

# Complementizer agreement and dependency marking typology

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The paper considers the status of complementizer agreement from a theoretical and typological point of view. Theoretically, the phenomenon is strange because no semantic or syntactic relation between the complementizer and the subject seems to be underlying it. A probe-goal analysis is rejected, as it would require positing ad hoc agreement features in C. Typologically, it looks like complementizer agreement would be a rare instance of ‘nondependent-marking’. The paper concludes that complementizer agreement should not be described in the terms employed for subject—verb agreement, but should instead be analyzed as the result of analogical change, as proposed by Goeman (2000) and Kathol (2001).

## 1. Introduction

In a number of varieties of Continental West-Germanic, subjects of finite embedded clauses trigger agreement on the complementizer, as illustrated in (1):

- (1) a. dat- $\emptyset$  s $\emptyset$  spel- $\emptyset$  (South Hollandic Dutch)  
that-PL 3PL play-PL  
‘..that they play.’
- b. dat-(\* $\emptyset$ ) s $\emptyset$  speel-t  
that-(PL) 3SG.FEM play-3SG  
‘..that she plays.’

In early generative discussions of this phenomenon (Hoekstra & Marácz 1989, Zwart 1993, also Watanabe 2000), the subject agreement on the complementizer was taken to result from head movement of (features of) a lower functional head (INFL, AGR) to the complementizer head position C. In these analyses, C is not inherently equipped with agreement features. In contrast, more recent analyses start from the assumption that the relevant agreement features originate in C (e.g. Carstens 2003:394, Van Koppen 2005:33, Chomsky 2005:note 23), as originally proposed in Bennis & Haegeman (1984:39).

The shift is related to a changed view on the configuration relevant to agreement: m-command (the specifier-head configuration, Chomsky & Lasnik 1993) in the earlier approaches vs. c-command (the probe-goal configuration, Chomsky 2001) more recently. As we will see illustrated below, it is difficult to decide on the basis of surface phenomena where agreement features (whatever their nature) ought to be located. The position of the features relevant to complementizer agreement, therefore, is decided primarily on conceptual grounds, i.e. derived from the supposed configurational constraints on agreement.

The position I would like to advocate here is that a minimalist conception of agreement does not involve any agreement features situated in functional heads (Zwart, to appear). Agreement is one of a number of ways in which dependency between pairs of sisters may be expressed. A standard case of subject-verb agreement, such as (2a), involves a dependency between the subject and the predicate as illustrated in (2b), where the predicate is the dependent of the subject. This dependency is then expressed on a term of the dependent, the verb:

- (2) a. Jan kus-t Marie (Dutch)  
 John kiss-3SG Mary  
 ‘John kisses Mary.’
- b. NONDEPENDENT  $\longrightarrow$  DEPENDENT  
 subject [3SG] predicate [3SG]  
*Jan kust Marie*

On this approach, the feature [3SG] is inherently present on the subject, *Jan*, and is shared with the dependent *kust Marie* ‘kisses Mary’ as an automatic effect of the dependency between the subject and the predicate. The verb *kust* ‘kisses’ itself is not in a dependency relation with the subject.

This view of agreement (hence referred to as the *Local Agreement Theory*) is an implementation of the Derivational Approach to Syntactic Relations of Epstein et al. (1998), in which syntactic relations can only exist between elements that are merged to each other, and are established as soon as the merger takes place. Assuming a process of feature sharing (cf. Koster 1987:8), no unvalued agreement features in functional heads need to be posited. Moreover, the theory can now dispense with the concept of uninterpretable features needed in the probe-goal system of Chomsky (2001), concerning which it was not clear what motivated their existence in the derivation.

If this is the correct approach to agreement, the question of where the agreement features in complementizer agreement constructions are located disappears. Agreement features are properties of phrases, and agreement is a reflection of a direct dependency relation between sister constituents. However, far from solving the problems surrounding complementizer agreement, this approach generates a new one: if complementizer agreement is to be described in terms of the Local Agreement Theory, the relevant dependency relation must be between the complementizer and its sister, the embedded clause, which contains the subject. In this relation, the embedded clause is generally taken to be the dependent, but then the morphology is an instantiation of ‘nondependent-marking’ (curiously triggered by a term of the dependent). This raises the question of whether it does not make more sense to describe complementizer agreement as a phenomenon distinct from syntactically induced agreement (as already argued by Goeman 2000 and Kathol 2001).

To investigate this question, this paper looks into potential cases of ‘nondependent-marking’, and finds them to be mostly lacking. This suggests that the phenomenon indeed may need to be described, not as ordinary agreement, but along the lines suggested by Goeman and Kathol. In the final section, other curious properties of complementizer agreement are also considered in light of this question.

## 2. Nondependent-marking

The literature on dependency marking describes dependency as a relation between a head and a nonhead (complements, specifiers, adjuncts), a key concept in Dependency Theory as formulated by Tesnière (1959). Applying this concept of dependency relation, Nichols (1986) discovered a major parametric split between languages expressing the dependency relation on the head (head-marking) or on the dependent (dependent-marking). On this approach, the subject is taken to be a dependent of the verb, and consequently subject-verb agreement is defined as a case of head-marking.

The Derivational Approach to Syntactic Relations (DASR) leads to a partly different perspective on dependency. Since a head is merged with its complement, syntactic relations between heads and complements are allowed within DASR. Nothing precludes thinking of the head-complement relation in the traditional terms of dependency theory (with the complement the dependent of the head). But the head-specifier and head-adjunct relation are not sufficiently local: adjuncts and specifiers are not merged with the head directly, but with a projection of the head. Therefore, any dependency relations involving the adjunct and the specifier must involve not the head, but that projection of the head which happens to be the sister of the adjunct/specifier. It follows that dependency relations are not invariably head-nonhead relations. From here on, we therefore use the more neutral term of dependent-nondependent relations.

From a typological point of view, this raises the question whether the phenomena described by Nichols (1986) in terms of head-marking vs. dependent-marking grammar can be described with comparable descriptive adequacy in terms of a dependent-nondependent opposition.

This section first discusses a number of cases which look like head-marking, but on closer inspection turn out to be cases of dependent-marking in disguise. Next, a tentative theory of dependency is proposed, separating the dependency *relation* from its *realization*. Finally, we consider the question of the proportion of dependent vs. nondependent marking in the types of constructions studied by Nichols (1986) in the context of head vs. dependent marking. This section leads to the conclusion that nondependent-marking is typologically rare.

### 2.1 Concealed dependent-marking

This section considers three cases of head-marking which on closer inspection turn out to involve dependent-marking. The phenomena discussed are not isolated, but are representative of the phenomena typically regarded as head-marking.

The first phenomenon is *affix migration*, by which a dependency marking morpheme moves from the dependent to the head (Nichols 1986:84). This can be illustrated with a familiar case from English. In (3a), we take *cup* to be the head and its complement *of coffee* to be the dependent. *Of* here seems to be a linker: a morphological marker which simply registers the presence of a syntactic dependency (Nichols 1986:58). Since *of coffee* is a PP, the marker is clearly part of the dependent category. However, in (3b) that same marker is realized on the head *cup*. That the marker has now migrated to the head is evidenced by the fact that *cuppa* may appear without a complement *coffee*, as in (3c).

- (3) a. cup of coffee
- b. cuppa coffee
- c. a cuppa

In principle, we might think of (3a) as dependent-marking, and (3b) as head-marking (or, under DASR, as nondependent-marking). Nichols (1986) classifies (3b) as head-marking, as is clear from her inclusion of izafet constructions in the head-marking column.

Izafet constructions are like (3b) in that a linker (the izafet marker, glossed EZ) is realized on the head rather than on the dependent:

- (4) a. xane-ye    bozorg (Persian)  
          house-EZ   big  
          ‘big house’ (Rastorgueva 1964:23)
- b. xane-ye    pedær  
          house-EZ   father  
          ‘father’s house’ (id.)

As can be seen from the Persian example in (4), the izafet marker can be used in a variety of constructions. The elements of the izafet construction form a tight unit, which cannot be separated by determiners, postpositions, clitics, etc. (Rastorgueva 1963:97). This makes it difficult to argue that the izafet marker belongs to the head (the leftmost element in the examples in (4)) rather than the dependent.

However, if the izafet marker were to agree with either the head or the dependent, we would have to conclude that the marker properly belongs to the *other* element. This is because agreement may be defined, as in Nichols (1986:58), as the realization of an affix indexing particular features of the head or the dependent, marking them on the *other* constituent.

The examples in (4) involve invariable linkers, but other Iranian languages such as Kurdish and Dimli (Zazaki) provide a test case. In Dimli, the izafet marker expresses gender and number agreement with the head noun, showing it is properly part of the dependent, even if the izafet marker is cliticized onto the head noun:

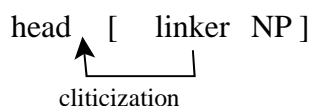
- (5) a. pir’tok-o                      fînd (Dimli)  
          book<sub>MASC</sub>-EZ:MASC.SG good  
          ‘good book’ (Todd 1985:136)
- b. top-a                          wər’d-i  
          ball<sub>FEM</sub>-EZ:FEM.SG small-FEM  
          ‘small ball’ (Todd 1985:137)

This analysis brings the izafet construction in line with similar linking constructions in e.g. the Bantu languages, where the linker also shows agreement with the head noun, as in (6):

- (6) a. ki-tabu ch-a    Juma (Swahili)  
          7-book 7-LINK Juma  
          ‘the book of Juma’
- b. vi-tabu vy-a    Juma  
          8-book 8-LINK Juma  
          ‘the books of Juma’

On this analysis, the constructions in (3)-(5) receive the analysis in (7), where the linker is properly part of the dependent, and may be cliticized onto the head:

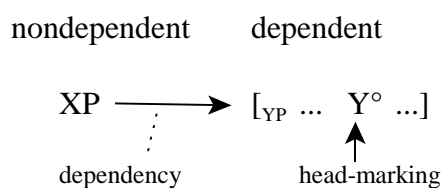
(7) *Affix migration*



If this is correct, the phenomenon of affix migration shows that phonologically expressed head-marking (i.e. cliticization) may in fact be syntactic dependent-marking.

The example of Swahili (6) allows a further conclusion. Here the linker is not cliticized onto the head, and appears to be the head of the dependent noun phrase (just like a preposition is taken to be the head of the preposition phrase). However, even if this is technically a case of head-marking (dependency marking realized on a head), it is clear that the dependency relation in question is between *kitabu* and the phrase *cha Juma*, where the entire phrase *cha Juma* is the dependent of the head/nondependent *kitabu*. I propose to call this *dependent head-marking*, i.e. marking of a dependency relation *on the head of the dependent*:

(8) *Dependent head-marking*



Accepting that dependent-marking may be realized on the head of the dependent, it becomes clear that ordinary subject-verb agreement is a very familiar case of dependent head-marking. This is exemplified by the following embedded clause example from Dutch:

- (9) ..dat hij in het bos wandel-t (Dutch)  
 that he in the forest walk-3SG  
 ‘..that he is walking in the forest.’

Here we suppose that a dependency relation exists between the subject *hij* ‘he’ and the predicate *in het bos wandelt* ‘walks in the forest’. This dependency relation is then marked on the head of the predicate, the verb *wandelen* ‘walk’.

This analysis does not take the subject to be a dependent of the verb. Such a dependency relation could not exist under the assumptions of DASR, but other reasons to reject it are also compelling. First, agreement with the subject may be realized on a verb which does not select it, as in raising constructions:

- (10) ..dat hij in het bos schijn-t te wandel-en (Dutch)  
 that he in the forest seem-3SG to walk-INF

In (10), *hij* ‘he’ is an argument of *wandelen* ‘walk’, not of *schijnen* ‘seem’, which nevertheless

shows agreement with *hij*. Second, languages may mark the dependency relation between the subject and the predicate on other predicate-internal elements, such as a clitic (11) or even the object (12), or may express the agreement multiply (13).

- (11) u bru pīn-yap psəñ u (Nongtung Khasi)  
 the man cause-die snake 3SG  
 ‘The man killed the snake.’ (Nagaraja 1997:355)
- (12) dios tupo-n naxo-xt’e wal wako (Coahuilteco)  
 god the-1PL we-annoy cause  
 ‘We annoyed God.’ (Troike 1981:663)
- (13) Juma a-li-kuwa a-ngali a-ki-fanya kazi (Swahili)  
 Juma<sub>i</sub> 1-PAST-be 1-still 1-PROG-do work  
 ‘Juma was still working.’ (Carstens 2003:395)

Third, taking the predicate to be the dependent in the subject-predicate relation resolves an anomaly signaled by Nichols (1986:77), namely that dependent-marking languages typically also show subject-verb agreement (an instance of head-marking on her view). If the predicate is the dependent of the subject, the agreement is just a case of dependent head-marking, and the anomaly disappears.

More generally, it seems that dependent-marking typically affects the *head* of the dependent, as exemplified by the German objective case-marking example in (14):

- (14) Ich sehe [ de-n Mann ] (German)  
 I:NOM see:1SG the-ACC man  
 ‘I see the man.’

If we may take the determiner to be the head of the noun phrase (as in Abney 1987), the dependency of the complement noun phrase *den Mann* ‘the man’ w.r.t. the verb *sehe* ‘see’ is marked on the head of the dependent.

A third source of spurious head-marking may be the phenomenon of *floating agreement* exemplified in the following examples from Udi:

- (15) a. xinär-en lavaš u-ne-k-sa (Udi)  
 girl-ERG bread:ABS eat-3SG-\$-PRES  
 ‘The girl EATS bread.’ (Schulze 2004:424)
- b. xinär-en lavaš-ne uk-sa  
 girl-ERG bread:ABS-3SG eat-PRES  
 ‘The girl eats BREAD.’ (id.)

In (15a), the agreement marker *ne* is infix to the stem *uk* ‘eat’ (the dollar sign is used to indicate a discontinuous part of the stem), in (15b) it is suffixed to the object. As Schulze (2004) argues, the positioning of the agreement affix is sensitive to focus, where focus on the object leads to the marking in (15b). This phenomenon may be interpreted as a further illustration of dependent head-marking, where the predicate is marked for dependency w.r.t. the subject, and

The three patterns discussed illustrate that *prima facie* cases of head-marking may in fact have to be described as cases of concealed dependent-marking.

We may now tentatively formulate a theory of dependency.

Importantly, the mappings in this process (from semantics to syntax, from syntax to morphology, or from morphology to phonology) do not have to be homomorphic. Thus, the semantics-to-syntax mapping may be disturbed by processes breaking up the sisterhood configuration of the subject and the predicate. A very familiar instantiation of the heteromorphic semantics-to-syntax mapping is verb movement to a position to the left of the subject:

- In (16b), the verb *leest* ‘reads’, which is a term of the predicate marking its dependency w.r.t. the subject (by dependent head-marking), is extracted from the predicate and merged anew with the constituent containing both the subject and the predicate. On the DASR approach, there is no need to describe (16b) as involving a different mechanism of dependency marking: since (16b) is derived from (16a), the relevant stage at which the dependency relation is established is (16a), and (16b) merely illustrates that syntax may disrupt the structural configuration of dependency, potentially obscuring its nature.

Finally, the heteromorphic relation between morphology and phonology is exemplified by the cliticization giving rise to affix migration (also discussed in section 2.1). For more general discussion of this point, the reader is duly referred to Klavans (1985).

If we take the effects of these disturbances into account, there appears to be no objection to reducing the format of dependency relations to the minimally needed configuration of sisterhood. Needless to say, it remains to be shown that all dependency relations can be described in terms of the sisterhood configuration, but that is not the subject matter of this paper. It does suggest, however, that we may profitably recast the question of dependency marking in terms of a new

opposition: dependent vs. nondependent marking.

### 2.3 *How much nondependent-marking is there?*

Following in the footsteps of Nichols (1986), we may here consider four basic relations:

- (17)
- a. argument—predicate
  - b. possessor—possessum
  - c. adposition—complement
  - d. noun—attributive adjective

The argument—predicate relation (17a) has been discussed in section 2.1, as far as the subject—predicate relation is concerned. The object—verb relation is of a different nature, because the object is properly speaking part of the predicate. The question whether object agreement on the verb instantiates nondependent-marking is complicated and will not be discussed here, except for noting that it is not uncommon for object agreement to appear only after displacement of the object, or when the object has a special discourse status (e.g. Creissels 2000:235 on the Bantu languages, Kayne 1989 on Romance, Polinsky & Potsdam 2001 on Tsez). This would suggest that, in a number of cases, object agreement is instead the manifestation of a relation between a displaced object and a predicate, the latter functioning as a dependent in much the same way as the (entire) predicate is the dependent of the subject.

The other three relations (17b-d) are briefly discussed below.

#### *a. the possessor—possessum relation*

Here we have to distinguish two ways of expressing possession in the nominal domain, which we do not take to be derivationally related. In one type of expression, the possessor functions as the subject of the possessive construction, and we typically get the order POSSESSOR—POSSESSUM (this is what Heine 1997:148 calls the ‘Topic Schema’). In the other type, the possessor functions as the adpositional complement to the possessum, and the order is a function of the head—complement order (Heine 1997:175; this type subsumes Heine’s ‘Location, Goal, Source, and Companion Types’). In the first type, we typically get dependency marking on the possessum (Heine 1997:159), in the second type, the complement (the possessor) is typically marked as a dependent. Examples are given below.

#### (18) POSSESSOR—POSSESSUM

- a.      fia      dadá      (Ewe)  
          chief   mother  
          ‘the chief’s mother’      [no marking]
- b.      fia      fé      xɔ      (Ewe)  
          chief   POSS   house  
          ‘the chief’s house’      [dependent-marking: linker]
- c.      the chief’s house      [dependent-marking: linker + affix migration]      (English)  
          ( < his house )



- d. à-č'k'°ən yə-y°nə (Abkhaz)  
 DEM-boy his-house  
 'the boy's house' [dependent-marking: dependent head-marking]

(19) HEAD—COMPLEMENT

- a. the house of the chief [dependent-marking: linker] (English)
- b. xane =ye pedær (Persian)  
 horse EZ father  
 'the horse of the father' [dependent-marking: linker + affix migration]

What the examples show is that a reversal of dependency typically results in a reversal of dependency marking: whereas the possessum is marked in the subject—predicate expression illustrated in (18), the possessor is marked in the head—complement expression illustrated in (19). If the predicate and the complement are typical instantiations of dependent categories, this suggests a preference for dependent-marking over nondependent-marking.

The only strong candidate for nondependent-marking in the domain of possession appears to be the genitive case, which often marks the 'subject' in the subject—predicate (possessor—possessum) construction. This may then give rise to a 'double marking' pattern, with the possessor being marked by case and the possessum by agreement (Nichols 1986:72):

- (20) a. Ahmed-in ev-i (Turkish)  
 Ahmed-GEN house-3SG  
 'Ahmed's house' (Heine 1997:148)
- b. hwan-pa wasi-n (Huallaga Quechua)  
 John-GEN house-3  
 'John's house' (Nichols 1976:72)

This, then, may be a true case of nondependent-marking. In addition, the genitive may come to mark the dependent possessor in the complementizing type of nominal possessive construction, but in that case we do rarely seem to find agreement on the nondependent possessum (see Heine 1997:149-150 on a potential case from Aramaic).

Agreement on a possessum that precedes the possessor is regularly found in the Mayan languages, as illustrated in (21) for Itza:

- (21) u-paal a' winik-ej (Itza)  
 3.ERG-child DET man-TOP  
 'the child of the man' (Hofling 2000:257)

It remains to be seen how this pattern can be accounted for. It is perhaps significant that the languages in question appear to have an unmarked VSO constituent order (Hofling 2000:190), suggesting that the order in (21) may be derived via fronting of the possessum. If so, it may be maintained that agreement is typically not marked on a nondependent.



- (26) a. hwan-pa hana-n-chaw (Huallaga Quechua)  
 John-GEN above-3-LOC  
 ‘above John’ (Nichols 1986:72)
- b. y-alam t-a’ winik-oo’-ej (Itza)  
 3.ERG-below to-DET man-PL-TOP  
 ‘below the men’ (Hofling 2000:328)

c. *attributive adjective constructions*

As we have seen, languages may realize attributive adjectives as complements in an izafet construction. Since complements are dependents, this type of construction involves dependent adjective phrases:

- (27) a. ki-ti ch-a m-ti (Swahili)  
 7-chair 7-LINK 3-wood  
 ‘wooden chair’ (Ashton 1959:145) [dependent-marking: linker]
- b. pir’tok =o fnd (Dimli)  
 book<sub>MASC</sub> EZ:MASC.SG good  
 ‘good book’ (=5a) [dependent-marking: linker, agreement + affix migration]

Alternatively, the adjective is realized as a modifier of the head noun. Here, the standard view would seem to be the the adjective is a dependent of the head noun, so that agreement on the adjective instantiates dependent-marking. On that view, the relatively rare case of Shushwap adduced by Nichols (1986:61) would be the only type of head-marking in attributive adjective constructions:

- (28) wist t-citx° (Shushwap)  
 high REL-house  
 ‘tall house’

However, in this type of construction, the relator (REL) is invariant, suggesting that it is a linker. In that case, since linkers are typical dependent-marking devices, a more plausible analysis would be that the head noun is the dependent of the adjective. This view may be supported by the alternation in (29) from Mikir (Karbi), where the linker appears on the head noun only when the adjective precedes it (Jeyapaul 1987:104):

- (29) a. monit calay (Mikir)  
 person funny  
 ‘funny person’
- b. calay a-monit  
 funny REL-person  
 ‘funny person’

If that is the correct approach to the Shushwap/Mikir type, it should also apply to the more common prenominal adjective construction where the adjective agrees with the head noun. In



- d. \* een goed voor iedereen-e oplossing  
 a good for everyone-NNTR solution  
 ‘a solution that is good for everyone’

If that is the correct analysis, prenominal adjective constructions invariably involve dependent-marking.

## 2.4 Conclusion

In this section we took dependency relations to be relations between sister categories, where each sister pair contains a dependent and a nondependent. We then asked the question whether languages show a preference for marking dependency on the dependent or on the nondependent. From the incomplete survey reported here, the impression arises that nondependent-marking is typologically rare. Many cases of head-marking can be understood as cases of concealed dependent-marking, as discussed in section 2.1. At each stage in the mapping from semantics to phonology (via syntax and morphology) can the basic organization of the dependency relation be obscured by various processes (section 2.2). Taking these problems into account, the picture that emerges is one where dependency relations are preferably expressed on the dependent (even if counterexamples to the generalization are not wholly absent), especially where the dependency is marked through agreement.

With this in mind, we may return to the question of Continental West-Germanic complementizer agreement: what kind of dependency relation does it express, and how?

## 3. Revisiting complementizer agreement

The first thing to note about complementizer agreement is that it is never the sole expression of subject agreement in a clause. As the example in (1a), repeated here as (34a), shows, the subject also triggers agreement on the verb (a case of dependent head-marking). Without the subject-verb agreement, no complementizer agreement construction is grammatical (34b).

- (34) a. dat-ø sə spel-ø (South Hollandic Dutch)  
 that-PL 3PLplay-PL  
 ‘..that they play.’  
 b. \* dat-ø sə speel  
 that-PL 3PLplay-PL

Therefore, complementizer agreement constructions appear to be normal, dependent-marking constructions, except that there is an *additional* expression of the subject agreement on the complementizer.

Multiple expression of agreement is not problematic, but unlike the Swahili case of (13), where all the elements expressing subject agreement are terms of the predicate, the complementizer does not originate as a term of the subject’s sister (on standard approaches to Germanic phrase structure). In fact, no meaningful semantic or syntactic relation between the subject and the complementizer that could be underlying complementizer agreement has been

proposed.

One relation that might be suggested is that the subject is a term of a dependent of the complementizer, taking the embedded clause to be the complement of the complementizer (hence its dependent). This would imply that complementizer agreement is a rare case of nondependent-marking.

Not only would the phenomenon be rare, the analysis would also be marred by the problem that the nondependent is marked for features of a *term* of the dependent, i.e. the subject of the embedded clause, instead of for features of the dependent (the embedded clause) itself. It is quite imaginable that features of the embedded clause, such as tense or mood features, be reflected in the morphology of the complementizer, but as Hoekstra & Smits (1997) clearly demonstrate, those features are never involved with complementizer agreement.

A further problem would be that the languages in question would simultaneously employ dependent and nondependent-marking in a single construction. The only cases where we have seen this happening is when the dependent is marked by agreement and the non-dependent by case (see above, section 2.3). Here, however, the nondependent complementizer would also be marked by agreement.

The conclusion suggests itself that complementizer agreement does not fit the picture of agreement as a dependency marking device. One course to take at this point would be to return to the analysis of agreement as a function of probe-goal relations, as proposed in Chomsky (2001), and applied to complementizer agreement in Van Koppen (2005). However, that would necessitate positing ad hoc agreement features in C, an unwanted move from a minimalist point of view.

I therefore take these considerations to indicate that complementizer agreement should be described along entirely different lines. In discussing dialects where complementizer agreement and verb agreement are morphologically not identical (such as the East Netherlandic dialect discussed in Van Haeringen 1958 and Zwart 1993), Goeman (2000) notes that the morphology on the complementizer invariably matches the morphology of a (monosyllabic) verb in pre-subject position, where the subject is a clitic (hence the gloss INV for this type of agreement):

- (35) a. dat- $\emptyset$       wy speul-t      (East Netherlandic Dutch)  
           that-PL.INV we play-PL  
           ‘..that we play.’
- b. kun- $\emptyset$ /\*t      wy  
           can-PL.INV/PL we  
           ‘can we’

Goeman (2000:278) concludes from this that the complementizer agreement morphology is induced by the clitic.

I take Goeman’s proposal to essentially imply that complementizer agreement originates as an analogical extension of the morphology of the verb in verb—clitic constructions to the complementizer in complementizer—clitic constructions. The analogical schema would run as in (36):

- (36)   kunt : kunn $\emptyset$  :: dat : datt $\emptyset$

The positional similarity of the complementizer and the verb in subject-verb inversion

constructions has been a corner stone in analyses of Continental West-Germanic syntax since Paardekooper (1961), and need not be further illustrated here. The similarity also features prominently in Kathol's (2001) analysis of complementizer agreement, who, more explicitly than Goeman, argues for analogical extension as the origin of the phenomenon.

The following considerations can be adduced in support of the Goeman/Kathol analysis of complementizer agreement as the result of an analogy mechanism.

First, the relevance of cliticization is evident from the observation in Zwart (1993:291) that complementizer agreement is absent in embedded verb-second constructions, as in Frisian (37b).

- (37) a. Heit sei dat-st do soks net leauwe moa-st (Frisian)  
 dad said that-2SG yousuch not believe:INF must-2SG  
 'Dad said that you should not believe such things.'
- b. Heit sei dat-(\*st) do moa-st soks net leauwe  
 dad said that-2SG youmust-2SG such not believe:INF  
 'Dad said that you should not believe such things.'

We know independently that cliticization onto the complementizer is excluded in embedded verb-movement constructions (De Haan & Weerman 1986:85). In these particular constructions, the analogy mechanism could not have been operative, hence complementizer agreement is not expected to occur.

Secondly, as shown by Ackema & Neeleman (2004), complementizer agreement is blocked when the complementizer and the subject are not adjacent:

- (38) a. Volgens mij lop-e wiej noar 't park (Hellendoorn Dutch)  
 according to me walk-PL.INV we to the park  
 'I think we are going to the park.'
- b. ..dar-re wiej noar 't park loop-t  
 that-PL.INV we to the park walk-PL  
 '..that we are going to the park.'
- c. Volgens mij loop-t op den wärmsten dag van 't joar ook wiej  
 according to me walk-PL on the hottest day of the year also we  
  
 noar 't park  
 to the park  
  
 'I think that on the hottest day of the year, we too are going to the park.'
- d. ..dat op den wärmsten dag van 't joar ook wiej noar 't park loop-t  
 that on the hottest day of the year also we to the park walk-PL  
 '..that on the hottest day of the year, we too are going to the park.'

As Ackema and Neeleman argue, the presence of the intervening adjunct has the effect that the complementizer and the subject are in separate prosodic domains. If cliticization is restricted to a prosodic domain, as seems reasonable, the observations in Ackema & Neeleman (2004) support

the idea that complementizer agreement is an analogical extension of the morphology of the inverted verb in cliticization contexts.

Thirdly, if complementizer agreement is the result of an analogy mechanism, we expect further elements to be vulnerable to the same mechanism, so that complementizer agreement should show up on coordinating conjunctions, relative pronouns, embedded *wh*-elements, etc. The former case appears to be rare, but is attested in Tegelen Dutch according to Cremers & Van Koppen (2004):

- (39) Ich dink    det     Jan      of-s    toow   kump-s                                (Tegelen Dutch)  
I   think   that   John   or-2SG you   come-2SG  
'I think that either John or you will come.'

On the other hand, complementizer agreement on relative pronouns and embedded *wh*-elements is quite common, as noticed as early as Van Haeringen (1939) and illustrated in (40).

- (40) a. wenn-ste komm-st (nonstandard High German)  
when-2SG come-2SG  
'when you come'
- b. jonge-sdie-e werk-e wil-le (South Hollandic Dutch)  
boy-PL REL-PL work-INF want-PL  
'boys that want to work'

The phenomena in (40) feature prominently in Kathol's (2001) argument for collapsing the specifier and the head of CP into a single COMP-node. However, what they seem to show without question is that the same mechanism giving rise to agreement on the complementizer may also target other elements which are in similar prosodic and linear relations to the subject clitic. The very fact that these relations are 'phonological' in nature makes it difficult to draw conclusions about phrase structure.

Van Koppen's important (2005) study also reveals another phenomenon relevant to the nature of complementizer agreement, namely a kind of first conjunct agreement. The facts show a discrepancy between verb-subject agreement in inversion constructions and complementizer agreement, in the sense that only the latter displays agreement with the first conjunct of a coordinated subject:

- (41) a. Ontmoet-e / \*-s [doow en Marie] uch voor de kerk ?  
meet-PL/2SG you<sub>SG</sub> andMary you<sub>PL</sub> in front of the church  
'Are you and Mary meeting in front of the church?' (Tegelen Dutch)
- b. ..de-s [doow en ich] ôs kenn-e treff-e  
that-2SG you<sub>SG</sub> andI 1PLcan-PL meet-INF  
'..that you and I can meet.'

From the perspective taken here, the first conjunct agreement in (41b) may be regarded as the overgeneration of a particular pattern conditioned by the linear adjacency of the complementizer and the pronoun. This is in a way to be expected if complementizer agreement is the analogical extension of a certain morphophonological pattern. What we do not expect, and what does not



happen witness (41a), is for that same overgeneration to affect the morphology of the verb in inversion constructions. This is because the morphology of the verb in inversion constructions is regulated by a syntactic process of dependency marking (dependent head-marking), which is not affected by verb movement (see the discussion surrounding (16)). As we saw there, the inflected verb realizes the dependency between the predicate (of which it is a term) and the subject, and continues to do so after it raises to a position commanding the subject. Hence we do not expect (41a) to be grammatical since the variant without inversion (42) does not permit first conjunct agreement either:

- (42) [Doow en Marie] ontmoet-e/\*s uch voor de kerk (Tegelen Dutch)  
 you<sub>SG</sub> and Mary meet-PL/2SG you<sub>PL</sub> in front of the church  
 ‘You and Mary are meeting in front of the church.’

Further considerations supporting analogy as the source of complementizer agreement are the following.

Complementizer agreement is a remarkably late phenomenon in the dialects that display it (cf. Goeman 1997). It is certainly not a well-attested phenomenon in Middle Dutch. It is also generally an unstable phenomenon which is easily lost or employed only optionally (Vanacker 1949). In this connection it may be noted that complementizer agreement of the type observed in Continental West-Germanic is typologically extremely rare, possibly unique (Ken Hale, p.c.).

As Vanacker (1949) and Goeman (1980, 2000) note, complementizer agreement quite generally occurs only with (weak) pronoun subjects. The case of West-Flemish, where complementizer agreement is also triggered by full noun phrase subjects, may then be taken as a further generalization of the phenomenon, spreading to constructions beyond those that originally gave rise to it.

Furthermore, it has been noticed by Hoekstra & Smits (1997) that complementizer agreement never involves tense. This robust generalization is hard to understand on the analysis of Zwart (1993) where complementizer agreement occurs only as a function of the movement of tense features to C. Hoekstra & Smits (1998) make the further generalization that complementizer agreement is limited to those varieties in which the agreement endings on the verb are identical in all tenses. From the perspective taken here, this can be understood if we accept that when a verb shows different agreement endings depending on its tense, the analogical pressure that such a verb, when it appears in inversion, exerts on the complementizer will be weak: there is not a single morphophonological pattern that the complementizer could adjust to.

Finally, it should be noted that the analogical change proposed in the Goeman/Kathol analysis of complementizer agreement is not unique within Continental West-Germanic. Thus, an adverbial modifying an adjective tends to acquire the adjective morphology in spoken Dutch (43a), apparently by analogy with multiple adjective constructions (43b).

- (43) a. een heel / hel-ə lang-ə rit (Dutch)  
 a very / very-NNTR long-NNTR ride  
 ‘a very long ride’  
 b. een mooi-ə lang-ə rit  
 a nice-NNTR long-NNTR ride  
 ‘a nice long ride’

This development, like the appearance of complementizer agreement, is consistent with the relevant laws of analogy formulated by Kuryłowicz (1947), which state that analogy gives rise to transparent complex forms (cf. Trask 1996:112f). Furthermore, although the phenomenon of complementizer agreement may be rare, there is no reason to believe that the analogical mechanism itself is rare, and we therefore expect to find different manifestations across languages. Whereas I am pessimistic as to the chances of finding other attestations of complementizer agreement across the world's languages, I am not regarding the chance of finding comparable analogically induced rarities.

#### 4. Conclusion

In this paper we have argued that the Continental West-Germanic phenomenon of complementizer agreement does not find a natural analysis within the Local Agreement Theory, where agreement is a dependency marking device affecting the head of the dependent. It is difficult to see the complementizer as being in a direct or indirect dependency relation with the subject. We considered the possibility of taking the agreement to be a case of 'nondependent-marking', but such a phenomenon appears to be typologically rare. A retreat to a probe-goal analysis of agreement would not help, as it would require the postulation of ad hoc uninterpretable agreement features on C. These and several other considerations suggest that Goeman (2000) and Kathol (2001) are right in describing complementizer agreement as the analogical reshaping of the complementizer, induced by the morphology of the verb in the verb—subject clitic configurations typical of Continental West-Germanic inversion constructions.

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