PRES.3SG you 'The culprit is you.'
 - b. *Le coupable, c'es tu/toi. the culprit it be.PRES.2SG you

Here the form of the pronoun that has to occur is the tonic form.

The pattern observed in the languages with NP2 agreement clearly suggests a predicate inversion analysis. A speculation made in Heycock and Kroch (1999a) was that such a conclusion was not forced. Note that in both English and French any pronoun in the postcopular position has to be the tonic form, which is not nominative; in all the languages with NP2 agreement the case of the postcopular noun phrase or pronoun is nominative. If we assume that, for whatever reason, the ϕ -features of a nonnominative argument are not available for agreement, then on the basis of the

different examples in (ii) are significantly worse when agreement is with the second-person pronoun.

- (ii) a. What he saw behind him was/*were you.
 - b. What makes this party go is/*are you.
 - c. All I could see was/*were you.

This is surprising if the reason for the plural agreement on the copula in (i) is the possibility of agreement directly with the postcopular noun phrase, but follows if what is really at issue is the number specification of *what* and *all* (which are, however, specified for person).

Note however that even if the pronoun is third-person plural, plural agreement seems equally degraded:

(iii) What he saw behind him was/*were them/*they.

It is not obvious why this should be the case, although it might have to do with the morphologically marked non-nominative case of *them*.

The inclusion of nominals of the type discussed here, as well as examples that can be analysed as examples of the A' predicate fronting construction is very plausibly the reason for the surprisingly high proportion of NP2 agreement reported for English in the study of Berg (1998).

data so far it would be possible to conclude that the cross-linguistic generalisation is that in a copular sentence with two noun phrases the agreement is with the most fully specified noun phrase whose ϕ -features are available, on the widely held assumption that third person is less specified than first or second (see, for example, Harley and Ritter 2002). Crucially, this generalisation makes no reference to any notion of subject (and Heycock and Kroch 1999a provide some evidence from German of agreement with what is argued to be a pronoun used predicatively).

However, a wider look at agreement in copular sentences suggests that, in languages where NP2 agreement is possible, it is only found allied to specificational semantics. To see this, we need to consider the contrast between specificational sentences and sentences with what I will refer to as readings of ASSUMED IDENTITY.

In some languages it it possible to use a copular sentence with a final pronoun to express a meaning along the lines of "to be in the role of *pronoun*" or "to be in the place of *pronoun*", as in (17).

- (17) a. If I were you, I would leave now.
 - b. If you were me, what would you do?
 - c. I would love to be you!
 - d. In that game, I was you and you were me.

As documented in Sigurðsson (2006), some languages that generally have nominative on the postcopular pronoun in a specificational sentence may show accusative for assumed identity readings.⁴ Dutch is a case in point — contrast the specificational sentences in (18) with the assumed identity examples in (19):

- (18) a. Het enige slachtoffer hierin bent jij. the only victim herein be.PRES.2SG 2SG.NOM 'The only victim in this is you.'
 - b. Als het eniger slachtoffer hierin jij bent, waarom laat je ze if the only victim herein 2sg.Nom be.PRES.2sg, why let you them dan begaan? then be-go

^{&#}x27;If the only victim in this is you, why do you let them get away with it?'

⁴Sigurðsson (2006) does not make any explicit distinction between "predication" and "specification" in his discussion (which focusses on case rather than agreement); he treats the postcopular DP as the "predicate" in all cases. With respect to what I am calling the assumed identity reading, he implies a different generalisation, referring generally to "modal" and "conditional" contexts, presumably with examples like (17a–c) in mind. However in the context of Swedish he points out that the use of accusative may arise "where the predicative DP takes on the role of the subject DP, rather than its IDENTITY" (p. 17). While I am sure that there is a difference in meaning between the role-playing involved in games, the transposition of identities in dreams, and the hypothetical assumption of identity in conditions like "if I were you", I believe that they are all similar — and different from specificational sentences — in that the initial DP refers in the normal way, and that the modality and conditionality is not criterial per se for the distribution of case and agreement.

- (19) a. Als ik jou was zou ik meteen weggaan.
 if I.NOM 2SG.ACC be.PAST.SG would I immediately leave
 'If I were you I would leave immediately.'
 - b. Als jij mij was, wat zou je doen? if 2SG.NOM 1SG.ACC be.PAST.SG what would you do 'If you were me, what would you do?'
 - c. In mijn droom was ik jou, and jij was mij. in my dream be.PAST.SG 1SG.NOM 2SG.ACC and 2SG.NOM be.PAST.SG 1SG.ACC 'In my dream I was you and you were me.'

Not only does the case-marking here suggest that in assumed identity sentences the initial nominal is the subject and the postcopular nominal is not, this is also suggested by the discourse properties of these sentences, as discussed also in Heycock and Kroch (1999a). If there is a subsequent clause to these assumed identity sentences, it is natural for the subject to corefer with the initial DP in the copular clause, as already shown in (19a,b) and illustrated further in (20a,b). This is the opposite of what is found in specificational sentences, as shown in (18b) and (21):

- (20) a. I would love to be you so that I/#you could get to sit back in that fancy office and give orders.
 - b. In that game, I was you, so I/#you pretended not to recognise my mother.
- (21) If the next lottery winner turns out to be you, what will you/#he/#she/#it do with the money?

Since the postcopular pronoun is accusative in the assumed identity cases in (19)–(20), it is not surprising that the verb does not agree with it (of course we have to ask why just in this case the pronoun is accusative (Sigurðsson 2006)). However, in some NP2 agreement languages the postnominal pronoun is nominative even in this type of sentence: German, Icelandic, and Faroese fall into this category. Nevertheless, in all of these languages the verb agrees with the initial noun phrase in assumed identity sentences. The examples in (22), (23), and (24) show this in German, Icelandic, and Faroese respectively.

- - 'If I were you I would leave immediately.'

leave

- b. Wenn du ich wärest, was würdest du tun? if 2SG.NOM 1SG.NOM be.SUBJ.PAST.2SG what would you do 'If you were me, what would you do?'
- c. Ich meinte meine Frage mit dem Freund anders. Nämlich, wenn er I meant my question with the friend differently namely if 3sg.NoM du wäre, wie würde er sich dann verhalten.
 2sg.NoM be.subj.past.3sg how would he Refl then behave 'I meant my question about my friend differently. That is, if he were you, how would he behave?'

- (23) a. Ef ég væri þú, myndi ég fara strax. if 1SG.NOM be.SUBJ.PAST.1SG 2SG.NOM would I go immediately 'If I were you I would leave immediately.'
 - b. Ef þú værir ég, hvað myndir þú þá gera? if 2SG.NOM be.SUBJ.PAST.2SG 1SG.NOM what would you then do 'If you were me, what would you do?'
- (24) a. Vissi eg var tú ... if 1sg.nom be.past.1sg 2sg.nom 'If I were you ...'
 - b. Vissi tú varst eg ...
 if 2SG.NOM be.PAST.2SG 1SG.NOM
 'If you were me ...'

To sum up: in copular clauses that do not have a specificational reading, the verb does not agree with the postcopular noun phrase even if this is nominative, and regardless of its featural make-up, as evidenced by the switch between first-and second-person agreement in the (a) and (b) examples above (and in addition the third-person agreement illustrated for German in (22c). The agreement with the postcopular noun phrase in a specificational sentence therefore has to be accounted for in some other way, and the obvious conclusion is that it is in fact the subject of the sentence. This then seems a strong argument in favour of a predicate inversion analysis — at least, in the case of languages with NP2 agreement.

2.2 Focus

Although the argument is considerably more indirect, further evidence for an analysis of specificational sentences involving leftward movement of the noun phrase that surfaces in precopular position can be derived from their information structural properties.

It has frequently been stated in one form or another (see among others Higgins 1973, Heycock 1994a, den Dikken et al. 2000, Partee 2000, Heycock and Kroch 2002, Mikkelsen 2004) that basic specificational sentences are unusual compared to other sentences in English in that they have an information structure that is fixed in certain crucial ways. The kind of data at issue is illustrated in (25)–(28), where SMALL CAPS are used to indicate the locus of the pitch accent. First, we see that the same predicative copular sentence can be used felicitously in both (25) and (26):

- (25) A: Who was the culprit? (John or Bill?)
 - B: JOHN was the culprit.
- (26) A: What was John? (Was John the culprit or the victim?)
 - A': Tell me something about my cousin John and his role in the crime.
 - B: John/he was the CULPRIT.

In contrast, the specificational sentence is good in only one of these two contexts, where the accent is on the postcopular constituent.

- (27) A: Who was the culprit? (John or Bill?)
 - B: The culprit was JOHN.
- (28) A: What was John? (Was John the culprit or the victim?)
 - A': Tell me something about my cousin John and his role in the crime.
 - B: *The CULPRIT was John/him.

The varying possibilities of pitch accent location in (25)–(26) are the norm for English: these examples are directly comparable to (29)–(30):

- (29) A: Who checked the cockpit?
 - B: JOHN checked the cockpit.
- (30) A: What did John check?
 - B: John checked the COCKPIT.

Thus it cannot simply be said that the location of the pitch accent in the specificational sentence is due to the default rule for English. Given the flexibility of pitch accent assignment in English, what needs to be explained is the impossibility of (28).⁵

In Heycock and Kroch (2002) it is argued that specificational sentences obligatorily involve focus on one of the two elements because focus constitutes a type of λ -abstraction that makes it possible to incorporate the meanings contributed by two non-predicate noun phrases in the absence of any other predicate; as we will see, however, there are problems with assuming that both nominals are of the same type, and in addition it is not completely clear why focus should obligatorily fall on the second noun phrase, rather than be freely assigned to either.

In den Dikken (2006) it is argued that the only peculiarity of inverted sentences with respect to information structure is that focus cannot "project" from the post-copular nominal. I am not completely convinced that focus is necessarily narrow in

(i) Bill is convinced that the culprit in that old mystery was Duchamp. But I personally think that the VICTIM was Duchamp, while the culprit was some other guy entirely.

But it can be shown that *Duchamp* is in fact still the focus in the second sentence, even though its phonological prominence is reduced, as in cases of "second occurrence focus". In common with such cases, a pronominal in the postcopular position can be destressed, but not completely reduced:

- (ii) A: Was Jill the first woman to get to Mars?
 - B1: No; the first woman to come BACK was {her/*'er}
 - B2: No; they wouldn't TAKE {her/'er}.

Similarly, Mikkelsen (2011) argues that pronouns in postcopular position in specificational sentences in Danish need not show any prosodic prominence, but nevertheless cannot undergo object shift.

⁵Some might be sceptical about there being an absolute requirement that the second DP be the focus, in light of examples like (i):

specificational sentences. For example, it seems to me that while in (31a) the focus with which *only* associates is plausibly just the noun phrase *John*, in (31b) it is the entire clause *the director was John*.

- (31) a. I wasn't disappointed because there was a director, but only because the director was [FOCINE JOHN].
 - b. I wasn't disappointed because the company got off the ground, but only because [Focus the director was JOHN].

However, even if den Dikken is correct that the focus on the postcopular phrase does not project and that this can be derived from the fact that "the subject noun phrase of a Predicate Inversion construction is basically 'frozen' in the syntax" (p. 83), the same crucial question is left unanswered as was left unanswered in Heycock and Kroch (2002): why, given the generally free focus assignment in English, does focus have to be on the postcopular phrase at all? This may be the default placement of stress, but the peculiarity of these sentences is precisely the fact that in specificational sentences this placement of focus is not only "default" or "typical", but required.

Mikkelsen (2005) ties the information-structural properties of specificational sentences to their syntax by arguing that the predicate can only be attracted to Spec,TP across the structurally intervening subject if it has a feature that T can probe for and that the subject lacks: specifically, she argues that this feature is *Topic*. T in English is only optionally endowed with an unvalued Topic feature (since as discussed above, in general, subjects in English are free to be foci, for example), but only if it has this feature will the small clause predicate be able to be attracted to Spec,TP across the subject.

2.3 Inversion as scrambling

Since we briefly considered specificational sentences in German above, it is worth noting that Mikkelsen's proposal about the relation between the re-ordering of noun phrases in a specificational sentence and the restriction on focus placement is strongly reminiscent of the properties of scrambling. Since the work of Lenerz (1977) it has been known about German that there is a "default" order for arguments, one characteristic of which is that it is compatible with any focus assignment. Other orders are possible, but are only felicitous in contexts in which focal stress falls in the "default" position immediately before the verb. Thus (33a) can answer either (32a) or (32b), but (33b), in which the direct object has scrambled to the left, is acceptable only as an answer to (32a). That is, as Lenerz puts it: *Don't scramble focus*.

- (32) a. Wem hat Peter das Futter gegeben? who.DAT has Peter the.ACC food given 'Who has Peter given the food?'
 - b. Was hat Peter der Katze gegeben? what.ACC has Peter the.DAT cat given 'What has Peter given the cat?'

- (33) a. Peter hat der Katze das Futter gegeben.

 Peter has the.DAT cat the.ACC food given.

 'Peter has given the cat the food.'

 [Possible answer to (32a) or (32b)]
 - b. Peter hat das Futter der Katze gegeben.
 Peter has the ACC food the DAT cat given.
 'Peter has given the food (to) the cat.'

 [Only possible as answer to (32a)]

If we assume that specificational sentences are indeed underlyingly predications, and that in the underlying order the subject always precedes the predicate, then if we treat the operation by which the predicate moves past the subject of the small clause—in German at least—as essentially an instance of scrambling, the impossibility of focus on the fronted predicate will fall together with the impossibility of focus on any scrambled element.

There is a further parallel between the well-known cases of scrambling in German and the properties of specificational sentences. It has been argued in de Hoop (1992) and Diesing (1992) that indefinite scrambled noun phrases must be interpreted as "strong". To illustrate the distinction between strong and weak indefinites in English, consider the well-known generalisation due originally to Milsark (1974) that a weak indefinite cannot be the subject of an Individual-Level predicate, while a strong indefinite can. A number of different modifications can favour the "strong" reading, including the use of *one* rather than *a*, and/or modification by a relative clause.

- (34) I had been struggling with a complicated set of data ...
 - a. ?*A problem was particularly hard.
 - b. One problem was particularly hard.
 - c. {?A/one} problem that I came across right at the beginning was particularly hard.
 - d. One of the problems was particularly hard.

Now, observe that one of the still-to-be explained properties of specificational sentences is that the initial noun phrase too, while not necessarily definite, seems also to have to be at least a strong indefinite:

- (35) a. ?*A problem was that we didn't understand all the parameters.
 - b. One problem was that we didn't understand all the parameters.
 - c. {A/one} problem that I came across right at the beginning was that we didn't understand all the parameters.
 - d. One of the problems was that we didn't understand all the parameters.

This pattern was actually a problem for Mikkelsen's account. That account relies for a characterization of a possible topic (recall that for Mikkelsen the initial noun phrase in a specificational sentences is necessarily a topic) on Birner (1992), which examines the pragmatics of inversion in examples like (36):

(36) a. With the Nobel Peace Prize winner are Archbishop Francis Stafford, Mother Mary Thomas Beil and the Very Rev. Marcian O'Meare ...

- Listening to the pilots' excited voices were congressional leaders, cabinet officials and foreign advisors.
- More impressive to me was Tom Conti in the thankless role of Mr Lawrence, the audience's alter ego.

It is argued in Heycock and Kroch (1997), Heycock (1998), and Heycock and Kroch (1999b) that this kind of A' predicate-fronting does apply also to nominal predicates, but that it can be distinguished empirically from specification—and indeed Mikkelsen also maintains that the two are distinct—exactly because only the latter involves A-movement to Spec, TP. The problem for Mikkelsen's account is that the range of nominals that can front in the A' predicate-fronting construction is much wider than what is found in the initial position in specificational sentences, even setting aside all the nonnominals; that is, this analogy does not give us the right cut among noun phrases, the one category which Mikkelsen says can occupy Spec,TP. For example, the fact that only plural agreement is possible in (37) is diagnostic for the A' predicate-fronting construction—but what rules out an alternative analysis as a specificational sentence (which would allow singular agreement, as well as the hallmarks of occupancy of Spec,TP like inversion with the auxiliary)?

(37) a. Delinquency is a threat to our society. Also a threat {are/*is} factory closings and house repossessions.

b.*{Are/Is} also a threat to society factory closings?

Mikkelsen correctly points out the overrestrictiveness of earlier generalisations that indefinites were inadmissable as the initial DPs in predicate inversion constructions, and she cites a number of naturally occurring examples in her Chapter 8. It is not straightforward to interpret the examples, however, since we cannot be sure that they are not instances of the A' predicate-fronting construction. Mikkelsen does not offer a definitive analysis of what makes certain indefinite predicates better candidates for inversion than others, but suggests that it is important that they contain discourse-old material, typically within modifiers (since an indefinite is typically itself discourse-new). As she notes, however, that is not enough to explain why examples like (38B') are bad, given that *doctor* has been used predicatively in the previous clause (and here I have provided a context which also makes the predicate *being a doctor* a question under discussion, and hence maximally topical):

(38) A: Who around here is a doctor?

B: Bill is a doctor. John is a doctor, too.

B': Bill is a doctor. #A doctor is John, too.

As suggested above, the generalisation seems to be that it is not enough that the initial constituent in a specificational sentence is discourse-familiar; it must in addition be at least a strong indefinite, as is also the case for scrambled noun phrases.

(39) A: Who around here is a doctor?

B: One doctor is Bill; another is John.

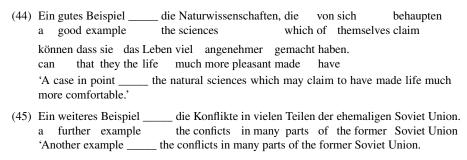
If we now consider German in the light of this conclusion that indefinite specificational subjects have to be strong, we can see that here at least, if we treat the inversion found in specificational sentences as an instance of scrambling, we predict not only the focus effect but also this otherwise unaccounted-for constraint on the initial constituent.

Before leaving German, it should be observed that examples like (40) demonstrate that in German, as Mikkelsen (2002) already showed elegantly for Danish, specificational sentences are not simply the result of V2, since the example in (40b) is a non-V2 subordinate clause.

- (40) a. Das grösste Problem sind deine Eltern. the biggest problem be.PRES.3PL your parents 'The biggest problem is your parents.'
 - b. Wir müssen etwas tun, weil das grösste Problem deine Eltern sind.
 we must something do because the biggest problem your parents be.PRES.3PL
 'We must do something, because the biggest problem is your parents.'

The NP2 agreement that is illustrated here is extremely consistent in German. Berg (1998) is an experimental study of agreement patterns in German and English. In this study, 46 native speakers of German and 57 native speakers of American English were presented with a series of sentences in their respective languages, and asked to fill in the blanks with any verb that they thought appropriate. The subjects were instructed that the experiment was about lexical choice, but the non-filler sentences were designed to determine what agreement choices would be made in a number of different cases. Included in these cases were five examples of copular sentences where the first noun phrase was (at least arguably) singular and the second plural. One was a pseudocleft, one began with a relative on *alles/all*, and the other two had "ordinary" noun phrases in initial position. The German sentences are given below; the translations are the sentences that the English-speaking subjects saw (these examples were given a surrounding context, omitted here).

(41)	Was mich interessiert, Operetten und Musicals, weil die what me interests operettas and musicals because they
	abwechslungsreicher und amüsanter sein können. more varied and more amusing be can 'What interests me more operettas and musicals which are more varied and amusing.'
(42)	Alles, was ich sehen konnte, diese beiden Augen, die von einer Baumkrone all what I see could these two eyes which from a tree top
	auf mich herab on me down
	'All I could see those two eyesing at me from the top of a tree.'
(43)	Ich glaube, die Unfallursache defekte Bremsen. I believe the cause of the accident defective brakes 'I understand the cause of the accident bad brakes.'



The results for these cases in German are summarised in Table 1.

Table 1: Summary of agreement in German from Berg's study

	Plural agreement		
what interests me	100%	(45/45)	
all I could see	98%	(45/46)	
the cause of the accident	88%	(41/46)	
a case in point	100%	(46/46)	
another example	100%	(45/45)	

The German figures in Table 1 show a very high degree of consensus in making the copula agree with the second noun phrase (although this consensus is somewhat weaker in the case of the example given above as (43)). The examples were all, however, main clauses, so it is not possible to exclude the possibility that the subjects interpreted them as topicalisations of predicates.

In a follow-up study, Fischer (2003) applied Berg's metholodogy to a comparison of German and Dutch specificational sentences. Fischer looked only at sentences where both noun phrases were definites with lexical heads (thus avoiding the complexities of including pseudoclefts); she also considered both main clause and subordinate clause contexts. She used eight different lexicalisations of the experimental stimuli (as well as a proportion of fillers, as in Berg's original study). Her results for German are summarised in Table 2; there were 41 German speakers (mainly undergraduate students from Hamburg and Heidelberg), but the numbers vary slightly because some responses were missing or irrelevant—for example, a verb other than the copula was chosen.

Fischer's results support the conclusion that agreement in German specificational sentences is unambiguously with the focussed noun phrase, and that we can account for specificational sentences just by an appeal to the availability of scrambling.

Some further circumstantial evidence for this conclusion can also be derived from a contrast between German and Dutch. Dutch is known to allow scrambling,

⁶In addition to looking at specificational sentences (with the order Singular DP-Plural DP), she also looked at subordinate clauses where the order was Plural DP-Singular DP; these figures are omitted here.

Table 2: Summary of agreement in German from Fischer's study

Clause type and order	Plural	al agreement		
Main: Sg–Pl Subordinate: Sg–Pl	89% 94%	(287/319) (303/321)		
Total	92%	(590/640)		

but of a more limited variety than German; for one, arguments do not scramble to the left of the subject, except in focus scrambling (Neeleman 1994). On the face of it, specificational sentences in Dutch appear to behave much as in German, with NP2 agreement in both main and embedded clauses.⁷ The following example (with the judgement) is from den Dikken (2006:96):

- (46) Ik geloof dat het grootste probleem de kinderen {zijn/*is}.
 - I believe that the biggest problem the children {are/*is}

However, it appears that speakers of Dutch are much less secure in their preferences than speakers of German. The study by Fischer (2003) cited above was in fact a parallel study of German and Dutch, with questionnaires filled in by 41 speakers of each language (the Dutch speakers were mainly undergraduates from Amsterdam). Table 2 gave the proportion of NP agreement produced by German speakers in a number of environments; in Table 3 these are repeated, but put together with the corresponding figures from the Dutch speakers.

It is immediately apparent from Table 3 that for the Dutch speakers there is much less convergence on NP2 agreement; in fact there are virtually equal proportions of NP1 and NP2 agreement (51% to 49%) in the responses. Fischer shows that there is variation within the responses for a given example, and also variation between the examples. Further, there is a significant amount of intraspeaker, as well as interspeaker, variation. Of the 41 German subjects, 11 gave only plural responses (NP2 agreement) and 12 more gave only one singular response; in contrast, there

^{&#}x27;I believe that the biggest problem is the children.'

⁷As pointed out in den Dikken (2006:280), in embedded clauses Dutch speakers typically reject specificational sentences with pronouns in the postnominal position, regardless of agreement. The same tendency seems to hold in German, although making the pronoun "heavier" by adding *selber/selbst* "self" seems to improve it; I have not yet been able to determine the degree of improvement, or the extent to which the same might be true of Dutch. Peter Ackema, who judged the example in (18b), repeated here as (i), to be grammatical, explicitly stated (personal communication) that he took it to be a case of "focus scrambling", and that the inclusion of *eniger* 'only' was crucial for its felicity.

⁽i) Als het eniger slachtoffer hierin jij bent, waarom laat je ze if the only victim herein 2SG.NOM be.PRES.2SG, why let you them dan begaan? then be-go

^{&#}x27;If the only victim in this is you, why do you let them get away with it?'

Table 3: Summary of agreement in German and Dutch from Fischer's study

Clause type and order	German plural		Dutch plural	
Main: Sg–Pl Subordinate: Sg–Pl	89% 94%	(287/319) (303/321)	38% 59%	(119/312) (189/319)
Total	92%	(590/640)	49%	(308/631)

were no Dutch respondents who consistently used only singular or plural agreement. Furthermore, Fischer reports that the Dutch respondents also changed their answers more than the German subjects (there were 31 changed responses by the Dutch subjects, 4 by the Germans), and Dutch subjects were more likely than German subjects to specifically mention the copular cases in discussion afterwards (the questionnaire contained a range of fillers in addition to the copular clauses at issue), and to report that they had a hard time deciding which form was "correct". While the situation in Dutch clearly merits further research, the much reduced acceptability of NP2 agreement in Dutch compared to German is consistent with the very restricted type of scrambling that is found in the former compared to the latter, if we treat "inversion" in specificational sentences in these languages as a subcase of scrambling.

3. PROBLEMS FOR PREDICATIVE INVERSION ANALYSES

So far, so good. There is, however, one aspect of the assimilation of specificational sentences in a language like German to scrambling that should give us pause. We saw above that the generalisation about initial noun phrases in specificational sentences was that, just like scrambled noun phrases (or the subjects of individual-level predicates), they have to be strong. But it is hard to know how to interpret this under the assumption that these noun phrases are predicates. Predicates are typically analysed as not having quantificational force, possibly because they lack the necessarily internal structure (Zamparelli 2000). The concept of a strong indefinite *argument* is relatively well understood, but it is not at all clear how to interpret the concept of a strong *predicate*. As I will argue below, the same underlying issue — the fact that the initial noun phrase exhibits properties that are associated with arguments, rather than with predicates — manifests itself in some other ways as well.

3.1 Not all predicates are equational, but some are more equational than others

One of the principal objections raised in Heycock and Kroch (1999b) against the predicate-inversion analysis is that the only kind of predicates that seem to be able to invert are those which can be interpreted as being equated with their subjects. As a first pass, we might contrast for example (47a) with (48a):

- (47) How did the candidates line up?
 - a. Was Laura best?
 - b. Was Laura the best?

- (48) How did the candidates line up?
 - a.*Was best Laura?
 - b. Was the best Laura?

Mikkelsen proposed to exclude cases like (48a) on the basis of category: only noun phrases can occupy Spec,TP. Even this however will not address the cases discussed in Heycock and Kroch (1999b) where the purported fronted predicate is a definite nominal. Crucial examples are the type given in (49)–(52). In (49) and (50) the predicates have the form of definite noun phrases — but they still cannot be inverted to form acceptable specificational sentences, as shown in (51) and (52).

- (49) John is the one thing that I want a man to be honest.
- (50) A: There are sympathetic nurses and callous nurses; which kind of nurse is Mary?
 - B: Mary is the first kind of nurse.
- (51) *The one thing that I want a man to be honest is John.
- (52) A: There are sympathetic nurses and callous nurses; give me an example of the second kind of nurse.
 - B: MARY is the second kind of nurse.
 - B':*The second kind of nurse is MARY.

Note that the context in (52) is set up to make *the second kind of nurse* topical, and hence qualified to move to Spec,TP under Mikkelsen's assumptions. The failure to invert shown in (51)–(52) contrasts minimally with (53)–(54):

- (53) a. Honest is the one thing that I want a man to be.
 - b. The one thing that I want a man to be is honest.
- (54) There are two kinds of nurse.
 - a. The hospital nurse is the first kind of nurse I want to mention. The community nurse is the second kind of nurse.
 - b. The first kind of nurse I want to mention is the hospital nurse. The second kind of nurse is the community nurse.

It is argued in Heycock and Kroch (1999b) that what we are seeing here are cases where predicational and equational uses of a definite noun phrase are clearly distinct. The nominal *the one thing that I want a man to be* is built around a relative with a gap in predicative position. It is therefore expected that it can function as a predicate, and take a subject argument, as it does in section 3.1. Alternatively, it can be equated with another predicate, as in (53a,b). The natural assumption is that this is just parallel to what happens when we have a nominal built around a relative with a gap in an argument position, which of course can function as an argument, and be equated with another nominal:

- (55) a. I put the one thing that I bought on the table.
 - b. The one thing that I bought is (also) the one thing that he bought.

The crucial point of course is that the equation in (53a) can be "reversed", but the predication, as shown in (51) and (52) quite clearly cannot. So these sentences pose a serious problem for predicate inversion analyses, as they suggest strongly that the real generalisation is that genuinely predicative copular constructions *cannot* invert. In all cases where this appears to be the case, there is an equative reading available; if that kind of reading is excluded, the result of inversion is simply ungrammatical.

3.2 Pronominalisation

A further problem for the proposal that the initial noun phrase is a predicate is posed by the way in which this phrase pronominalises. This may seem surprising, since the pronominalisation of the initial noun phrase has been argued — most extensively in Mikkelsen (2005) — specifically to support the predicate inversion analysis.

A number of resesarchers have observed that reference back to the subject of a specificational sentence in English is done with the singular neuter pronoun *it* rather than with the expected gendered pronoun (Büring 1998; Heycock and Kroch 1999a, 2002; Mikkelsen 2002, 2004, 2005):

- (56) a. Ahab is the best man for the job, isn't he/*it?
 - b. The best man for the job is Ahab, isn't *he/it?

Büring's solution for the German equivalent of these specificational cases is that the neuter pronoun is the expletive found in cleft sentences, so that when it occurs we are really dealing with an elliptical cleft:

(57) The culprit wasn't the private, it was the general who was the culprit.

This analysis does not really extend to English, however, as argued also in Mikkelsen (2002, 2004, 2005). In (56b) the neuter pronoun occurs as the tag to a specificational sentence. On standard assumptions the pronoun in the tag is anaphoric to the subject of the clause (here *the best man for the job*). If we somehow allow ellipsis of an entire cleft here, as in (58a), we will have to explain why it is excluded in other examples like (58b):

(58) a. The best man for the job is AHAB, isn't it Ahab that is the best man for the job? b.*She plans to interview AHAB, isn't it Ahab that she plans to interview?

Further, in English *it*-clefts are perfectly possible with plural foci; the agreement on the copula is invariably singular:

- (59) a. It was/*were Jennifer and Laura who were the best students.
 - b. It was/*were Jennifer and Laura who won.

An analysis in terms of an elliptical *it*-cleft would then predict that (60a) should be grammatical. But this is clearly wrong; the contrast with a tag question actually based on a cleft, such as (60b), is very sharp.

(60) a. *The best students were Jennifer and Laura, wasn't it Jennifer and Laura who were the best students?

b. It was Jennifer and Laura who were the best students, wasn't it Jennifer and Laura who were the best students?

Thus for English at least, while it is quite likely that some sentences of the form $it \dots be \dots NP$ are reduced clefts, some clearly are not; so it seems that the neuter pronoun that occurs in subject position is not the expletive of a cleft.

Under the predicate inversion analysis an alternative explanation is available, as argued extensively in Mikkelsen (2002, 2004, 2005). By hypothesis, the precopular noun phrase in a specificational sentence is a predicate nominal. There is clear evidence from all the languages that we are currently considering that a predicate nominal does not have agreement features (ϕ -features), and therefore cannot be referred to by a gendered pronoun, as in (61a): this then explains the ungrammaticality of the gendered tag in a specificational sentence like (61b):⁸

- (61) a. *Yesterday Rina was the night nurse on duty, but tonight Hannah will be her.
 - b. ?*Tonight the night nurse on duty will be Rina, won't she?

In fact, Partee (1986:360) suggested that the possibility of using *that* as the subject of specificational sentences even when the focus is an animate—a pattern pointed out in Higgins (1973)—is to be explained by the hypothesis that *that* can be a predicate. Mikkelsen is essentially extending this argument to *it*.

The failure of gendered pronouns as subjects of specificational sentences is indeed a strong argument against an equative analysis that would treat a sentence like *The culprit is John* as the equation of two entities of type *e*. However, this pronominalisation also seems to be distinct from what we find with clear cases of predicates, in that a plural initial "predicate" in a specificational sentence not only licenses but actually requires *plural* anaphora, a pattern that is not attested for predicates otherwise in any of the languages investigated.

Thus it is well known that the kind of pronominal predicate clitics found for example in the Romance languages are always morphologically singular, as well as in the unmarked gender (in Romance, masculine). And indeed we find this also with *that* and *it* when they appear in predicative position:

- (62) A: Sarah and Justin are her greatest friends, aren't they?
 - B: That/*those they are.
 - B': They are that/*those.
- (63) B': They are real geniuses, even though they don't look {it/*them}.

This observation might then be taken as further support for the analysis of *that* as a pro-predicate in examples like (64); the possibility of *those* might be due to the possibility of taking the sentence as an equation of individuals (given a proposal which allows equatives as a separate type of sentence):

⁸It remains unclear however why *it* is not much better:

⁽i) Yesterday Rina was the night nurse on duty, but tonight Hannah will be {?*it/?? that/Ø.}

- (64) A: Who are those people over there?
 - B: {That is /?those are} my cousin Jane and my great-aunt Kitty.

But this argument cuts the other way for *it*: in initial position *it* cannot pronominalise a plural "inverted predicate", so anaphoric reference back to the specificational subject in (65a) contasts sharply with anaphoric reference to the predicate in (65b).

- (65) a. *Her greatest friends are Justin and Sarah, {isn't/aren't} it?
 - b. Justin and Sarah are her greatest friends, even if they don't look it.

The impossibility of singular anaphora in a case like (65a), contrasting starkly with the pattern in the "canonical" predicative sentence, is therefore an argument against treating *her greatest friends* as a predicate in the specificational sentence.

4. EQUATION AND INTENSIONALITY

To summarise: So far we have seen that there is good evidence that in at least some languages specificational sentences involve "inversion" in the sense that the postcopular noun phrase is both the subject of a small clause and the subject of the sentence. We have also seen that the precopular noun phrase doesn't behave as though it refers to an <e> type individual—but nor does it behave like a predicate. As it turns out, Maribel Romero has provided an alternative possiblity for the precopular noun phrase (Romero 2005): she argues that it is an intensional object, of the same type that occurs also in concealed questions:

- (66) a. They knew/guessed/announced the winner.
 - b. The winner was Julia.

Romero's principal evidence for this assimilation is that both constructions show the same ambiguity, between what she calls *Type A* and *Type B* readings. These readings for concealed questions, originally due to Heim (1979), are given in (68)–(69) (Romero 2005:694–695).

(67) John knows the price that Fred knows.

- (i) A: Who are her greatest friends?
 - B: ?I think it is Justin and Sarah who are her greatest friends.

Example (i) can be compared to (ii), where a reduced cleft is the only plausible analysis:

- (ii) A: Who left?
 - B: I think it was Justin and Sarah who left.

The *it* in these reduced clefts is sometimes analysed as an inverted predicate; this of course makes the contrast just discussed even more mysterious.

 $^{^{9}}$ I use *it* in the tag position in order to avoid the possibility of taking it to be the expletive in a reduced cleft—a possibility that explains the contrast between (65a) and (i).

(68) Reading A: "John knows the same price that Fred knows."

There are several relevant questions about prices:

"How much does the milk cost?"

"How much does the oil cost?"

"How much does the ham cost?"

Fred knows the answer to exactly one of these questions, e.g., to the first one. John knows the answer to this question, too.

(69) Reading B: "John knows what price Fred knows."

There are several relevant questions about prices:

"How much does the milk cost?"

"How much does the oil cost?"

"How much does the ham cost?"

Fred knows the answer to exactly one of these questions, e.g., to the first one.

Then there is the "meta-question" asking which of these questions is the one whose answer Fred knows. John knows the answer to the meta-question. That is, John knows that the question about prices whose answer Fred knows is "How much does the milk cost?"

The parallel ambiguity in specificational sentences is given in (70)–(71).

- (70) a. The price that Fred thought was \$1.29 was (actually) \$1.79.
 - b. *Reading A*: "The question whose answer Fred thought was '\$1.29' has as its real answer '\$1.79' ".

There are several relevant questions about prices:

"How much does the milk cost?"

"How much does the oil cost?"

"How much does the ham cost?"

For one of these questions—e.g., the first one—Fred thought the answer was "\$1.29". But the actual answer to this question is "\$1.79".

- (71) a. The price that Fred thought was \$1.29 was the price of milk.
 - b. *Reading B*: "The question the answer to which Fred thought was '\$1.29' is 'How much does the milk cost?' "There are several relevant questions about prices:

"How much does the milk cost?"

"How much does the oil cost?"

"How much does the ham cost?"

For one of these questions, Fred thought the answer was "\$1.29".

Then, there is the "meta-question", asking which of these questions is the one whose answer Fred thought was "\$1.29". The answer to the meta-question is "How much does the milk cost?".

Romero explains these ambiguities by allowing *know* and *be* to take either the intension or the extension of the NP headed by *price* as first (*know*) or second (*be*) argument. That is, *price* has the meaning in (72), *know* has the two translations in (73), and *be* correspondingly the two translations in (74).

- (72) [[price]] $(\underline{x} < s.e >)$ (w) = 1 iff price (\underline{x}, w)
- (73) a. $[[know_1]] (\underline{x}_{\langle s,e \rangle})(z)(w) = 1 \text{ iff } \forall w'' \in Dox_z(w) [\underline{x}(w'') = \underline{x}(w')]$
 - b. $[[know_2]] (\underline{x}_{\leq s \leq s})(z)(w) = 1 \text{ iff } \forall w'' \in Dox_z(w) [\underline{x}(w'') = \underline{x}(w')]$
- (74) a. $[Be_1, spec]$: $\lambda x_{< e} > \lambda y_{< s,e} > \lambda w_s \cdot \underline{y}(w) = \underline{x}$
 - b. $[Be_2,spec]$: $\lambda x_{\langle s,e \rangle} \lambda y_{\langle s,\langle s,e \rangle \rangle} \lambda w_s \underline{y}(w) = \underline{x}$

Here we will not be so concerned with this particular ambiguity (for an exposition of how the different meanings are derived, the reader is referred to Romero 2005). In Importantly for the concerns that have been raised above concerning the type of the precopular noun phrase in a specificational sentence, however, Romero points out that singular noun phrases with concealed question interpretations pronominalise with the neuter pronoun (p. 721):

(75) John guessed the winner of the Oscar for best actress before I guessed {it/*her}.

And, although Romero does not mention this, unlike predicates but like specificational subjects, plural concealed questions pronominalise with plural pronouns:

(76) John guessed the winners before I guessed {*it/them}.

Romero is concerned above all with the semantics of specificational sentences. If we were to adopt her proposal as is, we would have an explanation for the pronominalisation pattern in specificational sentences, but no account of their information-structural properties or agreement patterns. Also, there are various reasons for not wanting to treat *be* as a transitive verb, including the existence of specificational small clauses (Heycock 1994a). In order to retain the advantages of the inversion account, what we need to do is to assume the existence of a functional category heading a small clause (similar to proposals stemming from Bowers 1993), whose semantics are identical to those given by Romero to specificational *be*, except that it is the complement of this head F, rather than its specifier, that provides the intensional object:

(77) a. [[F₁]]:
$$\lambda x_{\langle s,e \rangle} \lambda y_e \lambda w_s \underline{x}(w) = y$$

b. [[F₂]]: $\lambda x_{\langle s,\langle s,e \rangle} \lambda y_{\langle s,e \rangle} \lambda w_s \underline{x}(w) = \underline{y}$

- (i) The police have a number of unsolved murders on their books.
 - a. They thought that the murderer in the St. Leonard's case was Banks, but in the end it turned out to be Mankell, didn't it?
 - b.*The murderer that they initially thought was Banks in the end turned out to be Mankell, didn't it?

Nevertheless, Romero goes to some lengths to demonstrate that the sentences that she is analysing are in fact specificational (2005:712–714). I leave the contrast between her examples and cases such as (i) as a matter for further research.

¹⁰One puzzle here is why the relative clauses in (70) and (71) are grammatical at all, given that generally specificational sentences appear not to allow extraction of either of their arguments, and hence cannot be the basis for relative clauses. If for example we try constructing parallel examples with animate foci the results seem very degraded:

Hence the surface order of specificational sentences will still be the result of "inversion" — that is, the complement of F moves to the left in a specificational sentence, past its specifier.

```
(78) The winners<sub>i</sub> are [_{FP}Laura and Jennifer [_{F'} Ø_{F} t_{i}]]
```

Thus, under this analysis specificational sentences are a kind of "inverted equative", but crucially there is an asymmetry in the arguments that are equated, with the "more intensional" argument always being merged as the complement to F and hence only being able to occur in precopular position as the result of movement.¹¹

5. AGREEMENT IN SPECIFICATIONAL SENTENCES REVISITED

Having arrived at this analysis of inverted equatives, we can now return to the question of agreement.

5.1 Consistent agreement: German and English

What, then, is the mechanism of "inversion"? That is, how does the complement to F get to move to the left of its specifier? In the case of German, it was argued above that we do not need to invoke any mechanism beyond scrambling (for now I will remain agnostic as to exactly how scrambling should be analysed). But this won't do for English, which doesn't have scrambling. And, as we have seen, the agreement facts are also quite different than they are in German.

For English I propose that the "inversion" is accomplished essentially as described in den Dikken (2006). FP is the complement to the copula, which in turn heads a complement to T. Although the specifier of FP would normally intervene, and prevent the complement from being attracted to the higher specifier, I assume movement of F to the copula, which renders the relevant positions equidistant and hence makes movement of the complement to F possible:

```
    (79) [be+F [<sub>FP</sub> Laura t<sub>F</sub> [the winner]]]
    a. [Laura<sub>i</sub> F+be [<sub>FP</sub> t<sub>i</sub> t<sub>F</sub> [the winner]]]
    b. [the winner<sub>i</sub> F+be [<sub>FP</sub> Laura t<sub>F</sub> t<sub>i</sub>]]
```

The noun phrase that reaches the specifier position of *be* is now the closest to the T head, with which it enters an Agree relation that triggers morphological agreement (in the case of a finite T), and the noun phrase then moves to Spec,T:

```
(80) a. [_{TP} Laura_i [F+be+T [t_i t_{be} [[_{FP} t_i t_F [the winner]]]]]]]
b. [_{TP} the winner_i [F+be+T [t_i t_{be} [[_{FP} Laura t_F t_i]]]]]]
```

¹¹It should be noted that since, as we have seen above, actual predicates do not "invert", this mechanism must *not* be available for predicates of ordinary small clauses. One possibility is that such small clauses do not have a distinct predicative head at all, since they are built around constituents that are already predicates (*contra* the proposal of Bowers (1993), for whom a predicative head is required in order to produce a predicative category from its individual correlate).

But this still leaves us with the case of Faroese, which seems to show Germantype NP2 agreement, but does not allow scrambling and hence might be expected to behave instead like English. As it turns out, the facts in Faroese are actually more complex than initially appears.

5.2 Variable agreement: Faroese

In order to investigate agreement in specificational sentences in Faroese, I gathered data through a "fill-in-the-blanks" exercise similar to that used in Berg's and Fischer's studies of English, German, and Dutch (Berg 1998, Fischer 2003). The questionnaires were designed to elicit singular or plural agreement in specificational copular sentences where the first noun phrase was singular and the second plural (disagreement in person was not tested for). As in Berg's and Fischer's studies, the native speaker participants were asked to fill in the blanks in a series of sentences, some with a certain amount of context given; they were instructed that there was no right or wrong way to fill in these blanks, but that we were just interested in what words they felt fit best.

There were six different structures tested:

(i)	Main clause: NP1 NP2
	Main clause, intervening adverb: NP1 Adv NP2
	Main clause, Topic (Adjunct) Initial: Adjunct NP1 NP2
	Main clause, modal: NP1 be.INF NP2
	Embedded question: whether NP1 NP2
	Embedded question, modal: whether NP1 be.INF NP2
Exam	ples of these structures are as follows:
(81)	 a. Orsøkin til eldin tey brennandi kertiljósini í stovuni. cause.DEF of fire.DEF the burning candles.DEF in room.DEF 'The cause of the fire the burning candles in the living room.'
	 b. Orsøkin til eldin kanska tey brennandi kertiljósini í stovuni. cause.DEF of fire.DEF perhaps the burning candles.DEF in room.DEF 'The cause of the fire perhaps the burning candles in the living room.'
	c. Eftir mínari meining orsøkin til eldin tey brennandi kertiljósini after my opinion cause.DEF of fire.DEF the burning candles.DEF
	í stovuni. in room.DEF
	'In my opinion, the cause of the fire the burning candles in the living room.'
	d. Orsøkin til eldin hava verið tey brennandi kertiljósini í stovuni. cause.DEF of fire.DEF have.INF been the burning candles.DEF in room.DEF 'The cause of the fire have been the burning candles in the living room.'

e. Fyrst spurdi hann, um orsøkin til eldin ____ tey brennandi kertiljósini first asked he if cause.DEF of fire.DEF the burning candles.DEF í stovuni.
in room.DEF

'First he asked if the cause of the fire ____ the burning candles in the living room.'

f. Fyrst spurdi hann, um orsøkin til eldin ___ hava verið tey brennandi first asked he if cause.DEF of fire.DEF have.INF been the burning kertiljósini í stovuni. candles.DEF in room.DEF 'First he asked if the cause of the fire ___ have been the burning candles in the living room.'

Six different lexicalisations were used, in a Latin square design, so that there were six different variants of the questionnaire, each with one example of each of the structures above, but with a different lexicalisation for each example. The questionnaires were filled in by 51 speakers, from four different localities. For details of the lexicalisations, and further details about the material and methodology, the reader is referred to Heycock (2009).

Twelve speakers were invariant, always using NP1 agreement (the English pattern). If we set those speakers aside for the present, and also the data from one of the lexicalisations that contrasted with the others in strongly favouring NP1 agreement, the pattern of responses can be summarised as in Table 4.

	Table 4: Agreement with	n NP1 or NP2: variable	speakers	, Lexicalisation 4	1 excluded
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Structure	NP1	NP2	% NP2
Main clause: NP be NP	12	32	73%
Main clause: NP be Adv NP	8	14	64%
Main clause: Adjunct be NP NP	33	1	3%
Main clause: NP Modal be NP	20	1	5%
Wh-clause: if NP be NP	11	17	61%
Wh-clause: if NP Modal be NP	22	1	4%
Total	106	66	38%

What Table 4 suggests is that three contexts strongly — but not categorically — favour NP2 (plural) agreement: NP1 be NP2, in both main clause and embedded wh-clause, and NP1 be Adverb NP2 (tested only in main clause). The remaining three contexts almost categorically require NP1 (singular) agreement: NP1 Modal be NP2, in both main clause and embedded wh-clause, and Adjunct be NP1 NP2. While the first context still appears to favour NP2 agreement most strongly, there is in fact no significant difference between the three favouring contexts (($\chi^2(2, N = 94) = 1.27, ns$). Thus it seems that there are three contexts which essentially show only NP1 agreement, and three which favour (but do not require) NP2 agreement.

Let us first consider how we might explain the possibility of NP2 agreement in this language without scrambling. We must allow the complement of F to move past

its specifier — but nevertheless it is the specifier that seems to be the closest to T for the purposes of morphological agreement. A possible account of this is that *be* can lexicalise T directly. That is to say, that the structure of a copular sentence can be schematised as (82b), rather than (82a):

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(82) a. [_{TP} T [_{VP} be [_{FP} XP F YP]]]
b. [_{TP} be [_{FP} XP F YP]]
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In this case, assuming again that F moves to be, XP and YP are again equidistant and hence equally able to move to Spec,TP. However, I assume that morphological agreement is established in a strictly local relation between a head and an element in its c-command domain, so that whatever moves to Spec,TP, in this configuration agreement can only be between T and the specifier of FP (NP2 agreement).

(83)
$$[TP YP_i F+be(T)_{\phi} [FP XP_{\phi} t_F t_i]]$$

Clearly this option must not be available in English, or we would also find NP2 agreement here. One could simply stipulate that English *be* does not lexicalise T, but a more explanatory account is to relate this difference to differences in the status of Spec,TP in the two languages.

It appears that in certain circumstances Faroese allows Spec,TP to remain empty (or to contain a null expletive, depending on the analysis); if there is a subject that remains *in situ* in a lower position, the verb agrees with it. The examples in (84) from Thráinsson et al. (2004) show that Spec,TP may remain empty in Faroese, this possibility alternating with an overt expletive:¹²

- (84) a. Er (tað) skilagott at koyra við summardekkum um veturin? is (it) sensible to drive with summer tires in winter.DEF 'Is it sensible to use summer tires in the winter?'
 - b. Í gjárkvøldið bleiv (tað) dansað í havanum. last night became (it) danced in garden.DEF 'Last night there was dancing in the garden.'

- (i) a. Sjálvandi er tað/*pro gott, at tú kom. of course is it/*pro good that you came 'Of course it's good that you came.'
 - Í dag er tað/*pro komin ein drongur. today is it/*pro come a boy.
 'Today there came a boy.'

These judgements are clearly in conflict with those reported in Thráinsson et al. (2004). Although variation in this area has been noted, less empirical work has been done on this phenomenon so far than on the position of the finite verb.

¹²Vikner (1995), whose position on this is adopted also in Rohrbacher (1999), takes a different view of this aspect of the language, stating (p. 118) that "Faroese has no empty expletives", while conceding that it does allow the "quasi-argumental null subjects" found in weather-verb clauses. The data given in support of this position are the examples in (i) (Vikner's (15c,d) from Chapter 7 (glosses and translations not in the original):

And the example in (85) shows agreement with a postverbal subject, Spec,TP having again the possibility of remaining empty at least of phonological material:

(85) Eru (tað) komnir nakrir gestir úr Íslandi? are (it) come any guests from Iceland? 'Have any guests come from Iceland?'

Further, the existence of stylistic fronting in Faroese demonstrates that Spec,TP can host a nonsubject. In addition to cases where the subject gap is the result of A'-movement of an external argument, stylistic fronting is to some extent acceptable where there is a "low" subject; apparently less so in impersonal constructions (Barnes 1987).

- (86) a. Eg eti ikki kjøtin, um *(nakrantíð) hava verið mýs í hjallinum. I eat not meat.DEF if *(ever) have been mice in storeroom.DEF 'I won't eat the meat if there have ever been mice in the storeroom.'
 - b. Prestur harmaðist, um farið varð í dans hvørt leygarkvøld.
 minister regretted if gone was to dance every Saturday night
 'The minister was sorry if people went out dancing every Saturday night.'

The existence of stylistic fronting is evidence, then, that Spec,TP in Faroese can be occupied by an element other than the one that the verb agrees with. In English, on the other hand, it appears that access to Spec,TP is tied to agreement: T probes for a noun phrase with ϕ -features and the same item has to move to Spec,TP. This will then rule out the kind of configuration in (83), repeated here as (87):

(87)
$$[_{TP} YP_i F+be(T)_{\phi} [_{FP} XP_{\phi} t_F t_i]]$$

Faroese must of course also allow the copula to lexicalise a lower head (here I will just assume it is some type of verbal head, without being specific as to whether it heads a distinct type of functional projection), since it can also occur below a modal. Observe, however, that in this case the "inverse", specificational, order will again require that the complement to F move first to Spec,VP:

- (88) a. [TP] the burning candles may [TP] the [TP] the cause of the fire [TP]
 - b. [TP] [the cause of the fire]; may [VP] ti F+be [TP] the burning candles [TP] the burning c

In this case the NP that T locally c-commands is the (singular) moved complement to F. Thus we correctly derive that in this case Faroese also requires agreement with the NP that eventually surfaces in the precopular position (NP1 agreement); see Table $4.^{13}$

¹³The same does not appear to be true in German, underlining the necessity of a different analysis for this language (Beatrice Santorini, personal communication):

⁽i) a. Das Problem müssen/*muß deine Eltern sein. the problem must.PRES.3PL/must.PRES.SG your parents be 'The problem must be your parents.'

b. Das Problem dürfen/*dürfte deine Eltern sein. the problem should.3PL/should.3SG your parents be 'The problem is likely to be your parents.'

(89) [TP [the cause of the fire] $_{\phi}$ may ϕ [VP t_{ϕ} F+be [FP the burning candles $t_{F} t_{\phi}$]]]

It should be noted that there is evidence that what we are seeing in these cases is indeed agreement with NP1, and not just some default singular agreement. As has just been discussed, when the copula occurs below a modal, agreement with NP2 is blocked. Nevertheless, in sentences like (90a,b) the modal has to take plural agreement:¹⁴

```
(90) a. Hennara yndishøvundar {*man/munnu} vera
her favourite authors {*may.PRES.3SG/may.PRES.PL} be
Heinesen og Kamban.
Heinesen and Kamban
'Her favourite authors may be Heinesen and Kamban.'
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b. Hann spurdi meg, um hennara yndishøvundar {*mundi/mundu} he asked me if her favourite authors {*may.PAST.SG/may.PAST.PL} vera Heinesen og Kamban. be Heinesen and Kamban

'He asked me if her favourite authors might be Heinesen and Kamban.'

The same is true in the sentence type *Topic/Adjunct be NP1 NP2*, which as indicated above (and will be discussed below) also does not seem to allow NP2 agreement in Faroese:

```
(91) Mær vitandi {*er/eru} hennara yndishøvundar to my knowledge {*be.PRES.3SG/be.PRES.PL} her favourite authors Heinesen og Kamban.
Heinesen and Kamban
'As far as I know, her favourite authors are Heinesen and Kamban.'
```

Since we have evidence that in these structures agreement with NP2 (*Heinesen og Kamban*) is blocked, the plural agreement that is nevertheless required must be triggered by NP1. Thus when NP2 agreement does not occur in Faroese, what we get instead is agreement with the first noun phrase, just as we find throughout in English.

I have argued, then, that NP2 agreement in Faroese is possible just when the subject of the small clause FP is local to T, and can occur because Faroese is a language in which occupancy of Spec,TP is not tied to agreement (this latter being essentially the proposal that Moro made concerning NP2 agreement in Italian). It is known that the availability of Spec,TP for stylistic fronting in Faroese, as well as the possibility of this position remaining "empty", is one of the aspects of Faroese syntax that is undergoing a diachronic change. Thus, for example, while Thráinsson et al. (2004) cite (84)–(85) as grammatical with or without the overt expletive, and similar examples can be found in newspapers and other current texts, Vikner (1995) claims that the variant without the overt expletive is ungrammatical for younger speakers, as noted above. Similarly, Petersen (2000) argues that younger speakers (in the context

¹⁴Thanks to Zakaris Svabo Hansen and Victoria Absalonsen for the translations and judgements.

of his article, roughly those born after 1980) do not have stylistic fronting as part of their vernacular, and accept it only via their knowledge of written norms. Given that under the analysis proposed here, the possibility of NP2 agreement in Faroese is tied to the availability of Spec,TP for elements with which the verb shows no agreement, we can see the less than 100% production of NP2 agreement even in the favouring environments as a reflex of this same change—as well as the behaviour of the speakers who never produced NP2 agreement at all.¹⁵

We now therefore have an account of the availability of NP2 agreement in Faroese, its restriction to cases where *be* is finite, and the fact that it alternates with NP1 agreement both within and between speakers. What still remains to be explained is the apparently near-categorical preference for NP1 agreement in contexts where a nonsubject XP occupies Spec,CP so that the verb now precedes both NP1 and NP2. That is, as was shown in Table 4, in the questionnaire study only one out of 33 responses for examples like (92) had plural (NP2) agreement:

(92) Eftir mínari meining var/vóru orsøkin til eldin tey brennandi in my opinion be.PAST.3SG/were.PAST.PL cause.DEF to fire.DEF the burning kertiljósini í stovuni. candles.DEF in room.DEF 'In my opinion the cause of the fire was/were the burning candles in the living room.'

What this pattern seems to show is that when the finite verb moves from T, it establishes agreement from its highest position: that is, the morphology on the verb here does not reflect agreement between T and the closest noun phrase c-commanded by T in its position of first merge (NP2 agreement), but rather between T and the noun phrase in Spec,TP:

(93)
$$[_{CP} ZP F+be(T)_{\phi} [_{TP} YP_{\phi} t_{T} [_{FP} XP t_{F} t_{\phi}]]]$$

Of course, whenever the copula lexicalises a verbal head rather than T (as we have hypothesised must be an option in Faroese), the relation between the finite verb in C and the noun phrase in Spec,TP will also duplicate the relations that held between T and Spec,VP, so such a derivation will always produce NP1 agreement.

6. CONCLUSION

In this article I have argued for maintaining the proposal in Heycock and Kroch (1999b) that specificational sentences are equatives, but for adopting the analysis of Romero (2005) that makes this an "asymmetric" equation, in that the noun phrase that occurs in initial position is interpreted as a "more intensional" object than the postcopular noun phrase. This makes it possible to retain the insight of Williams (1983), Heggie (1988), Moro (1990, 1997, 2000), Heycock (1994b), den Dikken (1995, 1997, 1998, 2006), Mikkelsen (2002, 2005) that these sentences involve "inversion" of the two noun phrases, without forcing the conclusion that the precopular

¹⁵Clearly this predicts that if there is variability between speakers as to the extent to which they accept/produce stylistic fronting, this should correlate with the acceptance/production of NP2 agreement. Testing this prediction remains for future research.

noun phrase denotes a predicate—a conclusion, I have claimed, that makes incorrect empirical predictions about the range of elements that can occur in precopular position, as well as about possible and impossible pronominalisations. As part of the argument I have introduced new data from a number of Germanic languages, contrasting them with English, and argued that the differing agreement patterns they display can shed light on the syntax of these apparently simple yet actually complex sentences.

REFERENCES

Alsina, Alex. 2003. La inversión copulativa. Talk given at Universitat Pompeu Fabra, February 2003.

Barnes, Michael P. 1987. Some remarks on subordinate-clause word-order in Faroese. *Scripta Islandica* 38:3–35. Reprinted in Barnes 2001.

Barnes, Michael P. 2001. *Faroese language studies*. No. 5 in Studia Nordica. Tórshavn: Føroya Fróskaparfelag and Novus Forlag.

Berg, Thomas. 1998. The resolution of number conflicts in English and German agreement patterns. *Linguistics* 36:41–70.

Birner, Betty. 1992. The discourse function of inversion in English. Doctoral dissertation, Northwestern University.

Bowers, John. 1993. The syntax of predication. Linguistic Inquiry 24:591-656.

Büring, Daniel. 1998. Identity, modality, and the candidate behind the wall. In *Proceedings of Semantics and Linguistic Theory (SALT)* 8, ed. Devon Strolovich and Aaron Lawson, pp. 36–54. Ithaca: CLC Publications.

Costa, João. 2004. Subjects in Spec,vP: Locality and agree. In *Collected papers on romance syntax*, MIT Working Papers in Linguistics (MITWPL), vol. 47, ed. Ana Castro, Marcelo Ferreira, Valentine Hacquard, and Andrés Pablo Salanova. Cambridge, MA.

Declerck, Renaat. 1988. Studies on copular sentences, clefts and pseudo-clefts. Dordrecht: Leuven University Press.

Diesing, Molly. 1992. Indefinites. Cambridge, MA: MIT Press.

Den Dikken, Marcel. 1995. Copulas. Ms., Free University Amsterdam.

Den Dikken, Marcel. 1997. Predicate inversion in DP. In *Possessors, predicates and movement in the Determiner Phrase*, ed. Artemis Alexiadou and Christopher Wilder, pp. 177–214. Amsterdam: John Benjamins.

Den Dikken, Marcel. 1998. Appraising "The raising of predicates". *Linguistische Berichte* 174:246–263.

Den Dikken, Marcel. 2006. Relators and linkers: The syntax of predication, predicate inversion and copulas. Linguistic Inquiry Monographs, vol. 47. Cambridge, MA: MIT Press.

Den Dikken, Marcel, André Meinunger, and Chris Wilder. 2000. Pseudoclefts and ellipsis. *Studia Linguistica* 54:41–89.

Fischer, Golda. 2003. The problem is/are your parents: Resolving number conflicts in equative sentences in Dutch and German. Honours dissertation, University of Edinburgh.

Harley, Heidi and Elizabeth Ritter. 2002. Person and number in pronouns: A feature-geometric analysis. *Language* 78:482–526.

Heggie, Lorie. 1988. The syntax of copular structures. Doctoral dissertation, University of Southern California.

Heim, Irene. 1979. Concealed questions. In *Semantics from different points of view*, ed. Rainer Bäuerle, Urs Egli, and Arnim von Stechow, pp. 51–74. Berlin: Springer.

- Heycock, Caroline. 1991. Layers of predication: The non-lexical syntax of clauses. Doctoral dissertation, University of Pennsylvania.
- Heycock, Caroline. 1994a. The internal structure of small clauses. In *Proceedings of North East Linguistics Society (NELS)* 25, vol. 1, ed. Jill Beckman, pp. 223–238. Amherst, MA: Graduate Linguistic Student Association (GLSA).
- Heycock, Caroline. 1994b. Layers of predication: The non-lexical syntax of clauses. New York: Garland.
- Heycock, Caroline. 1998. Phrases réduites inverses. In *"Être" et "avoir": syntaxe, sémantique, typologie*, ed. Alain Rouveret, pp. 95–114. Saint-Denis: Presses Universitaires de Vincennes.
- Heycock, Caroline. 2009. Agreement in specificational sentences in Faroese. Nordlyd (Tromsφ Working Papers in Language and Linguistics) 36:56–77.
- Heycock, Caroline and Anthony Kroch. 1997. Inversion and equation in copular sentences. Paper presented at the workshop on (Pseudo)clefts at the Zentrum für Allgemeine Sprachwissenschaf (ZAS), Berlin, November 1997.
- Heycock, Caroline and Anthony Kroch. 1999a. Agreement, inversion and interpretation in copular sentences. Paper presented at Formal Approaches to Slavic Linguistics 8, Philadelphia.
- Heycock, Caroline and Anthony Kroch. 1999b. Pseudocleft connectedness: Implications for the LF interface level. *Linguistic Inquiry* 30:365–397.
- Heycock, Caroline and Anthony Kroch. 2002. Topic, focus, and syntactic representations. In *Proceedings of West Coast Conference on Formal Linguistics (WCCFL) 21*, ed. Line Mikkelsen and Christopher Potts, pp. 101–125. Somerville: Cascadilla Press.
- Higgins, Francis Roger. 1973. The pseudo-cleft construction in English. Doctoral dissertation, Massachusetts Institute of Technology (MIT).
- de Hoop, Helen. 1992. Case configuration and Noun Phrase interpretation. Doctoral dissertation, University of Groningen.
- Lahousse, Karen. 2009. Specificational sentences and the influence of information structure on (anti-)connectivity effects. *Journal of Linguistics* 45:139–166.
- Lenerz, Jürgen. 1977. Zur Abfolge nominaler Satzglieder im Deutschen. Tübingen: Gunter Narr.
- Mikkelsen, Line. 2002. Specification is not inverted predication. In *Proceedings of North East Linguistics Society (NELS) 32*, ed. Masako Hirotani, pp. 403–422. Amherst, MA: Graduate Linguistic Student Association (GLSA).
- Mikkelsen, Line. 2004. Specifying who: On the structure, meaning, and use of specificational copular clauses. Doctoral dissertation, University of California at Santa Cruz.
- Mikkelsen, Line. 2005. Copular clauses: Specification, predication and equation. Linguistik Aktuell, vol. 85. Amsterdam: John Benjamins.
- Mikkelsen, Line. 2011. On prosody and focus in object shift. Syntax 14:230–264.
- Milsark, Gary. 1974. Existential sentences in English. Doctoral dissertation, Massachusetts Institute of Technology (MIT).
- Moro, Andrea. 1990. *There*-raising: Principles across levels. Paper presented at the 13th Generative Linguistics in the Old World (GLOW) Colloquium, Cambridge.
- Moro, Andrea. 1997. The raising of predicates: Predicative Noun Phrases and the theory of clause structure. Cambridge: Cambridge University Press.
- Moro, Andrea. 2000. Dynamic antisymmetry. Cambridge, MA: MIT Press.
- Neeleman, Adriaan. 1994. Complex predicates. Doctoral dissertation, Universiteit Utrecht.
- Partee, Barbara. 1986. Ambiguous pseudoclefts with unambiguous be. In Proceedings of North East Linguistics Society (NELS) 16, ed. Stephen Berman, Jae-Woong Choe, and

- Joyce McDonough, pp. 354–366. Amherst, MA: Graduate Linguistic Student Association (GLSA).
- Partee, Barbara. 1998. Copula inversion puzzles in English and Russian. Ms.
- Partee, Barbara. 2000. Copula inversion puzzles in English and Russian. In *University of Massachussetts Occasional Papers (UMOP) 23: Issues in Semantics and its Interface*, ed. Kiyomi Kusumoto and Elisabeth Villalta, pp. 198–208. Amherst, MA: Graduate Linguistic Student Association (GLSA).
- Patten, Amanda. 2010. Cleft sentences, construction grammar and grammaticalization. Doctoral dissertation, University of Edinburgh.
- Pereltsvaig, Asya. 2001. On the nature of intra-clausal relations: A study of copular sentences in Russian and Italian. Doctoral dissertation, McGill University.
- Petersen, Hjalmar P. 2000. IP or TP in modern Faroese. Working Papers in Scandinavian Syntax 66:75–83.
- Rohrbacher, Bernhard. 1999. *Morphology-driven syntax: A theory of V to I raising and pro-drop. Linguistik Aktuell*, vol. 15. Amsterdam: John Benjamins.
- Romero, Maribel. 2005. Concealed questions and specificational subjects. *Linguistics and Philosophy* 28:687–737.
- Sigursson, Halldór Ármann. 2006. The Nom/Acc alternation in Germanic. In *Comparative studies in Germanic syntax*, ed. Jutta M Hartmann and László Molnárfi, pp. 13–50. Amsterdam: John Benjamins.
- Thráinsson, Höskuldur, Hjalmar P. Petersen, Jógvan í Lon Jacobsen, and Zakaris Svabo Hansen. 2004. *Faroese: An overview and reference grammar*. Tórshavn: Faroese Academy of Sciences
- Vikner, Sten. 1995. Verb movement and expletive subjects in the Germanic languages. Oxford: Oxford University Press.
- Williams, Edwin. 1983. Semantic vs. syntactic categories. Linguistics and Philosophy 6:423–446.
- Zamparelli, Roberto. 2000. Layers in the Determiner Phrase. New York: Garland.