

Chapter 14

Complementizer Agreement

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14.1 Introduction

This chapter deals with a unique phenomenon found in a subset of the Germanic Languages: Complementizer Agreement (henceforth CA).^{1,2} CA is attested in (dialects of) Frisian and in a subset of the Dutch and the German dialects. It is, as far as I know, not found in (dialects of) English or the North Germanic languages.³ There is a large descriptive literature on CA in the continental West-Germanic dialects (see Barbiers et al. (2005, 2006), Weiß (2005), van Koppen 2017 for an elaborate list of references).

In Germanic languages / dialects with CA (henceforth CA-varieties), complementizers introducing embedded clauses show agreement for ϕ -features (in particular in person and / or number) with the embedded subject. Consider the examples below:

¹ An extended version of this chapter is published as van Koppen (2017). The text of the current contribution partly overlaps with that paper, focusing mainly on the empirical generalizations concerning CA. The theoretical debates about this phenomenon and CA outside of the Germanic area are discussed in van Koppen (2017).

² Outside Germanic we also find languages / dialects displaying agreeing complementizers. There are for instance languages that agree with wh-elements (in Irish and Chamorro, see McCloskey 2001 and Chung 1998, but potentially also in French, see Rooryck 2000) or with the subject of the matrix clause (in Bantu-languages like Lubukusu, see Diercks 2010, 2013 and Carstens 2016). See also van Koppen (2017) for discussion about CA for ϕ -features in non-Germanic languages.

³ A potential case of CA in English is discussed by Putnam and van Koppen (2011). They show that Mid-Western American English seems to show CA in a particular type of pseudoclefts, which they dub the *all/s*-construction:

- (i) All-s Greg and Marsha want to do is kiss each other when no one else is around.
- (ii) All*(-s) you know about Cindy is that she likes to tattle on her siblings.

The s-inflection which appears on *all* in these pseudocleft sentences is sensitive to the ϕ -features of the embedded subject (in some dialects) just like the agreement on the complementizer in the dialects with CA. The s-inflection on *all* cannot appear when the subject is second person. This inflection is restricted to these pseudocleft sentences and it is not found on regular complementizers in these dialects.

- (1) a. K peinzen da / *dan dienen student nen buot gekocht eet.
 I think that-_{3p.sg} / that-_{3p.pl} that student a boat bought has
 'I think that that student has bought a boat.'
- b. K peinzen dan / *da die studenten nen buot gekocht een.
 I think that-_{3p.pl} / that-_{3p.sg} those students a boat bought have
 'I think that those students have bought a boat.'

(West Flemish, Haegeman 2000)

The complementizer in the West-Flemish example in (1) has to carry a third person plural affix, *-n*, when the subject of the embedded clause is third person plural as in (1b), but it crucially cannot carry this affix when the subject is third person singular as in (1a). CA is obligatory in some varieties, like the West-Flemish variety Haegeman (1992, 2000) reports on, but there are also varieties in which CA is optional. CA does not have an effect on the meaning of a sentence. It is reported that there is a register effect, though: Some speakers experience CA as belonging to another (more archaic) register (cf. Hoekstra & Smits 1997: 12); there is no thorough sociolinguistic research about this aspect of CA, however. CA is also a phenomenon that is typically found in nonstandard languages, i.e., in dialects or regiolects, i.e., it is not a property of the standard varieties of Dutch or German, although it is a property of Frisian, which is recognized as an official language in the Netherlands.

This chapter discusses the empirical observations that have been made about CA; the reader is referred to van Koppen (2017) for an in-depth discussion of the theoretical accounts of CA. The chapter is organized as follows: Section 14.2 provides a detailed discussion about the various types of CA-paradigms. Section 14.3 explores the relation between verbal agreement and CA, by diving into so-called double agreement. Section 14.4 discusses the interaction of CA with clitics and pro-drop. Section 14.5 goes into the question whether CA is sensitive to linear adjacency and, finally, Section 14.6 goes into the syntactic distribution of CA.

14.2 The Complementizer Agreement-Paradigm

The affixes used on the complementizer in CA-varieties are the same as the ones used as the verbal agreement affixes in these dialects. The CA-paradigm is quite often defective, however, in the sense that less overt agreement reflexes appear on the complementizer than on the finite verb in the same variety. A good example is Frisian. As the Frisian dialect of Heerenveen (2) illustrates, there is only an affix for the second person singular on the complementizer as 'if' and possibly for the third person singular (depending on the analysis of the t-ending), whereas the finite verb *gaen* 'go' also shows overt agreement reflexes for, at least (again

depending on the analysis of these verb forms) first person plural and the third person plural.⁴

- (2)
- | | | | | | |
|----|-----|----------|-----|-----|------------|
| a. | ... | as ik | a'. | ... | gaen ik |
| | | if I | | | go I |
| b. | ... | ast | b'. | ... | giest |
| | | if-2p.sg | | | go-2p.sg |
| c. | ... | at er | c'. | ... | giet er |
| | | if he | | | goes he |
| d. | ... | as we | d'. | ... | geane we |
| | | if we | | | go we |
| e. | ... | as jimme | e' | ... | gean jimme |
| | | if you | | | go you |
| f. | ... | as se | f'. | ... | gaene sij |
| | | if they | | | go they |

(Heerenveen Frisian, Barbiers 2006)

There are dialects that have a full paradigm. Haegeman (1992), for instance, argues that West Flemish has a full, i.e., nondefective, CA-paradigm:

- (3)
- | | | | | | |
|----|-----|------------------|----------|----------|----------|
| a. | ... | da-n-k | (ik) | morgen | goa-n. |
| | | that-1p.sg~1p.sg | (I) | tomorrow | go-1p.sg |
| b. | ... | da-j | (gie) | morgen | goa-t. |
| | | that-2p.sg | (you) | tomorrow | go-2p.sg |
| c. | ... | da-se | (zie) | morgen | goa-t. |
| | | that-3p.sg | (she) | tomorrow | go-3p.sg |
| d. | ... | da-me | (wunder) | morgen | goa-n |
| | | that-1p.pl | (we) | tomorrow | go-1p.pl |
| e. | ... | da-j | (gunder) | morgen | goa-t. |
| | | that-2p.pl | (you) | tomorrow | go-2p.pl |
| f. | ... | da-n-ze | (zunder) | morgen | goa-n |
| | | that-3p.pl~3p.pl | (they) | tomorrow | go-3p.pl |

(West-Flemish, Haegeman 1992: 49)

This paradigm is complete in the sense that there is an element agreeing with the subject in each person/number and gender combination. The agreement morphology appearing on the complementizer in this dialect consists of two parts. The first part can be classified as inflectional morphology expressing at least agreement for number (i.e., the *n*-ending in the first person singular and third person plural). The second part can be analyzed as a clitic pronoun (i.e., the elements *k*, *j*, *se*, *me*, *j*, *ze* in the

⁴ Note that Frisian also displays subject drop in the second person singular. The second person subject pronoun *do* 'you' can be present, but this leads to a focused reading on the subject.

examples above), which conveys the person, number, and gender information of the subject (cf. Haegeman 1992: 68–69). We will come back to the relation between clitics and CA in Sections 14.3 and 14.4. De Vogelaer (2006: 99–101) shows that the West- and East-Flemish dialects as well as some other Dutch dialects, like the Eastern Dutch dialect of Groenlo (data from Barbiers et al. 2005 / 2006), have a CA-paradigm that is completely parallel to the verbal agreement paradigm and can hence be argued to be nondefective as well. This becomes clear if we compare the inflection on the complementizer with the inflection on the verb in the verb-subject order:

- | | | | | | | |
|-----|----|-----|-----------|-----|-----|---------------|
| (4) | a. | ... | as-ik | a'. | ... | was-ik |
| | | | if I | | | wash I |
| | b. | ... | a(s)-je | b'. | ... | was-je |
| | | | if you | | | wash you |
| | c. | ... | ast-e | c'. | ... | wast-e |
| | | | if he | | | washes he |
| | d. | ... | azze-wie | d'. | ... | wasse-wie |
| | | | if we | | | wash we |
| | e. | ... | as-jullie | e' | ... | was(t)-jullie |
| | | | if you | | | wash you |
| | f. | ... | at-ze | f'. | ... | leeft-ze |
| | | | if they | | | live they |

(Groenlo Dutch, De Vogelaer 2006: 100)

Example (4) illustrates that the complementizer shows the same inflectional pattern as the verb *wassen* 'to wash'. This pattern does not hold for all CA-varieties, however.

When we consider the CA-varieties, we can roughly divide the Germanic dialects and languages with CA into two groups. The first one includes Frisian, the Saxonian and Limburgian dialects, and the German dialects with CA. These dialects all at least show agreement with second person singular subjects. The agreement affix in these dialects is typically *-s* or *-st* and the subject pronoun is (a variant of) *du* / *do* 'you'. Consider the examples in (2) from Frisian and in (5) from the Bavarian dialect of Gmunden (Gruber 2008).

- | | | | | | | | | |
|-----|------------------------------------|------|------|----------------------|-------------------|------|-------|----------------------|
| (5) | I | woas | net, | ob-st | du | des | mocha | kaun-st. |
| | I | know | not | if _{2.p.sg} | you _{sg} | that | do | can _{2p.sg} |
| | 'I don't know if you can do that.' | | | | | | | |

(Gmunden Bavarian, Gruber 2008: 6)

There are also dialects within this group with a more elaborate CA-paradigm. The variety of Bavarian discussed by Bayer (1984), for instance, just like the

Gmunden dialect discussed in (5), has CA for the second person singular and plural.⁵

- (6) a. Du_i bis dass-st t_i kummst ...
 you are that_{-2p.sg} come_{-2p.sg}
 ‘You are the one that comes ...’
 b. Ihr_{i/es_i} bis dass-ts t_i kummts ...
 you are that_{-2p.pl} come_{-2p.pl}
 ‘You are the ones that come ...’

(Bavarian, Bayer 1984: 234)

The same holds for several Eastern Dutch and Limburgian Dutch dialects (see Barbiers et al. 2005: 221). Some dialects within this group, like Lower Bavarian (see Bayer 1984), additionally have CA in the first person plural – an example is provided in (15) in the next section – and some German dialects have CA in the third person plural in addition to the second person singular and plural and the first person plural. An example of such a dialect is Egerlandish (also a dialect of Bavarian):

- (7) a. wal-st
 because_{-2p.sg}
 b. das-n mer
 that_{-1p.pl} we
 c. wenn-ts diaz
 when_{-2p.pl} you
 d. daa-n-s
 that_{-3p.pl}-they

(Egerlandish, Schiepek 1899/1908, Weise 1907, as cited in Weiß 2005: 151)

The second group of CA-dialects consists of the western Dutch dialects (including Flemish), but it also includes some Dutch dialects spoken in the east of the country, like Groenlo (see example (4) above). These dialects typically show plural agreement on the complementizer:

- (8) a. ... as ik/jij/hij hoor(t) ...
 when I/you/he hear(s)
 ‘... when I/you/he hear(s) ...’
 b. ... as-e we/jollie/ze hore ...
 when_{-pl} we/you/they hear
 ‘... when we/you/they hear ...’

(Kattwijk Dutch, Barbiers et al. 2006)

⁵ The examples from Bayer (1984) display movement of the subject to show that the endings (i.e., -st/-ts) on the complementizer are inflectional affixes rather than subject clitics. Subject clitics cannot be stranded when the subject moves.

(9) a. ... datte je zwemme.
that_{2p.sg} you swim_{2p.sg}
'... that you are swimming.'
(West-Frisian, Hoekstra & Smits 1997: 18)

b. ... datte we 'ier burgers en visscherlui ewwe
that_{pl} we here civilians and fishermen have_{pl}
'... that we have civilians and fishermen here.'
(West-Frisian, West-Friesland's Oud en Nieuw: Jaarboek 1929)

14.3 A Closer Inspection of the Relation between the CA-Paradigm and the Verbal Agreement Paradigm: Double Agreement

There are (at least) two patterns of DA. In the first one, the ending on the finite verb depends on the relative position of subject and verb: If the finite verb follows the subject (in subject-initial main clauses or embedded

clauses) the verb has a different inflection than when the subject follows the verb (in inverted main clauses or V1-clauses). The frequently discussed DA pattern of the Dutch dialect of Hellendoorn is exemplified in (10)–(12). This dialect only shows a DA pattern with first person plural subjects.

- (10) a. Wiej bin-t den besten!
 we are-_{agr1} the best
 ‘We are the best!’
 b. *Wiej binn-e den besten!
 we are-_{agr2} the best

(Hellendoorn Dutch, van Koppen 2005: 125–126)

- (11) a. *Bin-t wiej den besten?
 are-_{agr1} we the best
 b. Binn-e wiej den besten?
 are-_{agr2} we the best
 ‘Are we the best?’

(Hellendoorn Dutch, van Koppen 2005: 125–126)

When the verb follows a first person plural subject in Hellendoorn Dutch it ends in a t-affix (see example (10), when the verb precedes the subject it ends in a e-affix (see example (11)). The agreement on the complementizer always patterns with that on the finite verb in VS-clauses. This is known in the literature as the inversion generalization (see Hoekstra and Smits 1997, Barbiers et al. 2005: 19–34).⁶

- (12) ... darr-e / *dat wiej den besten bin-t / *binn-e!
 that-_{agr2} / that we the best are-_{agr1} / are-_{agr2}
 ‘... that we are the best!’

(Hellendoorn Dutch, van Koppen 2005: 125–126)

A similar case of DA in which the ending on the verb is dependent on the relative order of verb and subject is found in Brabantic, see (13).⁷

⁶ It is not the case that all verbs in DA-dialects necessarily pattern the same. There is for instance sometimes a difference between auxiliaries and main verbs or between monosyllabic and polysyllabic verbs. This has led to a debate in the literature on exactly which verbs are relevant for the inversion generalization. Goeman (1980, 2000) argues that the complementizer copies the agreement affix of monosyllabic verbs. De Vogelaer (2006) compares CA to the inflection on inverted monosyllabic and polysyllabic verbs to see which paradigm matches the CA paradigm best. He reaches the conclusion that the CA paradigm resembles the verbal paradigm of the verbs that have the same morpho-phonological shape as the complementizer: polysyllabic complementizers match the inflection on polysyllabic verbs and monosyllabic complementizers that on monosyllabic verbs. Hoekstra and Smits (1997, 1999) argue that auxiliaries are the relevant group of verbs. Van Craenenbroeck and van Koppen (2002) claim that CA resembles the inflection on the verb *to be* in inversion in the present tense.

⁷ As has been pointed out by Bayer (1984), Weiß (1998, 2005), the DA ending /-ma/ replaces the regular verbal agreement ending for the first person plural, /-a(n)/, only with a couple of polysyllabic verbs (e.g., *laffa* ‘to run’, *gengan* ‘to go’, *soucha(n)* ‘to seek’).

- (13) a. ... da-de gullie kom-t / *kom-de.
 that-_{2p} you_{pl} come-_{2p.pl} / come-_{2p}
 ‘... that you will come.’
 b. Gullie kom-t / *kom-de.
 you_{pl} come-_{2p.pl} / come-_{2p}
 ‘You will come.’
 c. Wanneer kom-de / *kom-t gullie.
 when come-_{2p} / come-_{2p.pl} you_{pl}
 ‘When do you come?’

(Brabantic, Zwart 1997:140)

The Brabantic second person singular and plural *de*-affix appears on the finite verb when it precedes the subject and on the complementizer, but not on the finite verb in subject-initial main clauses and embedded clauses. Zwart (1997) argues that this *de*-ending is an affix, but it has also been analyzed as a clitic pronoun which necessarily appears in the Wackernagel position (see, for instance, Stroop 1987). Clitic pronouns and inflection on the verb in the verb-subject order or the inflection on the complementizer are closely related and it is very often hard to tease the two apart, as we will discuss in more detail in Section 14.3.2. It is not always easy to distinguish between the two (see for instance Gruber [2008] for an extensive discussion). For this reason, it is not always clear if we are dealing with a pattern of different affixes, for instance *-t* and *-de* in Brabantic (i.e., DA), or with the same affix, for instance *-t* in Brabantic which disappears because of assimilation with the clitic pronoun *-de*. The same issue plays a role in Frisian. De Haan (1997) shows that Frisian also has a DA pattern similar to Hellendoorn Dutch and Brabantic in the second person singular. He provides the examples in (14).

- (14) a. ... dat-st do moarn komme soe-ste.
 that-_{2p.sg} you tomorrow come would-_{2p.sg}
 ‘... that you would come tomorrow.’
 b. Do soe-ste moarn komme.
 you would-_{2p.sg} tomorrow come
 ‘You would come tomorrow.’
 c. * Moarn soe-ste (*do) komme.
 Tomorrow would-_{2p.sg} you come
 d. * ... dat-ste (do) moarn komme soe-ste.
 that-_{2p.sg} you tomorrow come would-_{2p.sg}

(Frisian, De Haan 1997: 65)

Frisian appears to have two agreement affixes *-st* and *-ste*. De Haan (1997) shows that *-ste* displays DA-behavior: It can only co-occur with the subject pronoun *do* if the finite verb follows the subject. If the *ste*-affix appears on a

finite verb preceding the subject – see (15c), or the complementizer, see (15d) – *do* cannot appear. De Haan concludes from this that Frisian has two different *ste*-endings. One that cannot co-occur with an overt subject pronoun and one that can. He argues that the first one is comparable to the Brabantic *de*-ending and the Hellendoorn Dutch *e*-ending because it is also restricted to complementizers and verbs in subject inversion contexts. Here the issue of pro-drop also plays a role. The *ste*-ending appearing in the verb / complementizer subject order is only compatible with a pro-drop sentence. We will explore the relation between CA/DA, clitics and pro-drop more in depth in Section 14.3.2.

Double agreement does not necessarily follow the pattern displayed in (10)–(12) and (13), however. The second DA-pattern is found in Lower Bavarian. This dialect shows a double agreement pattern in the first person plural, but with a slightly different distribution than the patterns discussed above, see (15).

- (15) a. ... daß-ma mia noch Minga fahr-n / *fahr-ma.
 that-_{1p.pl} we to Munich go-_{1p.pl} / go-_{1p.pl}
 ‘... that we are going to Munich.’
 b. Mia fahr-ma / *fahr-n noch Minga.
 we go-_{1p.pl} / go-_{1p.pl} to Munich
 ‘We are going to Munich.’
 c. Fahr-ma/ *fahr-n mia noch Minga?
 go-_{1p.pl} / go-_{1p.pl} we to Munich
 ‘Are we going to Munich?’

(Lower Bavarian, Zwart 1997: 140)

This example shows that the affix on the finite verb in Lower Bavarian is not so much dependent on the position of the finite verb relative to the subject, but to the position of the finite verb within the clause. The verb carries a *ma*-affix if it is in the left periphery of the clause, whereas it ends in a *n*-affix if it is in the right periphery.

In short, the DA-dialects show that CA is similar to the inflection on the verb in the left periphery for dialects like Lower Bavarian and to the inflection on the verb in the verb-subject order in others, like Hellendoorn Dutch, Brabantic, and Frisian.

14.3.2 The Defectivity of the CA-Paradigm

As I have already mentioned, a lot of dialects with CA make fewer distinctions in the CA-paradigm than in the verbal paradigm. The question arises, of course, why this would be the case. Weiß (2012) and Fuß (2004, 2005) argue that this defectivity of the CA-paradigm in Bavarian can be explained by an accidental reanalysis of a clitic pronoun to an agreement ending. They assume this reanalysis takes place for a limited number of subject

pronouns. As discussed above, there are several cases of CA that seem to have a pronominal origin, in particular the second person singular CA for instance Frisian in (14), Brabantic in (13), and Bavarian in (5), but also the first person plural CA in Bavarian in (15). This analysis does not provide an explanation however for the CA-endings that are unlikely to have this origin, like the dialect of Katwijk in (8), Groenlo in (4), and parts of the West-Flemish paradigms in (3). The endings in these latter dialects are, at least not straightforwardly, analyzable as clitic pronouns.

Hoekstra and Smits (1997, 1999) have proposed a different explanation for the defectivity of CA-paradigms. Their Identity Generalization states that the CA-paradigm only uses those verbal affixes that are identical in the present and past tense. Put differently, CA affixes are those affixes of the verbal paradigm that do not express tense information and are hence pure phi-affixes. The discussion on DA makes clear that we should look at the verbal paradigm in inversion contexts, at least for the dialects with the Hellendoorn Dutch pattern. The example below illustrates the identity generalization:

- (16) a. Present tense: Wol-st do komme?
want-_{2p.sg} you come
‘Do you want to come?’
- b. Preterit: Woe-st do komme?
wanted-_{2p.sg} you come
‘Did you want to come?’
- c. Complementizer: ... dat-st do komme sil-st
... that-_{2p.sg} you come will-_{2p.sg}
‘... that you will come’

(Frisian, van Craenenbroeck and van Koppen 2002)

The *st*-affix appears both in the present tense and the past tense, compare (16a–16b), and hence does not convey tense information. It can be used as CA, see (16c). Frisian does not have CA in the plural. This is also predicted by the identity generalization. Consider the examples in (17).

- (17) a. Present tense: moatt-e wy
must-_{1p.pl} we
‘must we’
- b. Preterit: moast-en wy
must-_{1p.pl} we
‘must we’
- c. Complementizer: dat-(*e/*en) wy moatt-e
that-_{1p.pl} we must-_{1p.pl}

(Frisian, Hoekstra p.c.)

The first person plural does not have an ending in the verbal paradigm that is the same in the present tense and the past tense, compare (17a–17b), and

hence Frisian does not have CA in the first person plural, see (17c). As such the Identity Generalization provides a potential tool to explain why some dialects have CA and others lack it. It also gives us a handle on the defectivity of the CA-paradigm.

Hoekstra and Smits (1997, 1999) base their generalization on the agreement patterns in seven Dutch dialect areas. It is unclear, however, if this generalization can be extended to the German CA dialects, especially since most of these dialects lack a past tense form. The generalization has also not been checked in more detail for the Dutch dialects (for instance within the SAND-project, Barbiers et al. 2005). Some deviations from this generalization have been reported for the Dutch dialects, however. Hoekstra & Smits (1997) themselves for instance show that there are dialects in the Dutch province of Limburg that have a verbal agreement ending that is identical in the present tense and the preterit, but that do not have CA. So, at the very least, identity seems to be a necessary but not a sufficient condition to get CA. Van Craenenbroeck and van Koppen (2002) provide a counterexample against this generalization from Nieuwkerkenwaas-Dutch, see (i) below:

- (i) a. Present tense: Will-e zunder komm?
 want-pl they come
 ‘Do they want to come?’
 b. Preterit: Wou-n zunderkomm?
 wanted-pl they come
 ‘Did they want to come?’
 c. Complementizer: da-n zunder zulle komm.
 that-pl they will come
 ‘that they will come’.

(Nieuwkerken-Waas Dutch, van Craenenbroeck and van Koppen 2002: 5)

In this example, the verbal agreement on the auxiliary *willen* ‘want’ is not the same in the present tense and the preterit, but CA is still an option. This shows that a more fine-grained investigation of this generalization is necessary.

14.3.3 Summary

This section has discussed the questions surrounding the CA-paradigm. We have seen that the CA-affixes mirror the verbal affixes on the verb in the left periphery (in the case of Lower Bavarian) or on the verb in the verb-subject order (in the cases of the other dialects). This is usually referred to as the inversion-generalization. Furthermore, we have explored two potential explanations for the defectivity of CA-paradigms. One potential

reason is that CA-affixes are often accidentally reanalyzed clitic pronouns. Another explanation can be found in the Identity Generalization.

14.4 CA, Clitics and Pro-Drop

We have seen that there is a close connection between CA, clitics, and pro-drop. We will further explore this connection in this section.

As discussed in Section 14.3, we can distinguish two types of CA-affixes. There are affixes that are pronominal in origin and affixes that have a verbal origin (see among others Weiß 2012, Goeman 1997). Dialects can have both types of CA affixes within one paradigm. There appears to be an especially close relation between clitic pronouns and CA in the second person. For instance, Bayer (1984), Fuß (2004), Gruber (2008), and Weiß (2012) argue that CA in the second person singular is the result of reanalysis of second person subject clitics in the verb-subject order as inflectional markers. Hoekstra (1997) also addresses the question as to why pro-drop is found exclusively with first and second person in the West-Germanic languages. He argues that because first and second person subjects are necessarily pronominal in contrast to third person subjects, there is a strong tendency for cliticization to the verb in the verb-subject order in these persons. This means that reanalysis of a first and second person pronoun into an inflectional affix is much more likely than of a third person pronoun (cf. also Weiß 2012).⁸ These verbal inflectional markers then also appear on the complementizer by extension. The origin of verbal CA-affixes is much less clear (see Goeman 1997 for a detailed discussion of the attestations of verbal CA in older stages of Dutch).

One difference between pronominal and verbal CA affixes is that the former tend to license pro-drop, but the latter do not (see among many others Bayer 1984, Hoekstra 1997, Fuß 2005, Weiß 2012).⁹ Consider the examples in (18a) and (18b) respectively.

⁸ The question arises how we can determine whether the element attached to the complementizer is a clitic or an inflectional ending. There are various tests proposed in the literature to distinguish between these two options. Zwicky (1977) and Zwicky and Pullum (1983) provide several tests. De Haan (1997) gives specific tests to distinguish between clitics and inflectional endings in Frisian. Fuß (2005) discusses several tests applied to Bavarian. Gruber (2008) also discusses the issue of the status of the CA-endings in the Austrian Bavarian dialect of Gmunden. She provides several tests and reaches the conclusion that in her dialect the CA-affix has both properties of an inflectional ending and of a clitic pronoun. She provides an analysis for the dual status of this type of ending. It would lead us too far afield to discuss these tests in detail here. The reader is referred to the literature given in this footnote and the references therein for the complete debate.

⁹ Hoekstra and Marácz (1989) argue that pro-drop in the West-Germanic dialects is always licensed by CA and vice versa. However, as is shown by Zwart (1993) and as can be derived from the examples in the main text, this generalization is not correct.

- (18) a. ... wenn-sd will-sd.
 if_{2p.sg} want-2sg
 ‘... if you want.’
 (Bavarian, Weise 1907, as cited in Weiß 2005: 154)
- b. ... waal-n *(mer) graad besamn senn.
 because-1p.pl We at_the_moment together are-1p.pl
 ‘... because we are together at the moment.’
 (Bavarian, Weise, 1907, as cited in Weiß 2005: 154)

The d-affix in (18a) derives from a subject clitic, which has become part of the verbal inflection. In this example, pro-drop can take place. The first person plural agreement in (18b) does not contain such a pronominal part and pro-drop is not an option.¹⁰ The same opposition is found in the Dutch dialects and Frisian. Hoekstra (1997) argues that the Frisian *st*-ending has a pronominal origin and licenses pro-drop. The West Flemish *n*-ending which is not pronominal does not license pro-drop.

- (19) a. ... dat-st (do) jûn kom-st.
 that-2p.sg (you) tonight come-2p.sg
 ‘... that you will come tonight.’
 (Frisian, Weiß 2005: 156)
- b. ... da-n *(ze) goan werk een.
 that-3p.pl they go_{3p.pl} work have
 ‘... that they have gone to work.’
 (West Flemish, Weiß 2005: 156)

To summarize, there is a close connection between clitics, CA, and pro-drop. Clitics in the first and second person have a tendency to attach to the verb and complementizer. This then leads to reanalysis of the clitic into a complementizer agreement affix and a (double) verbal agreement affix. Since these affixes still have a pronominal component (or because they are in between a proper affix and a clitic, as Gruber [2008] argues), they are able to license pro-drop.

14.5 CA and Linear Adjacency

As discussed in 14.4, the regular CA-pattern in the Germanic languages is one in which the subject of the embedded clause agrees with the complementizer. There are a couple of CA-patterns that deviate from

¹⁰ There appears to be an exception to this rule discussed by Zwart (1993: 167), namely Zürich German that allows pro-drop without a clear (pronominal) agreement affix:

(i) ... öb (d/du) nach Züri chunnsch.
 whether you to Zürich come_{2p.sg}
 ‘... whether you come to Zürich.’

However, Weiß (2005) argues that there might be a pronominal zero-affix in this example that licenses pro-drop.

this general pattern and where the CA seems to target a directly adjacent noun phrase: CA with coordinated subjects and CA with external possessors. I discuss these two patterns in Section 14.5.1. Another issue, discussed in Section 14.5.2, related to adjacency concerns the question of whether an intervener between the complementizer and subject has an effect on CA.

14.5.1 Agreement with Coordinated Subjects and External Possessors

The complementizer normally agrees with the subject. However, there are two cases in which it agrees with only part of the subject, rather than with the complete subject. In both these cases CA is with a noun phrase which is linearly closest to the complementizer, which might lead to the conclusion that CA is the result of linear adjacency between complementizer and subject. The first example concerns cases in which the subject is a coordination and the second involves an external possessor.

Let us first look at the patterns with coordinated subject. Van Koppen (2005) investigates the behavior of CA with coordinated subjects in varieties of Germanic. She shows that there are two patterns: Either the complementizer agrees with the coordinated subject as a whole, see (20), or it agrees with the first conjunct only, see (21).

- (20) Kpeinzen **da-n** [Valère en Pol] morgen goa-n.
 I.think that_{-3p,pl} [Valère and Pol]_{3p,pl} tomorrow go_{-PL}.
 ‘I think that Valère and Pol will go tomorrow.’

(Lapscheure Dutch, from Haegeman 1992: 49)

- (21) ... **de-s** **doow** en ich ôs treff-e.
 that_{-2p,sg} [you_{sg} and I]_{1p,pl} each.other_{1p,pl} know_{-1p,pl}
 ‘... that you and I know each other.’

(Tegelen Dutch, van Koppen 2005: 174)

In example (20) the complementizer and the finite verb are both inflected, agreeing with the third person plural feature of the subject *Valère en Pol*. The agreement on the complementizer in (21) is different from that on the finite verb. The complementizer agrees with second person singular features of the first conjunct of the coordinated subject, whereas the verb agrees with the first person plural features of the complete coordinated subject. Due to reasons of space the reader is referred to Van Koppen (2005, 2012) for an elaborate discussion of these patterns.

CA can also target a part of the subject rather than the complete subject in the case of external possession, see Haegeman and van Koppen (2012).

- (22) ... **omda-n** **die** **venten** toen juste **underen** **computer**
 because-_{3p.pl} those guys then just their computer
 kapot was
 broken was
 ‘... because those guys’ computer broke just then.’

(Lapscheure Dutch, Haegeman and van Koppen 2012: 444)

The subject, *die venten underen computer* ‘those guys’ computer’, is discontinuous: The possessor *die venten* ‘those guys’ and the possessee *underen computer* ‘their computer’ are interrupted by the adverb *toen juste* ‘just then’.¹¹

These patterns might give the impression that CA simply targets a right adjacent noun phrase. This is not the case, however, as exemplified in (23).

- (23) ... **omdat**/*omda-n [**André en Valère** **underen**
 because-_{3p.sg} /because-_{3p.pl} André and Valère their
 computer] kapot **was**.
 computer broken was
 ‘... because André and Valère’s computer was broken.’

(Lapscheure Dutch, Haegeman and van Koppen 2012)

In this example, the complementizer cannot agree with the immediately adjacent third person plural possessor noun phrase *André en Valère*, but it has to agree with the complete subject *André en Valère underen computer* which is third person singular.

That adjacency is not the trigger for CA is also confirmed by example (24) in which a scrambled object *zukken boeken* intervenes between complementizer and subject. This third person plural direct object cannot agree with the complementizer, as illustrated in (24c), although it is adjacent to it.

- (24) a. kpeinzen dat **zelfs** **Valère** zukken boeken niet leest.
 I.think that even Valère such books not reads
 b. ?? kpeinzen dat zukken boeken **zelfs** **Valère** niet leest.
 I.think that such books even Valère not reads
 c. * kpeinzen da-n zukken boeken **zelfs** **Valère** niet leest.
 I.think that.pl such books even Valère not reads
 ‘I think that even Valère would not read such books.’

(Lapscheure Dutch, Haegeman and van Koppen 2012)

14.5.2 Interveners between Complementizer and Subject

Another issue related to the question of whether CA is sensitive to adjacency concerns intervening adverbs between the complementizer and the subject. Although agreement relations are generally not sensitive to

¹¹ The reader is referred to Haegeman and van Koppen (2012) for an in-depth discussion of this construction.

intervening adverbs, CA seems to be sensitive to this in some CA-varieties, but not in all of them.

Ackema and Neeleman (2004) show that adjacency plays a role in the West-Flemish dialect of De Panne, see (25).

- (25) a. ...da / da-n zunder op den warmste dag van t jaar
 that / that-_{3P, PL} they on the hottest day of the year
 tegen under wil gewerkt en.
 against their will worked have
- b. ...da / *da-n op den warmste dag van t jaar zunder
 that / that-_{3P, PL} on the hottest day of the year they
 tegen under wil gewerkt en.
 against their will worked have
 ‘... that they have worked against their will at the hottest day of
 the year.’

(De Panne Dutch, Ackema, and Neeleman 2004: 240)

CA is optional in this dialect. However, when an adverb intervenes between the complementizer and the subject pronoun, it is obligatorily absent. Fuß (2008) shows that the same pattern can be observed in Bavarian:

- (26) a. Obwoi-st du ins Kino ganga bist ...
 although-_{2P, SG} you to-the movies gone are_{2P, SG}
 ‘Although you went to the movies ...’
- b. Obwoi(*-st) woartscheints du ins Kino ganga bist ...
 although(-_{2P, SG}) probably you to-the movies gone are_{2P, SG}
 ‘Although you probably went to the movies ...’

(Bavarian, Grewendorf p.c., as cited in Fuß 2008: 85)

However, there are also ample examples in the literature that show that intervention does not have an effect on CA. Gruber (2008), for instance, shows that adverb or argument intervention in her Bavarian variety does not seem to play a role.

- (27) a. **Warum-st** sein Freind uns **du** net vorgstöht ho-st,
 Why-_{2P, SG} his friend us you not introduced have-_{2P, SG}
 vasteh i a net.
 understand I too not
 ‘Why you didn’t introduce his friend to us, I don’t understand
 either.’
- b. Wos hot da Hannes gsogt, **wo-st** morgn
 What has the Hannes said, that-_{2P, SG} tomorrow
 du mitbringa soid-st?
 you with-bring should-_{2P, SG}
 ‘What did Hannes say that you should bring along tomorrow?’

(Bavarian, Gmunden dialect, Gruber 2008: 54)

The example at (27a) shows the intervention of a scrambled direct and indirect object between the CA and the subject. Example (27b) illustrates intervention of an adverb.¹² Haegeman and van Koppen (2012) discuss similar examples from Lapscheure Dutch, a West-Flemish dialect; just like De Panne Dutch illustrated in (25). Lapscheure Dutch has CA when an adverb intervenes, see example (28).¹³

- (28) a. ... **da-n** / ?*dat toen juste **men twee broers** kwamen.
 that-_{PL} / that then just my two brothers came
 ‘... that my two brothers came just then.’
 b. ... **da-n** / ?*dat juste ip dienen moment **men twee broers** kwamen.
 that-_{PL} / that just at that moment my two brothers came
 ‘... that my two brothers came just at that moment.’

(Lapscheure Dutch, Haegeman and van Koppen 2012: 447)

Weiß (2005) provides an example from Zürich German where an indirect object intervenes between the subject and the CA (see Haeberli 1999 for similar data from this dialect):

- (29) ... **wie-t** mer **du(u)** gsäit häsch
 how-_{2P.SG} to-me you said have_{2P.SG}
 ‘... what you have told me.’

(Zürich German, Weber 1964, as cited in Weiß 2005: 57)

To summarize, linear adjacency seems to play a role in the distribution of CA in some dialects, but clearly not in all dialects. More research is necessary to further investigate this aspect of CA.¹⁴

14.6 Syntactic Distribution of CA

Up till now, we have only looked at the morphological aspects of CA, e.g., the paradigm, the origin of the affixes, the relation of CA with verbal agreement, the licensing of pro-drop. This section briefly addresses the matter of the syntactic distribution of CA.

CA is normally attached to the complementizer of finite clauses as the examples given have amply illustrated. Syntactically, CA is restricted to finite clauses, i.e., it is never found in infinitival clauses on the infinitival complementizer. Furthermore, CA necessarily expresses agreement with

¹² Helmut Weiß (p.c.) informs me that his own Bavarian dialect, which is a variant of Middle Bavarian and spoken in Bavaria, has the same properties as the variant reported in Gruber (2008).

¹³ In previous work Haegeman did argue that the subject and the complementizer should be adjacent (see Haegeman 1992). Given the right pragmatic context, intervention is possible in this dialect, however.

¹⁴ Van Koppen (2017) shows that intervention of a subject modifier has some other interesting effects in some but not all CA-varieties.

the embedded subject and not with any other argument. The category of the subject generally does not affect the possibility to have CA. Full NPs and pronouns can both trigger it in the dialects that have CA in the third person (see, for instance, De Vogelaer 2006: 32–33). Barbiers et al. (2005: 33) have investigated this in depth for the Dutch dialects and show that the Flemish dialects have CA both with pronominal and nonpronominal subjects, but that there are dialects in the Hollandic area (i.e., the northwestern part of the Netherlands) in which CA exclusively occurs with pronominal subjects.^{15,16} It can also be found on other elements in the left periphery when the complementizer is absent. Consider for instance the data in (30) where the inflection surfaces on the *wh*-word *warum* ‘why’ or the data in (31) where the inflection is attached to a *wh*-phrase:¹⁷

- (30) ... warum-sd des ned mochs-d.
 why-2p.sg this not make-2p.sg
 ‘... why you do not make this.’

(Bavarian, Weiß 2005: 148)

- (31) Du sollst song [[an wäichan Schuah]_i-st] du t_i wui-st].
 you should say the which-one shoe_{2p.sg} you want-2.SG
 ‘You should say which one of the shoes you want.’

(Bavarian, Bayer 1984: 235)

Similar examples with CA on elements other than the complementizer can be found in many Dutch and German dialects (see for instance Zwart 1993:171, Weiß 2005). A possible hypothesis about these cases is that the inflection appears to be on the *wh*-word or *wh*-phrase. Another hypothesis, however, is that it is hosted by an empty complementizer immediately following this left peripheral item (see Zwart 1993 among many others).

A comparable case of this pattern in which the inflection is not on the complementizer but on another left peripheral element is discussed by Cremers and van Koppen (2008). They show that CA in the Dutch dialect of Tegelen can appear on coordinating conjunctions like *of* ‘or’ or *en* ‘and’. An example is given in (32).

¹⁵ Goeman (1980, 2000) argues that CA is sensitive to rhythm in the sense that a weak pronoun or an unstressed determiner following the complementizer triggers CA. Hoekstra and Smits (1997) confirm that there is a tendency on the basis of a West-Frisian corpus (a dialect spoken in the Dutch province of North Holland) to be more easily available with NPs if the NP is unstressed.

¹⁶ Vanacker (1949: 38) discusses a Flemish dialect where CA is obligatory with pronominal subjects, but optional with full NPs. This observation has not been investigated systematically for other dialects.

¹⁷ Bayer (2014) questions whether the example in (30) is indeed grammatical. However, there are many examples of this type in the literature. Hoekstra and Smits (1997), for instance, provide this example:

- (i) Iech wil waete wiewöl geld-s te hob-s.
 I want know how.much money-2p.sg you have-2p.sg
 ‘I want to know how much money you have.’

(Maastricht Dutch, van Ginneken 1939 as cited by Hoekstra and Smits 1997)

- (32) Ich ving det Marie of-s toow d'n ierste mōs sien.
 I find that Marie or-_{2P.SG} you the first must be
 'I think that Marie or you should be the first.'

(Tegelen Dutch, Cremers, and van Koppen 2008: 1065)

Cremers and van Koppen show that the inflection on conjunctions can only appear in cases that allow coordination of complete embedded clauses, which are normally introduced by a complementizer. They also pursue the hypothesis that the agreement ending on the conjunction of 'or' in this example is actually present on an empty complementizer introducing an embedded finite clause.

Finally, CA is also found on the complementizer in comparative clauses. Bayer (1984) and Fuß (2008) report that CA in Bavarian is only possible in clausal comparatives, but not in phrasal ones, see the data in (33).

- (33) a. D'Resl is gresser [als wia-st du bist]
 The-Resl is taller than as-_{2P.SG} you are
 'Resl is taller than you are.'
 b. D'Resl is gresser [als wia(*-st) du]
 The-Resl is taller than as-_{2P.SG} you
 'Resl is taller than you.'

(Bavarian, Bayer 1984: 269)

A subset of the Dutch dialects with CA does allow CA with phrasal comparatives, see (34). See Cremers and van Koppen (2008), and Barbiers et al. (2005: 36) for a map showing the exact distribution of this pattern.

- (34) Du geloofst zeker niet dat er sterker is wie-st-u.
 you believe-_{2P.SG} surely not that he stronger is than-_{2P.SG}-you
 'You probably don't believe that he is stronger than you.'

(Nieuwenhagen Dutch, Barbiers et al. 2006)

Movement out of the embedded clause (either by the subject or any other element) does not seem to affect the presence of CA in most dialects:

- (35) DOOW denk ik de-s / *det de wedstrijd winnen zal-s.
 you-_{SG} think I that-_{2P.SG} / that the game win will-_{2P.SG}
 'YOU, I think will win the game.'

(Tegelen Dutch, van Koppen 2012: 137)

A similar example can be given for Frisian:

- (36) Do, tink ik dat-st / *dat moarn komme sil-st
 you, think I that-_{2P.SG} / that tomorrow come shall-_{2P.SG}
 'I think YOU will come tomorrow.'

An exception to this generalization is Hellendoorn Dutch (see van Koppen 2012 for an explanation):

- (37) WIEJ denkt Jan dat / *darr-e die pries ewönnen hebt,
 we think Jan that / that-_{1P.SG} that prize won have
 nie ZIEJ.
 not they
 'WE John thinks won that prize, not THEM.'

(Hellendoorn Dutch, van Koppen 2012: 138)

Boef (2013) and Mayr (2010) propose a close connection between CA and subject extraction in the Dutch dialects and in Bavarian respectively. They argue that CA makes subject extraction possible. Mayr (2010) gives a particularly convincing argument for this, illustrated in (38).

- (38) a. [Es Kinda]₁ hot da Hauns gfrogt [t₁ ob-s t₁ hamkummts]
 you children has the John asked if-_{2P.PL} home_come
 'John asked if you children will come home.'
 b. *[Es Kinda]₁ hot da Hauns gfrogt [t₁ ob-∅ t₁ hamkummts]
 you children has the John asked if-∅ home_come

(Bavarian, Mayr 2010: 121)

Mayr shows that CA is optional for some speakers of Bavarian. However, when the subject is extracted, the only grammatical option is the one with CA (i.e., example (38a)) and not the one without CA (i.e., example (38b)).

A final point about the distribution of CA concerns the clauses it appears in. The dialects and languages that display CA are all asymmetric Verb Second languages, which means that the finite verb is in second position in main clauses and in final position in embedded clauses (Zwart 1993). There are several analyses of CA that make use of this observation (see, for instance, Zwart 1993, 1997, 2001). That the link between embedded Verb Second and the presence of CA is not coincidental can be seen in Frisian. This language (in contrast to most other Germanic languages and dialects) allows embedded Verb Second. Interestingly, CA cannot appear in these clauses (cf. De Haan and Weerman 1986, Zwart 1993, De Haan 2001). Consider the sentences in (39).

- (39) a. Heit sei dat-st do soks net leauwe moa-st.
 dad said that-_{2P.SG} you such not believe most-_{2P.SG}
 b. Heit sei dat(*-st) do moa-st soks net leauwe.
 dad said that(-_{2P.SG}) you must-_{2P.SG} such not believe
 'Dad said that you should not believe such things.'

(Frisian, van der Meer 1991, as cited in Zwart 1993: 198)

Example (39a) is a regular embedded clause with CA and the verb in final position. The embedded Verb Second clause in (39b) cannot have CA however. De Haan (2001) convincingly shows that these clauses with

what seems to be embedded Verb Second are actually coordinated root clauses. The complementizer *dat* ‘that’ is not a subordinating conjunction in these clauses, but it is a coordinating conjunction. If these sentences are indeed root clauses, then we do not expect CA to occur, as it is restricted to embedded contexts (see Zwart 1993, 1997, 2001, Carstens 2003 for alternative accounts of these data).

14.7 Summary

To summarize, this chapter has provided an overview of the empirical properties of CA in the West-Germanic languages. It focused on the morphological aspects of CA, like the properties of the paradigm, the properties of the affixes, but also on morphosyntactic aspects, like the effect of adjacency on CA, the relation between CA, clitics and pro-drop, and CA’s syntactic distribution.

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