Natural Language & Linguistic Theory
https://doi.org/10.1007/s11049-024-09621-9

Complementizer agreement is clitic doubling

Evidence from intervention effects in Frisian and Limburgian

Astrid van Alem[1]

Received: 10 August 2023 / Accepted: 19 February 2024

Abstract
Complementizer agreement in minority and nonstandard West Germanic languages is well-known and frequently studied, but there is little agreement on its analysis. In this paper, I add to this debate by presenting novel and underdiscussed data from Frisian and Limburgian on intervention effects: what happens to complementizer agreement when the complementizer and the subject are separated by an intervening element. In Frisian, intervention leads to ungrammaticality, and in Limburgian, it leads to the realization of complementizer agreement between the intervener and the subject. These effects cannot be accounted for by existing Agree and PF analyses of complementizer agreement. Instead, I argue that the complementizer agreement morpheme is a clitic. Adopting the approach to clitic doubling of van Craenenbroeck and van Koppen (2008), I develop an analysis of complementizer agreement as clitic doubling. The intervention effects in Frisian and Limburgian follow from an interplay of the structural size of the clitic and restrictions on movement. Specifically, the ungrammaticality of intervention in Frisian is the result of competition between the clitic and the intervener for the same structural position, and the subject-internal realization of complementizer agreement in Limburgian is the result of movement of the clitic below the intervener.

Keywords Complementizer agreement · Clitic doubling · Microvariation · West Germanic

1 Introduction

One of the most notable and well-known properties of several West Germanic languages is that they show complementizer agreement (CA): in an embedded clause, both the verb and the complementizer morphologically reflect the φ-features of the subject. CA is illustrated in (1).

✉ A. van Alem
a.h.j.vanalem@uu.nl

[1] Utrecht University, Utrecht, the Netherlands

Published online: 12 September 2024

(1) Ik wait da-st-u de woarheit zeg-st.
I know that-2SG-you the truth say-2SG
'I know that you are telling the truth.' Stadskanaal Dutch

A recurring question about CA concerns the nature of the morpheme that realizes the features of the subject, and how it is inserted in the structure. Carstens (2003), van Koppen (2005), and others argue that CA is the spellout of agreement between C^0 and the subject, while for example Ackema and Neeleman (2004) and Weisser (2019) claim that CA is inserted at PF (see van Koppen 2017 for an overview of different approaches to CA). The core data in this debate are examples where the complementizer and the subject are separated by an intervening element, as in some varieties this type of intervention affects the realization of CA.

In this paper, I contribute to the debate on the nature and analysis of CA, by looking at the effect of intervention on CA in Frisian and Limburgian. I present novel and understudied data that are problematic for both previous analyses of CA: in Frisian, intervention leads to ungrammaticality, while in Limburgian, intervention causes CA to be realized to the right of the intervener. To account for these intervention effects, I argue that CA is clitic doubling, and I develop a unified analysis based on the analysis of clitic doubling by van Craenenbroeck and van Koppen (2008), combined with movement restrictions and variation in the structural size of the CA clitic.

The paper is organized as follows. In Sect. 2, I introduce the data on the effect of intervention on CA in Frisian and Limburgian, and show how it differs from varieties that have been discussed in the previous literature. I also show that the analyses developed based on the previously studied varieties cannot account for the Frisian and Limburgian data. Section 3 argues that the CA morpheme is a clitic, by looking at its syntactic and morphological properties. Section 4 presents the analysis of intervention effects on CA. I adopt van Craenenbroeck and van Koppen's (2008) analysis of clitic doubling, according to which clitic doubling is partial copying of a phrasal pronoun (Sect. 4.1). I present evidence that the CA morpheme in Frisian and Limburgian is of a different structural size (Sect. 4.2). Then, I discuss restrictions on possible landing sites for clitic movement, that are the result of general restrictions on movement and the position of intervening elements (Sect. 4.3). Section 4.4 shows how the intervention effect on CA in Frisian and Limburgian follows from these assumptions. Specifically: in Frisian, the CA clitic competes for the same structural position with the intervener, resulting in ungrammaticality; in Limburgian, the CA clitic moves to a position below the intervener, resulting in the realization of the CA morpheme to the right of the intervener. In Sect. 4.5, I discuss why the clitic cannot pied-pipe the subject. Section 5 concludes with a summary and a brief discussion of the role of CA in syntactic theorizing.

2 Intervention effects on CA

In this section, I discuss the intervention effects on CA in various West Germanic languages. The first two subsections introduce the core data of this paper from Frisian and Limburgian, since these varieties show intervention effects that have not been

taken into account by existing analyses of CA, or that have not been observed before. In Sect. 2.3, I briefly discuss intervention effects on CA in other varieties to demonstrate the relevance of the Frisian and Limburgian data. Section 2.4 discusses previous analyses of CA, and demonstrates why the Frisian and Limburgian data are problematic for them.

2.1 Frisian

Starting with the Frisian data, Frisian has CA for 2SG (2).[1] In a context where the complementizer and the subject are adjacent (and the embedded clause is not a V2 clause; cf. below), CA is obligatory, as illustrated in (3).[2]

(2) dat-st-o [. . .] fegetarysk ytst
that-2SG-you vegetarian eat.2SG
'that you eat vegetarian'

(3) a. Ik hoopje dat-st-o ek komst.
I hope that-2SG-you also come.2SG
'I hope that you will come too.'

b. * Ik hoopje dat do ek komst.
I hope that you also come.2SG
'I hope that you will come too.' (van der Meer 1991, 67, 69)

When a focus particle intervenes between the complementizer and the 2SG subject, the structure becomes ungrammatical, both in the presence of CA (4b) and its absence (4c) (see de Haan 2010 for similar data). Intervention of a whole constituent in addition to a focus particle also leads to ungrammaticality (4d, e).

(4) a. dat-st-o [. . .] fegetarysk ytst
that-2SG-you vegetarian eat.2SG
'that you eat vegetarian'

b. * dat-st ek do [. . .] fegetarysk ytst
that-2SG also you vegetarian eat.2SG
'that you, too, eat vegetarian'

c. * dat ek do [. . .] fegetarysk ytst
that also you vegetarian eat.2SG
'that you, too, eat vegetarian'

d. * dat-st dizze film sels do noch net sjoen hast
that-2SG this movie even you yet not seen has.2SG
'that even you haven't seen this movie yet'

[1] The full 2SG pronoun in Frisian is *do*, but in CA contexts, CA and the pronoun are realized as *sto*. In the presentation of the examples, I gloss *st* as the CA morpheme and *o* as the pronoun. I assume with de Haan (2010) that the underlying sequence is *st-do*, which undergoes progressive assimilation and degemination, resulting in *sto*. For further discussion of this issue, I refer the reader to Visser (1988), van der Meer (1991), and de Haan (1994).

[2] The Frisian examples that are not taken from previous literature are elicited from a native speaker, and confirm the pattern that has been reported in the literature; see in particular de Haan (2010).

e. * dat dizze film sels do noch net sjoen hast
that this movie even you yet not seen has.2SG
'that even you haven't seen this movie yet'

It is not the case that Frisian does not allow intervention of a focus particle between the complementizer and the subject at all. Example (5) illustrates that this configuration is fine with 1SG and 3SG subjects.

(5) dat sels ik/Jan komme soe.
that even I/Jan come will
'that even I/Jan will come.'

Furthermore, the ungrammaticality of (4b–e) is not due to a special ban on modification of 2SG subjects in embedded clauses with a focus particle. Frisian allows embedded V2 under a complementizer, but in this context, CA cannot occur; see (6).[3] As example (7) illustrates, the 2SG subject of an embedded V2 clause can be modified by a focus particle. Intervention of a focus particle between a complementizer and a 2SG subject in Frisian is therefore possible, except when there is also CA.

(6) Heit sei, dat-(*st) do moast soks net leauwe.
father said that-2SG you must.2SG such not believe
'Father said that you shouldn't believe such things.'
(van der Meer 1991, 71)

(7) dat ek do ytst al fegetarysk.
that also you eat.2SG already vegetarian
'that you, too, eat vegetarian'

These facts strongly suggest that the ungrammaticality of (4b–e) is related to the CA configuration: when something intervenes between the complementizer and the subject in a context that would require CA, CA cannot be inserted, leading to ungrammaticality.

2.2 Limburgian

Next, we turn to the Limburgian data.[4] Like Frisian, Limburgian has obligatory CA with 2SG subjects, as (8) illustrates.

[3] As shown by de Haan (2001), Frisian V2 clauses that are embedded under a complementizer show very little connection to the main clause. For instance, extraction from the embedded clause into the main clause is impossible, as is binding from outside of the embedded V2 clause. For this reason, de Haan analyzes embedded V2 under a complementizer in Frisian as an embedded root phenomenon. The "complementizer" in this construction is in fact a coordinator and not part of the embedded clause. This explains why there is no CA: there is no complementizer to begin with.

[4] The Limburgian data are from elicitations with two native speakers of a southern Limburgian dialect. The data differ from Tegelen Dutch as discussed by van Koppen (2005), which is also a variety of Limburgian. Since Tegelen is located in the north of the province Limburg, and my informants are from the south, I assume for now that the variation between the data in this paper and the Tegelen Dutch data is due to regional differences within Limburg, but further research is necessary to confirm this. All the data from other sources that I refer to as "Limburgian" also come from southern Limburgian varieties.

(8) a. dat-s-tich de westrijd geis winne
that-2SG-you the game go.2SG win
'that you are going to win the game'

b. * dat dich de westrijd geis winne
that you the game go.2SG win
'that you are going to win the game'

When an element, such as a focus particle, intervenes between the complementizer and the subject, the CA morpheme is realized not on the complementizer but between the focus particle and the subject (9a). The size of the intervening material does not matter: in (9b), both a topicalized object and a focus particle intervene between the complementizer and the subject, and in (9c), both an adverb and a focus particle intervene; in both cases, the CA morpheme is realized to the right of the focus particle.[5] Note that in Limburgian, *dich* and *doe* are in (apparent) free variation as 2SG subject pronouns.

(9) a. dat auch-s-tich waal ens vegetarisch uts
that also-2SG-you sometimes vegetarian eat.2SG
'that you, too, sometimes eat vegetarian'

b. dat zo'n boek allein-s-tich in 't openboar lus
that such.a book only-2SG-you in the public read.2SG
'that only you would read such a book in public'

c. dat messchien auch-s-toe een andere baan geis zeuke
that maybe also-2SG-you a other job go.2SG look.for
'that maybe you, too, will look for another job'

The 2SG morpheme *-s* attaches to a focus particle exclusively in sentences where the subject follows a complementizer. As illustrated in (10), in sentences where the subject follows the inflected verb, the 2SG morpheme attaches to the verb. This is also the case when there is intervening material between the verb and the subject. Furthermore, example (11) shows that *-s* cannot attach to a focus particle that modifies a sentence-initial subject. These examples show that it is not the case that *-s* is inserted between a focus particle and the 2SG subject by default, as some kind of epenthesis; the syntactic context of embedding is relevant.

(10) a. Murge gei-s-toe de westrijd winne.
tomorrow go-2SG-you the game win
'Tomorrow you are going to win the game.'

b. Volgens Jan ut-s auch doe waal ens vegetarisch.
according.to Jan eat-2SG also you sometimes vegetarian
'According to Jan, you, too, sometimes eat vegetarian.'

[5] When the intervener is larger than just a focus particle, CA is optional. At the moment, I do not have an account for this.

c. Volgens mich hub-s heilaas auch doe geen pries
according.to me have-2SG unfortunately also you no price
gewonne.
won
'According to me, you, unfortunately, also didn't win a price.'

(11) * Auch-s-tich uts waal ens vegetarisch.
also-2SG-you eat.2SG sometimes vegetarian
'You, too, sometimes eat vegetarian.'

The morpheme *-s* is also not an inherent part of the subject itself. Example (12) shows that a sentence-initial subject cannot be preceded by *-s*.[6]

(12) * S-tich/s-toe dè de wedstrijd geis winne
2SG-you/2SG-you that the game go.2SG win
'You, who will win the game'

2.3 CA in other West Germanic varieties

Frisian and Limburgian behave differently with respect to the intervention effect on CA than the other varieties that have been discussed in the literature on CA. In this section, I will briefly show what the other observed patterns are.

In the first set of West Germanic languages with CA, intervention between the complementizer and the subject does not affect the realization of CA; the complementizer has agreement despite the presence of an intervening element. Varieties that behave this way are Bavarian (Bayer 1984; Gruber 2008), Tegelen Dutch (a variety of Limburgian; see fn. 4) (van Koppen 2005), and West Flemish (Haegeman 1992; Haegeman and van Koppen 2012), illustrated below.

(13) dass-st auch du an Hauptpreis gwunna hosd
that-2SG also you the first.prize won have.2SG
'that you, too, have won the first prize'
Bavarian (van Koppen 2005, 144)

[6]The reviewers ask what happens (both in Frisian and Limburgian) when the intervener consists of just a fronted object or adverb, with no focus particle preceding the subject. The word order C–O/Adv–S is the result of focus scrambling over the subject; it is somewhat marked and requires a specific prosody that indicates that the subject is focus (see e.g. Neeleman and van de Koot 2008 on Dutch, and J. Hoekstra 2014 on Frisian). In Limburgian, the word order C–O/Adv–S is possible when the subject is preceded by a focus particle, but if there is no focus particle, this word order is extremely unnatural and would not be used, according to the speaker I consulted. This is the case both with 2SG and 3SG subjects, so unrelated to CA. In Frisian, the word order C–O/Adv–S is possible when the subject is stressed (J. Hoekstra 2014). I assume that this is due to the presence of a covert focus operator that is in the same structural position as overt focus operators such as *only* and *also*. In Sect. 4.4, I propose that the element that causes the ungrammaticality of intervention in Frisian is the focus particle. The prediction is that a covert focus operator would cause the same type of ungrammaticality, and this is borne out, given (i).

(i) * Hy leaude dat-st/dat moarn do komme soest.
he believes that-2SG/that tomorrow you come should.2SG
'He believed that you should come tomorrow.' (Fuß 2008, 85)

(14) de-s auch doow merge kums
that-2SG also you tomorrow come.2SG
'that you, too, will come tomorrow'
Tegelen Dutch (van Koppen 2005, 144)

(15) Kpeizen da-n zelfs men broers zuknen boek niet lezen.
I.think that-PL even my brothers such.a book not read.PL
'I think that even my brothers do not read such a book.'
West Flemish (Haegeman and van Koppen 2012, 446)

Bavarian and Tegelen Dutch are similar to Frisian and Limburgian in that they have CA for 2SG. In addition, Bavarian has CA for 2PL and, in Lower Bavarian, 1PL (Bayer 1984). West Flemish is unique in that it has a full CA paradigm (Haegeman 1992). I return to the differences between these varieties on the one hand (in particular Tegelen Dutch and Bavarian) and Frisian and Limburgian on the other hand in fn. 17.

The other type of intervention effect is found in Hellendoorn Dutch, a Dutch Low Saxon variety. In Hellendoorn Dutch, intervention results in the complete absence of CA:

(16) a. darr-e wiej den besten bint!
that-1PL we the best are.PL
'that we are the best!'
b. dat zölfs wiej de westrijd wint
that even we the game win.PL
'that even we win the game'
Hellendoorn Dutch (van Koppen 2005, 110, 143)

Hellendoorn Dutch differs from the other varieties with CA on some other points as well. First of all, it only has CA for 1PL, and not for 2SG as all the other varieties have. Furthermore, Hellendoorn Dutch is a position-dependent agreement language, meaning that agreement on a verb that follows the subject is different than agreement on a verb that precedes the subject, or on a complementizer: in the word order C/V–S, the agreement morpheme is *-ə*, whereas the S–V word order leads to *-t* agreement, as can be seen on the sentence-final verbs in (16). On the relation between position-dependent agreement and CA, see Zwart (1997), van Koppen (2005), and Sect. 3.

To sum up, West Germanic varieties can respond in four different ways to intervention between an agreeing complementizer and the subject. First, in existing literature it has been observed that in for example Bavarian and Tegelen Dutch, CA is not affected by intervention, and that in Hellendoorn Dutch, CA disappears under intervention. The current paper shows that there are two additional intervention effects: in Frisian, intervention leads to ungrammaticality, and in Limburgian, intervention causes the CA morpheme to be realized between the intervener and the subject.

2.4 Problems for previous analyses

In previous literature on CA, two types of analyses have been proposed, which make different predictions regarding intervention effects (see van Koppen 2017 for a recent

overview). I will discuss them here, and show that they cannot account for the Frisian and Limburgian data from Sects. 2.1 and 2.2.

According to the first type of analysis, CA is the spellout of an Agree relation (Carstens 2003; van Koppen 2005; Haegeman and van Koppen 2012). The idea is that C^0 is a φ-probe that agrees with the subject in Spec,TP. The valued φ-features on C^0 are spelled out as inflection on the complementizer. This analysis is well-suited to account for languages where CA is not affected by intervention, such as Bavarian, Tegelen Dutch, and West Flemish (see the previous section); an intervening element should not affect the Agree relation between the probe C^0 and the subject in Spec,TP, because the hierarchical relationship between the probe and the subject remains the same. The Agree analysis of CA thus predicts that CA is not affected by intervention.

The second type of analysis takes CA to be the result of a PF operation, such as PF feature checking (Ackema and Neeleman 2004), feature copying (Fuß 2008, 2014), or allomorphy (Weisser 2019). An important aspect of the approaches by Ackema and Neeleman (2004) and Weisser (2019) is the requirement that the subject be linearly adjacent to the complementizer.[7] For this reason, these analyses work well for varieties where intervention leads to the absence of CA, such as Hellendoorn Dutch, discussed in the previous section. The intervening element disrupts the linear adjacency between the complementizer and the subject, and this blocks the application of the PF operation that leads to CA.

Although the Agree and PF analyses of CA are successful in deriving the intervention effects that are discussed in Sect. 2.3, the Frisian and Limburgian data pose problems for both of them. Recall that in Frisian, disrupting the adjacency between the complementizer and the 2SG subject with a focus particle, in contexts that would otherwise trigger CA, leads to ungrammaticality (illustrated in (17), repeated from (4b, c)). This is unexpected if CA is the spellout of valued features on C^0, as linear adjacency is not a requirement for Agree to succeed.[8] In fact, when a focus particle intervenes between an agreeing verb and a non-2SG subject, agreement succeeds even in Frisian. This is illustrated in (18), where the verb can agree with a 3SG or 3PL subject despite the presence of an intervening focus particle. The contrast with (17) is not due to the fact that the agreeing element is a verb instead of a complementizer, as (19) shows that 2SG agreement on verbs also fails under intervention.

(17) * dat-(st) ek do [. . .] fegetarysk ytst
that-(2SG) also you vegetarian eat.2SG
'that you, too, eat vegetarian'

[7] The analysis by Fuß (2008, 2014) is different, as it assumes that the features that lead to CA are copied from the verb. The prediction is therefore that absence of the verb should lead to the absence of CA. Presence or absence of the verb is not a variable that is relevant in structures with intervention between the complementizer and the subject in Frisian and Limburgian, so I will not consider this analysis further.

[8] One exception is that in Tsez, adjacency between agreement target and controller is a requirement for closest conjunct agreement (Benmamoun et al. 2009). However, this requirement does not hold for agreement in Tsez across the board: Tsez famously allows long distance agreement (Polinsky and Potsdam 2001). Furthermore, adjacency is not a condition for closest conjunct agreement in all languages; see for example Bhatt and Walkow (2013) on Hindi-Urdu. I therefore think it is reasonable to attribute the adjacency property of closest conjunct agreement in Tsez not to the conditions on Agree but to some other factor specific to closest conjunct agreement in Tsez.

(18) a. Miskyn giet sels hy Jan helpen.
maybe go.3SG even he Jan help
'Even he is maybe going to help Jan.'

b. Miskyn sille sels sy Jan helpen.
maybe will.PL even they Jan help
'Even they are maybe going to help Jan.'

(19) * Neffens Jan giest sels do net nei it feest.
according.to Jan go.2SG even you not to the party
'According to Jan, even you are not going to the party.'

I conclude that CA in Frisian (as well as 2SG verbal agreement) differs from regular subject-verb agreement, in that it requires the complementizer and the subject to be adjacent. Since this is not typical for an Agree relation, it is unlikely that CA in Frisian is the spellout of an Agree relation on C^0.

In Limburgian cases of intervention between the complementizer and the subject, the CA morpheme does not attach to the complementizer, but between the subject modifier and the subject itself ((9a, c), repeated below).

(20) a. dat auch-s-tich waal ens vegetarisch uts
that also-2SG-you sometimes vegetarian eat.2SG
'that you, too, sometimes eat vegetarian'

b. dat messchien auch-s-toe een andere baan geis zeuke
that maybe also-2SG-you a other job go.2SG look.for
'that maybe you, too, will look for another job'

These data are also problematic for Agree approaches to CA. Under these approaches, the complementizer is the target of Agree. The expectation is that the valued features are spelled out on the complementizer, and not on an element elsewhere in the structure, as is the case in Limburgian.

A potential solution to this problem is that the agreement morpheme and an adjacent syllable undergo metathesis, such as in Harris and Halle's (2005) approach to mesoclisis in Spanish imperatives. While this would derive (20a), it cannot derive cases where the intervening material is comprised of multiple syllables or even phrases, such as (20b). Since the CA morpheme always occurs between the focus particle and the subject, these data show that placement of the CA morpheme is structurally, not linearly (i.e. phonologically), determined. I therefore conclude that CA in Limburgian is not the spellout of an Agree relation on C^0.

The Frisian and Limburgian data also pose several issues for PF accounts of CA.[9] Focusing first on Frisian, the ungrammaticality caused by the presence of an intervener between the complementizer and a 2SG subject is not accounted for by a PF approach to CA. Under a PF approach, CA is inserted at PF when the complementizer and the subject are linearly adjacent. When the complementizer and the subject are not adjacent, the configuration for the application of the PF rule is not met, and there-

[9]These problems have also been raised in van Alem (2020). In addition to the objections discussed here, several other arguments against PF analyses of CA have been put forth in the literature; see in particular van Koppen (2005, 2012), and Haegeman and van Koppen (2012).

fore the rule does not apply. This predicts that the complementizer is realized without agreement (Ackema and Neeleman 2004, 241); it does not predict ungrammaticality.

The Limburgian data are also problematic for PF accounts of CA, as they show that while the complementizer is the trigger for insertion of CA, it is not always the complementizer that undergoes the adjustment. Instead, in Limburgian, the CA morpheme is realized between the intervener and the subject. This clearly shows that we are not dealing with a PF operation that targets the complementizer, so this type of analysis does not work for Limburgian.

3 The CA morpheme is a clitic

In the previous section, I introduced the data on CA in Frisian and Limburgian and showed that the intervention effects do not follow from analyses that take CA to be the spellout of an Agree relation or the result of a PF operation. This section focuses in detail on the morphosyntactic and morphological properties of the CA morpheme. Based on these properties, I conclude that the CA morpheme is a subject clitic.[10]

Before getting into the data, let me make explicit what I understand a clitic to be and how it differs from an affix. Following earlier work on pronominal subject clitics in nonstandard varieties of Dutch (Haegeman 1990, 1992; van Craenenbroeck and van Koppen 2008), I take a CA clitic in Frisian and Limburgian to be the morpho-

[10]The idea that the CA morpheme has clitic-like properties is not entirely new. For instance, van der Meer (1991) analyzes CA in Frisian as clitic doubling from a diachronic perspective (see also Nübling 1992 and Gruber 2008 for Bavarian). De Haan (2010), on the other hand, explicitly argues against a clitic analysis of CA in Frisian, based on three arguments. The first two arguments concern the distribution of the CA morpheme compared to the 3SG pronoun *er* 'he.' While *er* can be reduced in backwards conjunction reductions, the CA morpheme cannot (i). Furthermore, the CA morpheme can appear as the trace of A-bar movement, while the 3SG morpheme *er* cannot (ii).

(i) a. hoe-t en wannear-t er hjir komt
how-that and when-that 3SG here comes
'how and when he comes here'

b. * hoe-t en wannear-t-st hjir komst
how-that and when-that-2SG here come
'how and when you come here' (de Haan 2010, 219)

(ii) a. Do tink ik dat-st moarn komme silst.
you think I that-2SG tomorrow come will.2SG
'You, I think, will come tomorrow.'

b. * Hy tink ik dat er moarn komme sil.
he think I that 3SG tomorrow come will
'He, I think, will come tomorrow.' (de Haan 2010, 219–220)

De Haan claims that the 3SG pronoun *er* is a clitic. Since the CA morpheme has a different distribution than *er*, the CA morpheme cannot be a clitic. The premise of this argument is that *er* is a clitic, but this is not sufficiently motivated. For instance, *er* is never used as a double of the full pronoun *hy* 'he,' which makes it look more like a weak pronoun (Cardinaletti and Starke 1999).

The third argument against a clitic analysis of the CA morpheme that de Haan puts forth is that it can appear without an overt subject pronoun. De Haan takes this to mean that *-st* licenses *pro*-drop, which he sees as evidence that the CA morpheme is an inflectional morpheme. I will argue for a different interpretation of this observation below.

logical realization of a phrase that is phonologically dependent on another element (the host).[11] An affix, on the other hand, is the morphological exponent of features on a head (in this case, C^0). Based on these definitions, we expect clitics and affixes to show a different distribution, and a difference in sensitivity to what happens to the C^0 head. I discuss five properties exemplifying these differences below.[12]

The first observation regarding the CA morpheme is that it can appear on verbs and complementizers without an additional subject pronoun in Frisian (as well as in some other varieties with CA, such as Bavarian: see Fuß 2004). This is illustrated in (21).

(21) a. dat-st de wedstriid winne silst
that-2SG the game win will.2SG
'that you will win the game'

b. Miskien moat-st my helpe.
maybe must-2SG me help
'Maybe you should help me.' (de Haan 2010, 216)

The standard interpretation in the literature is that examples like the ones in (21) show that Frisian has (partial) *pro*-drop (de Haan 2010; Koeneman and Zeijlstra 2019; Slofstra and E. Hoekstra 2021). Under this interpretation, the 2SG (CA) morpheme is an affix that is strong enough to license a *pro* subject. There are several reasons to doubt this interpretation. First, while the 2SG morpheme is unique in the verbal paradigm, it is not the only morpheme for which this is the case. For instance, 3SG agreement also corresponds to a unique suffix, but *pro*-drop of 3SG subjects is not allowed:

(22) Kom-t *(er) jûn?
come-3SG he tonight
'Is he coming tonight?' (Zwart 1993, 165)

Second, the restriction that only 2SG subjects may be dropped does not fit in the typological picture of partial *pro*-drop. Partial *pro*-drop is attested in several non–West Germanic languages, but these other languages with partial *pro*-drop show a participant-based split, such that first and second persons group together to the exclusion of third persons. For example, in Finnish and Hebrew, first and second person pronouns can be dropped, while third person pronouns cannot (Vainikka and Levy 1999).

For these reasons, I conclude that the *pro*-drop analysis is incorrect, and that the 2SG morpheme is not an affix. Instead, I propose that in the examples in (21), the 2SG

[11] This does not mean that all clitics are phrases. Presumably, there are also clitics that are heads (at some point in the derivation); see among others Roberts (2010), Nevins (2011), Baker and Kramer (2018), and Preminger (2019). "Clitic" is then a cover term for different types of elements that are not affixes, but phonologically dependent on another element.

[12] The recent literature on object clitic doubling discusses several other diagnostics for clitic doubling versus agreement. For example, Preminger (2009) argues that failed clitic doubling leads to the absence of a clitic, whereas failed agreement leads to default morphology. Harizanov (2014), Kramer (2014), and Baker and Kramer (2018) propose that clitic doubling extends the binding domain of the argument, whereas agreement does not. Both diagnostics require that the clitic-doubled argument is not the highest argument in the sentence, but this condition is never met for 2SG subjects in Frisian and Limburgian. These diagnostics therefore cannot be applied to the CA morpheme.

morpheme itself is the subject. More specifically, the 2SG morpheme is a pronominal clitic in the subject position, and it takes the preceding verb or complementizer as its host. This interpretation of the examples in (21) explains the contrast between the 2SG morpheme and the 3SG morpheme regarding their ability to appear without an additional overt subject: the 3SG morpheme is an affix, so an overt subject is required, while the 2SG morpheme is a clitic and can be used as the subject itself. It also explains why Frisian behaves differently from other languages with partial *pro*-drop, since Frisian does not have partial *pro*-drop.[13]

The second observation about the CA morpheme is that it has a low degree of host selectivity; that is, the CA morpheme in Frisian and Limburgian attaches not only to verbs and subordinating complementizers but also to wh-words (23), wh-phrases (24),[14] relative pronouns (25), comparative complementizers (26),[15] and focus particles ((27), repeated from (9b)).

(23) CA on wh-words

a. Ik wit net hoe-st-o dat bedoelst.
I know not how-2SG-you that mean.2SG
'I don't know how you mean that.' Frisian (van der Meer 1991, 64)

b. Iech wil waete wienie-s te gaes.
I want know when-2SG you go.2SG
'I want to know when you are leaving.'
Limburgian (E. Hoekstra and Smits 1997, 11)

(24) CA on wh-phrases

Iech wil waete wievöl geld-s te höbs.
I want know how.much money-2SG you have
'I want to know how much money you have.'
Limburgian (E. Hoekstra and Smits 1997, 11)

(25) CA on relative pronouns

a. Grutte omkoal, dyt-st biste!
big dullard that-2SG are.2SG
'Such a dullard you are.' Frisian (J. Hoekstra 1997, 80)

b. Det is eine man woo-s-te neit van op aan kèns.
that is a man who-2SG-you not of on on can.2SG
'That is a man that you cannot count on.'
Limburgian (van der Sijs 2019)

[13] In Sect. 4.2, I discuss why the Limburgian CA morpheme cannot be used as the subject pronoun.

[14] CA on wh-phrases cannot be demonstrated in Frisian, because wh-phrases always co-occur with a complementizer, as in the following example:

(i) Ik wol wite hoefolle jild a-st-e hast.
I want know how.much money if-2SG-you have.2SG
'I want to know how much money you have.' (E. Hoekstra and Smits 1997, 11)

[15] The glossing of (26) as containing CA is supported by van der Meer (1991) and Fuß (2014).

(26) CA on comparative complementizers

a. Ik bin grutter as-st-o bist.
I am bigger than-2SG-you are.2SG
'I am bigger than you.' Frisian (van der Meer 1991, 65)

b. Du geloofst zeker niet dat er sterker is wie-s-tu.
you believe.2SG surely not that he stronger is than-2SG-you
'You surely don't believe that he is stronger than you.'
Limburgian (van Koppen 2017, 5)

(27) CA on focus particles

a. dat auch-s-tich waal ens vegetarisch uts
that also-2SG-you sometimes vegetarian eat.2SG
'that you, too, sometimes eat vegetarian'

b. dat zo'n boek allein-s-tich in 't openboar lus
that such.a book only-2SG-you in the public read.2SG
'that only you would read such a book in public' Limburgian

Zwicky and Pullum (1983) take a low degree of host selectivity to be a property of clitics. The low degree of selectivity of the CA morpheme follows if it is a clitic in an independent syntactic position; it does not attach to an element of a particular category, rather it takes whatever precedes it as its phonological host. An affix, on the other hand, realizes the features of a head of a particular category, so it will only show up on heads of that category (e.g. verbs).

The next three observations concern the CA morpheme's morphological properties in its use as a verbal morpheme, in comparison to other (verbal) agreement morphemes in Frisian and Limburgian. The motivation for looking at 2SG verbal morphology is as follows. First, 2SG CA and 2SG verbal morphology are identical in Frisian and Limburgian. Second, like in the other continental West Germanic asymmetric V2 languages, the Frisian and Limburgian verb can be realized in the same structural position as the complementizer, that is, C^0 (den Besten 1989; Zwart 1997). As demonstrated above, the CA morpheme is insensitive to the category of the element that it attaches to, so there is no reason to believe that the 2SG morpheme that shows up on verbs in C^0 is a different morpheme than the 2SG CA morpheme. In fact, in Frisian, intervention between a verb and a 2SG subject gives rise to the same effect (i.e. ungrammaticality) as intervention between a complementizer and a subject, as illustrated in (19), repeated below:

(28) * Neffens Jan giest sels do net nei it feest.
according.to Jan go.2SG even you not to the party
'According to Jan, even you are not going to the party.'

The parallel behavior of verbal agreement and CA with respect to intervention follows if the same 2SG morpheme and the same structural configuration are involved.[16]

[16]The parallel between verbal morphology and CA regarding intervention does not extend to Limburgian. In Limburgian clauses with CA, intervention causes the CA morpheme to be realized on the intervener

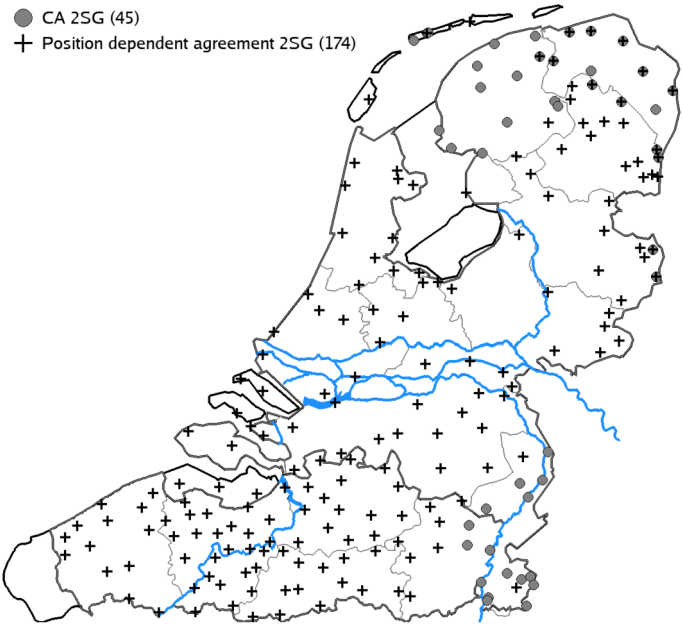


Fig. 1 CA and position-dependent agreement (based on paradigm for *leven* 'to live') in the Dutch language area. All data from Barbiers et al. (2006).

The first of these three observations concerns a prominent phenomenon in the agreement system of Dutch dialects, namely position-dependent agreement (Zwart 1993; Ackema and Neeleman 2003; van Koppen 2005; Don et al. 2013; van Alem 2023). Position-dependent agreement refers to verbal agreement that varies depending on the word order of the verb and the subject. The phenomenon is illustrated for Standard Dutch in (29).

(29) a. jij werk-t
you work-2SG

b. werk-Ø jij
work-Ø you

Position-dependent agreement with 2SG subjects is extremely frequent in the Dutch language area. Crucially, however, we do not find position-dependent agreement for 2SG in Frisian and Limburgian. Put differently: the CA morpheme in Frisian and Limburgian is never part of a position-dependent agreement alternation. This is most compellingly illustrated using a map: see Fig. 1. The Frisian language area in

instead of the complementizer. 2SG verbal morphology does not show this behavior under intervention and is realized on the verb. I tentatively suggest that in Limburgian the morpheme *-s* corresponds to two lexical entries, a clitic and a suffix. When both the clitic and the suffix are present in the structure, one of them undergoes haplology, such that only one morpheme is realized. In structures with intervention between the verb and the subject, the clitic that attaches to the intervener is elided; in structures without intervention, the verbal suffix and the 2SG clitic are adjacent, so we cannot tell based on the phonology which of the two is elided. However, as I show below, the properties of the 2SG morpheme that attaches to verbs in Limburgian are compatible with it being a clitic, so it seems likely that the verbal suffix elides when the suffix and the clitic are adjacent.

the northwest and the Limburgian language area in the southeast have CA for 2SG but do not have position-dependent agreement for 2SG.

This pattern can be understood if we take the CA morpheme in Frisian and Limburgian to be a clitic. The reasoning is as follows. Position-dependent agreement is typically analyzed as partial (syntactic) agreement (e.g. van Alem 2023) or as the impoverished spellout of agreement (e.g. Ackema and Neeleman 2003). Under both of these approaches, the agreeing head ends up with a reduced number of features, which affects the choice of the suffix that is inserted. If the CA morpheme were an affix, there is nothing that would prevent it from being affected by the same process of partial agreement or impoverished spellout. However, if the CA morpheme is a pronominal clitic, the prediction is that it should not be affected by the operation that results in position-dependent agreement, because the clitic is a phrase that is independent of the head. The observed pattern in Fig. 1 corresponds to the interpretation that the CA morpheme is a clitic.

The next observation about CA morphemes is that they are tense-invariant. This is a general property of CA morphemes in continental West Germanic languages, as expressed in E. Hoekstra and Smits's (1997) "agreement in present tense = agreement in past tense" generalization:

(30) **The "agreement in present tense = agreement in past tense" generalization**
Complementizer agreement can only occur when the agreement ending of the verb in inversion in the present tense is identical to the ending of the verb in inversion in the past tense.
(E. Hoekstra and Smits 1997, 23, translated from Dutch)

An example illustrating tense invariance of the 2SG CA morpheme in Frisian is given in (31): the 2SG morpheme is the same in present and past tense, while the 3SG morpheme and the 2PL morpheme vary across the tenses.

(31)
a. gie-st-o
go-2SG-you
b. gie-t hy
go-3SG.PRS he
c. gean-e jim
go-PL.PRS you.PL
d. gong-st-o
went-2SG-you
e. gong hy
went he
f. gong-en jimme
went-PL.PST you.PL
(Barbiers et al. 2006)

Tense invariance is taken to be a property of clitics by Nevins (2011). In the context of CA, the lack of tense allomorphy makes sense if CA morphemes are clitics, because clitics are pronominal elements that are completely independent of tense. In contrast, (verbal) affixes attach to tensed heads, and therefore tense allomorphy is very likely to occur.

The final observation regarding the CA morpheme is that it does not show morphological irregularities that are found with other elements in the verbal paradigm. In Limburgian, some verbs undergo a vowel change when they inflect for 2SG or 3SG.

The crucial contrast is that in the 3SG context with the vowel change, the 3SG suffix is dropped, whereas the 2SG morpheme is unaffected. The pattern is illustrated in (32) (verb without vowel change) and (33) (verb with vowel change).

(32) a. werk ich (ɛ)
work I

b. werk-s-toe (ɛ)
work-2SG-you

c. werk-t her (ɛ)
work-3SG he

(33) a. help ich (ɛ)
help I

b. hulp-s-toe (ʏ)
help-2SG-you

c. hulp-Ø her (ʏ)
help-Ø he

Following Bendjaballah's (2014) analysis of umlaut in German, I assume that the vowel change in Limburgian is the realization of a nonconcatenative morpheme (e.g. a floating [+ round] feature) that expresses morphosyntactic features. Since the vowel change is restricted to the 2SG and 3SG context, we can assume that the morphosyntactic features expressed by the nonconcatenative morpheme are [2SG] or [3SG], respectively. We can understand the contrast between the 2SG morpheme and the 3SG morpheme in (32) and (33) if the 2SG morpheme is a clitic and the 3SG morpheme is an affix. In the 3SG context with vowel change, the exponent that results in the vowel change by assumption expresses 3SG features. Since the vowel change and the 3SG suffix are in complementary distribution, expressing the morphosyntactic features of the verb by means of the vowel change is apparently sufficient in Limburgian, and the 3SG suffix is not inserted. The same reasoning does not apply in the 2SG context. The 2SG features are expressed by means of the vowel change, but this does not prevent insertion of the CA morpheme. Under the clitic analysis, this follows because the CA morpheme does not expone features of the verb; instead, it is an exponent of the subject, so its realization is independent of the realization of features on the verb.

To summarize, I have presented five arguments that the CA morpheme is a clitic: in Frisian, the CA morpheme can be used as the subject, leading to apparent *pro*-drop; in Frisian and Limburgian, the CA morpheme has a low degree of selection with respect to its host; in both varieties, the CA morpheme does not show position-dependent agreement, and is tense-invariant; and finally, in Limburgian, the CA morpheme is unaffected by nonconcatenative affixation.[17]

[17] Sect. 2.4 demonstrated that CA in Tegelen Dutch and Bavarian is similar in morphological form and distribution in the paradigm to CA in Frisian and Limburgian. Yet, CA in Tegelen Dutch and Bavarian is not sensitive to intervention and may well be analyzed as agreement (following e.g. van Koppen 2005). This raises the question what sets apart CA in these two varieties from CA in Frisian and Limburgian. As far as I was able to check, CA in Tegelen Dutch and Bavarian exhibits fewer properties of clitics than CA in Frisian and Limburgian. In Tegelen Dutch (van Koppen 2005 and own data), the CA morpheme cannot be used as the subject, and there are no morphological irregularities of the (southern) Limburgian type. Bavarian has been claimed not to have a past tense (Wiltschko 2014), so tense invariance is an irrelevant property. Furthermore, according to Gruber (2008), Bavarian CA does not show morphological irregularities. Possibly, a certain number of clitic-like properties is necessary to "tip the scale" towards the CA morpheme being acquired as a clitic rather than an affix, in a Yangian fashion (Yang 2000). If this number is not reached in Tegelen Dutch and Bavarian, this allows CA in these varieties to be analyzed as agreement, explaining the insensitivity to intervention.

4 Analysis

In the previous section, I argued that the CA morpheme is a clitic. In this section, I develop an analysis of intervention effects on CA in Frisian and Limburgian based on that conclusion. First of all, in Sect. 4.1 I introduce the analysis of clitic doubling that I adopt in this paper, that of van Craenenbroeck and van Koppen (2008). According to this analysis, clitic doubling is partial copying of a full DP pronoun. The amount of structure that is copied can vary, and in Sect. 4.2 I determine the structural size of pronominal elements in Frisian and Limburgian according to Déchaine and Wiltschko's (2002) typology of pronouns. Crucially, the Limburgian CA clitic is structurally smaller than the Frisian CA clitic. In Sect. 4.3, I provide a formalization of the clitic doubling operation, and discuss restrictions on movement induced by the Subject Condition and antilocality. The resulting situation is that the clitic must move within the subject, but skip at least one maximal projection. Furthermore, I argue that intervening focus particles are also located in the extended projection of the subject. Section 4.4 demonstrates how the combination of the structural size of the CA clitic, the restrictions on movement, and the presence of an intervening focus particle come together to derive the different intervention effects on CA in Frisian and Limburgian. In short: the CA clitic in Frisian competes for the same position as the focus particle, leading to ungrammaticality when both CA and an intervening focus particle are present in the structure. In Limburgian, the CA clitic moves to a position below the focus particle, leading to the word order in which CA follows the focus particle. In Sect. 4.5, I discuss why the clitic cannot pied-pipe the subject to reach the targeted landing site.

4.1 The analysis of clitic doubling: Van Craenenbroeck and van Koppen (2008)

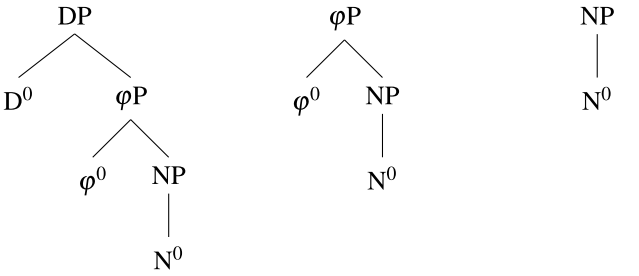
A number of analyses of clitic doubling have been proposed in the literature. Many of these analyses involve some kind of movement, such as (long) head movement (Roberts 2010; Preminger 2019) or phrasal movement combined with m-merger (Harizanov 2014; Kramer 2014). In this paper, I adopt the analysis of clitic doubling by van Craenenbroeck and van Koppen (2008), which assumes that the clitic is a displaced partial copy of the doubled DP. In contrast to many of the other analyses, van Craenenbroeck and van Koppen's deals with clitic doubling of subjects, and its empirical focus is on a variety of Dutch. If CA in Frisian and Limburgian is clitic doubling too, it is desirable that it can be analyzed using the same tools that have been proposed for other cases of subject clitic doubling in continental West Germanic languages.

Van Craenenbroeck and van Koppen (2008) discuss clitic doubling of pronominal subjects in Wambeek Dutch, illustrated for 3PL in (34). In this example, the clitic *se* doubles the strong subject pronoun *zaailn*.

(34) Ik paus da se zaailn kommen.
I think that they$_{\text{CLITIC}}$ they come
'I think that they are coming.'
Wambeek Dutch (van Craenenbroeck and van Koppen 2008, 208)

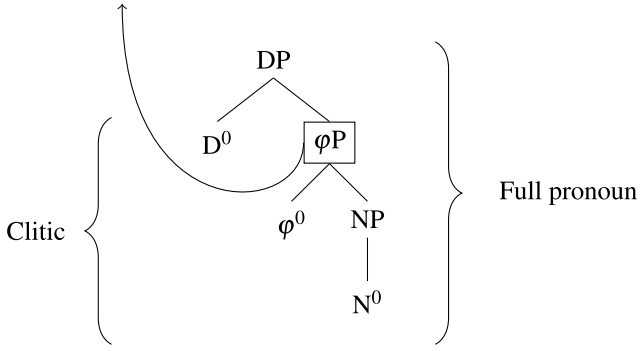
To analyze this type of clitic doubling, van Craenenbroeck and van Koppen adopt the typology of pronouns of Déchaine and Wiltschko (2002), who propose that pronouns are phrasal structures that can be divided into three categories: pro-DPs, pro-φPs, and pro-NPs (see Cardinaletti and Starke 1999 for a related proposal). These pronouns are in a containment relation to each other, as illustrated in (35). At the point of spellout, the whole pronominal structure is lexicalized by the corresponding pronoun (phrasal spellout).

(35) a. pro-DP b. pro-φP c. pro-NP



Pro-DPs, pro-φPs, and pro-NPs can be teased apart by looking at properties such as binding and argument status (see Déchaine and Wiltschko 2002; Rullman 2004). Based on a detailed study of the properties of pronominal elements in Wambeek Dutch, van Craenenbroeck and van Koppen argue that clitics are pro-φPs and doubled pronouns are pro-DPs. In order to implement this observation in their analysis, van Craenenbroeck and van Koppen argue that clitic doubling is partial copying of the strong pronoun. More specifically, the φP can be targeted for movement to a different position in the sentence. Subsequently, both copies of the pronoun are spelled out, which leads to clitic doubling: the moved φP is spelled out as the clitic, while the whole DP is spelled out as the strong pronoun. This is illustrated in (36). (Partial copying as the operation underlying syntactic doubling has also been proposed by e.g. Barbiers et al. 2010 and Boef 2013.)

(36)



Since this analysis of clitic doubling makes use of phrasal movement, it predicts that the structural size of the clitic has an effect on its syntactic behavior, as a result of general syntactic restrictions on movement. In the next subsection, I show that the structural size of the CA clitic differs between Frisian and Limburgian.

Table 1 Properties of pronouns

	Argument status	Generic reading
Pro-DP	+	–
Pro-φP	+	+
Pro-NP	–	N/A

4.2 The structural size of the CA clitic

Several diagnostics have been proposed to distinguish between pro-DPs, pro-φPs, and pro-NPs. The first diagnostic I will apply concerns argument status: pro-DPs and pro-φPs can be used as arguments, but pro-NPs cannot (Déchaine and Wiltschko 2002; van Craenenbroeck and van Koppen 2008).[18] The second diagnostic I use, based on Gruber (2017), looks at the interpretation of pronominal elements: pro-φPs allow a generic reading, while pro-DPs do not (this diagnostic cannot be applied to pro-NPs, because they cannot be used as arguments).[19] The properties of the different types of pronouns based on argument status and the availability of a generic reading are summarized in Table 1.

Frisian has three 2SG morphemes: the full pronoun *do*, a weakened form *de* (də), and the CA morpheme *-st*. *Do* and *de* can occur in the canonical subject position with *-st* present as a double (37a, b); in addition, *-st* can appear on its own ((37c, d), repeated from (21)).[20]

[18] The flip side of this diagnostic is that pro-φPs and pro-NPs can be used as predicates but pro-DPs cannot (Déchaine and Wiltschko 2002). However, there seems to be an independent constraint that forces first and second person predicates to be strong (presumably pro-DP) pronouns; this constraint holds in English (Déchaine and Wiltschko 2002) but also in Frisian and Limburgian (i). Furthermore, predicatively used pronouns have accusative case in Frisian and Limburgian (i), whereas the CA morpheme is nominative. These two properties of predicative pronouns prevent the successful application of this diagnostic to the CA morpheme.

(i) a. Ik bin dy en do bist my.
I am you.ACC and you are me.ACC
'I am you and you are me.'
Frisian (Josse de Haan, *Piksjitten op Snyp*, Chap. 131, accessed through dbnl.org)

b. Ich bèn dich en doe bès mich.
I am you.ACC and you are me.ACC
'I am you and you are me.' Limburgian

[19] Additional diagnostics consider binding and the availability of bound variable readings (Déchaine and Wiltschko 2002; Rullman 2004): pro-DPs are subject to Condition C and cannot be used as bound variables, while pro-φPs are subject to Condition B and can be used as bound variables. However, these diagnostics have been demonstrated to not always work with first and second person pronouns (Déchaine and Wiltschko 2002; Rullman 2004; Gruber 2017). Since CA is restricted to 2SG, I will not use binding and bound variable readings to determine the structural size of the CA morpheme.

[20] The examples in (37c, d) can also contain an additional full pronoun, as illustrated below:

(i) a. Miskien moat-st-o my helpe.
maybe must-2SG-you me help
'Perhaps you have to help me.' (de Haan 2010, 216)

(37) a. Do moat-st my helpe.
you must-2SG me help
'You must help me.' (de Haan 2010, 215)

b. De kinst poerbêst ite yn dat restaurant.
you can.2SG very.well eat in that restaurant
'You can eat very well in that restaurant.' (J. Hoekstra 2010, 40)

c. Miskien moat-st my helpe.
maybe must-2SG me help
'Maybe you should help me.' (de Haan 2010, 216)

d. dat-st de wedstriid winne silst
that-2SG the game win will.2SG
'that you will win the game'

It is clear that *do* and *de* can be used as arguments. In Sect. 3, I argued that *-st* in (37c, d) is the subject of the clause that cliticizes to the verb or complementizer. This means that *-st* is the argument here, and that all 2SG morphemes in Frisian are either pro-DPs or pro-φPs, in the Déchaine and Wiltschko (2002) typology.

The availability of a generic reading of the pronoun allows us to decide between these two options. J. Hoekstra (2010) and E. Hoekstra (2020) show that a generic reading is available with *-st* and *de*, but not with *do*. That is, (37b), and (38a, b) below, can receive a generic interpretation, but (38c) cannot. I conclude that *do* is a pro-DP, while *-st* and *de* are pro-φPs.

(38) a. Kinst poerbêst ite yn dat restaurant.
can.2SG very.well eat in that restaurant
'You (generic) can eat very well in that restaurant.' (E. Hoekstra 2020)

b. dat-st hurd riidst yn sa'n auto
that-2SG fast drive.2SG in such.a car
'that you (generic) drive fast in such a car'

c. dat-st do hurd riidst yn sa'n auto
that-2SG you fast drive.2SG in such.a car
'that you (specific) drive fast in such a car' (J. Hoekstra 2010, 40)

Limburgian has the following 2SG morphemes: *doe*, *dich*, *de* (də), *se* (sə), and *-s*. See (39) for examples. Except for the CA morpheme *-s*, all 2SG morphemes can be used as the subject. The morpheme *-s* must always co-occur with one of the other morphemes; if it occurs on its own, the sentence is ungrammatical (39c). I conclude that *-s* cannot be an argument by itself, and that it is therefore a pro-NP. Example (39b) illustrates that a generic reading is available for the pronouns *de* and *se*; these morphemes are therefore pro-φPs. The pronouns *doe* and *dich*, on the other hand, do not allow a generic reading, as illustrated in (39a). These pronouns are pro-DPs.

b. dat-st-o de wedstriid winne silst
that-2SG-you the game win will.2SG
'that you will win the game'

Table 2 Structural status of pronouns

	Pro-DP	Pro-φP	Pro-NP
Frisian	*do*	*de*, *st*	
Limburgian	*doe*, *dich*	*de*, *se*	*-s*

(39) a. Doe/dich kries un gooj baan es se gooje cijfers hoals.
you/you get.2SG a good job if you good grades obtain.2SG
'You (specific) will get a good job if you obtain high grades.'

b. De kries un gooj baan es se gooje cijfers hoals.
you get.2SG a good job if you good grades obtain.2SG
'You (generic) will get a good job if you (generic) obtain high grades.'

c. * Morge geis de wedstried winne.
tomorrow go.2SG the game win
'Tomorrow you will win the game.'

The structural status of each of the pronouns is summarized in Table 2. The CA morphemes are boxed for clarity.[21]

4.3 More on the syntax of clitic doubling

Having established the structural status of the CA morphemes in Frisian and Limburgian, we can now return to the analysis of CA as clitic doubling in these varieties. I propose that clitic doubling is triggered by a composite agreement and movement probe in C^0. In both Frisian and Limburgian, the probe is restricted to Agreeing with a 2SG subject, which I implement by assuming that the probe has a [∗2SG∗] agreement feature (using Heck and Müller's 2007 notation). The probe also has a movement feature that triggers movement of the clitic, represented as [•F•]. In Frisian, the CA clitic is a φP, so the movement feature in Frisian is [•φP•]. The Limburgian CA clitic is an NP, so the corresponding movement feature is [•NP•].[22] I assume that the agreement and movement features are dependent on each other, such that either

[21] As can be seen in the table, there are several instances where there are two different morphemes that have the same structural status. In the case of pro-φP in Frisian and Limburgian, this appears to be the result of allomorphy: *de* (in both Frisian and Limburgian) is used in preverbal contexts, and *-st* (Frisian) and *-se* (Limburgian) are used in postverbal contexts and when following a complementizer. The alternation between *doe* and *dich* in Limburgian cannot be treated this way, because these forms are both used pre- and postverbally and following complementizers. Instead, what appears to be relevant here is that *dich* is the accusative 2SG pronoun. Its use in nominative contexts is thus an example of a more common pattern in varieties of Dutch where an accusative pronoun is also used for nominative case (see e.g. van Bergen et al. 2011 for the same phenomenon with 3PL pronouns in colloquial Dutch, and Barbiers et al.'s 2006 DynaSAND database for examples with the 1PL pronoun in Zeeland Dutch). Why this happens, and whether *doe* and *dich* are truly in free variation, is a matter that is outside of the scope of this paper.

[22] I assume that the targeted final landing site for movement of the clitic is Spec,CP, that is, the specifier of the head that triggers the movement. From there, the clitic can undergo m-merger with the head, resulting in cliticization on C (Matushansky 2006; Harizanov 2014). However, as I will show below, the clitic actually never moves as far as Spec,CP, so the actual process of cliticization in Frisian and Limburgian is slightly different. I elaborate on this in Sect. 4.4.

both successfully discharge or both fail. This has the effect that movement is obligatorily triggered if and only if there is agreement with a 2SG subject. The complete C^0 probes in Frisian and Limburgian are given in (40).

(40) a. Frisian: C^0 [∗2SG∗, •φP•]
b. Limburgian: C^0 [∗2SG∗, •NP•]

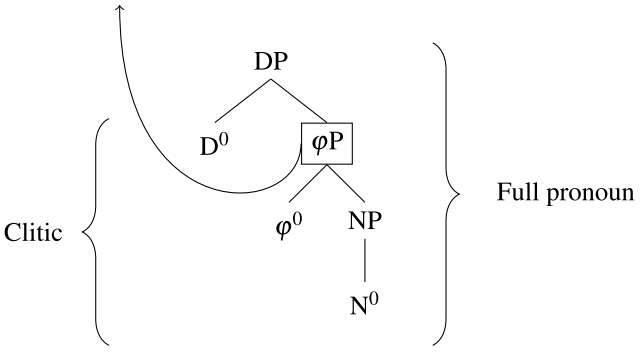
A further assumption about clitic doubling that I adopt is the requirement that clitic doubling of a DP must take place when that DP Agrees with a clitic doubling probe:

(41) If a DP has entered into an Agree relation with a clitic doubling probe, the clitic that doubles the DP must move.
(Modified from Coon and Keine 2021, 671)

Coon and Keine (2021) use this requirement in their account of the Person-Case Constraint, which rules out certain combinations of clitic objects of ditransitive verbs. Specifically, Coon and Keine argue that the ungrammatical clitic combinations arise when there is simultaneous agreement between one clitic doubling probe and two DPs (the objects). As per the requirement in (41), the clitics doubling both DPs must move; however, at every step of the derivation only one element can move, leading to a (temporary) violation of (41) and hence ungrammaticality. In other words, Person-Case Constraint–violating combinations of clitics are ruled out because there is competition between two clitics for movement. In the next subsection, I will show that the ungrammaticality of intervention with CA in Frisian is due to a similar case of competition.

In the analysis of clitic doubling by van Craenenbroeck and van Koppen (2008), adopted in this paper, the clitic that undergoes movement as the result of Agree with a clitic doubling probe is a partial phrasal copy of the subject DP. The partial copy and the subject are both spelled out, leading to doubling. The structural representation of this analysis was given in (36), and is repeated below.

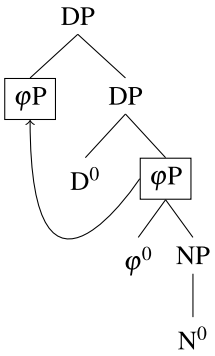
(42)



As it stands, the structure in (42) involves movement of the clitic out of the subject. However, extraction from subjects is barred because of the Subject Condition (Chomsky 1973), meaning that the movement operation depicted in (42) should be

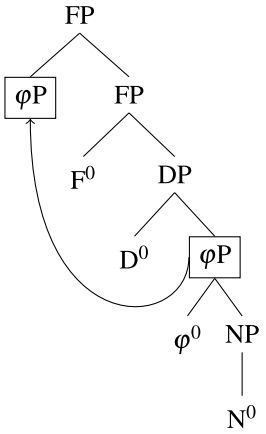
blocked.[23] To resolve this issue, movement has to apply within the DP, as in (43) (cf. van Craenenbroeck and van Koppen 2018).

(43)



The configuration in (43) introduces another issue, as it involves movement of the complement of a head to its specifier, which has been argued to be an illicit movement step, because it is too local (Abels 2003). Van Craenenbroeck and van Koppen (2008) are aware of these problems,[24] and in later work (van Craenenbroeck and van Koppen 2019) they propose that there is an additional functional layer (FP) on top of the DP. The clitic can move to the specifier of this projection without violating antilocality or the Subject Condition, as in (44) (a similar idea can be found in Béjar and Rezac 2003, who argue for a multipurpose FP under which strong pronouns are embedded).

(44)



The idea that pronominal DPs have an extended left periphery in the form of this FP finds empirical support when we look at subject modification by focus particles: a simple constituency test using V2 shows that in Frisian and Limburgian, a focus

[23] Van Craenenbroeck and van Koppen (2008) claim that the Subject Condition is not violated in (42), because the clitic and the subject are part of one movement chain that undergoes double spellout. It is not exactly clear to me how double spellout voids the problem of extraction from the derived subject position. In later work (van Craenenbroeck and van Koppen 2018), the authors seem to agree and assume DP-internal movement instead, as I do here.

[24] They mention the antilocality violation in a footnote of a manuscript version of their 2008 paper.

particle forms a constituent with the pronominal subject when it attaches to the left of it:

(45) Sels do moatst dy noait fan in faam belêze litte.
even you.NOM must.2SG you.ACC never of a girl lecture let
'Even you should never let yourself be lectured by a girl.'
Frisian (E. Hoekstra 2015)

(46) Auch doe uts waal ens vegetarisch.
also you eat.2SG sometimes vegetarian
'You, too, sometimes eat vegetarian.' Limburgian

Focus particles can only attach to pro-DP pronominal subjects, as illustrated by the ungrammaticality of (47), where the focus particle attaches to a pro-φP subject.

(47) * Auch de/se uts waal ens vegetarisch.
also you/you eat.2SG sometimes vegetarian
'You, too, sometimes eat vegetarian.' Limburgian

These observations fall into place easily under the proposal that there is an FP layer dominating the DP: the extra functional layer houses the focus particle and allows it to form a constituent with the subject, but this is only possible when the subject is projected up to DP, as only then can the FP layer be projected.

Barbiers (2010) identifies two types of focus particles in Standard Dutch (48). Class I particles are heads, whereas class II particles are phrases. Only particles of class II can attach to the left of a pronominal argument to form a constituent with it; attempting to do this with class I particles leads to strong ungrammaticality, as illustrated in (49).[25]

(48) a. Class I: *maar* ('only'), *wel* (positive polarity particle), *al* ('already')
b. Class II: *zelfs* ('even'), *ook* ('also'), *alleen* ('only')

(49) a. Alleen jij bent vegetariër.
only you are vegetarian
'Only you are a vegetarian.'

b. * Maar jij bent vegetariër.
only you are vegetarian
'Only you are a vegetarian.' Standard Dutch

While the exact inventory of particles may differ across varieties, I assume that all particles that attach to the left of pronouns are phrasal. More precisely, I propose that all particles exhibiting this behavior reside in Spec,FP.

[25] *Maar jij bent vegetariër* (49b) is grammatical under the (nonintended) reading where *maar* is a coordinating conjunction ('but').

4.4 Deriving the intervention effects on CA

In the preceding sections, I introduced the analysis of clitic doubling by van Craenenbroeck and van Koppen (2008), according to which a clitic is a phrasal partial copy of a full DP pronoun. I argued that the Frisian CA clitic is a φP and the Limburgian CA clitic is an NP, in Déchaine and Wiltschko's (2002) typology of pronouns. I also discussed two restrictions on clitic movement, specifically the Subject Condition and antilocality, which force the clitic to move subject-internally and cross at least one maximal projection. With this background in place, we can turn to the derivation of the intervention effects on CA. Starting with Frisian, recall that intervention between a complementizer and a 2SG subject leads to ungrammaticality ((50), repeated from (4)).

(50) a. dat-st-o [. . .] fegetarysk ytst
that-2SG-you vegetarian eat.2SG
'that you eat vegetarian'

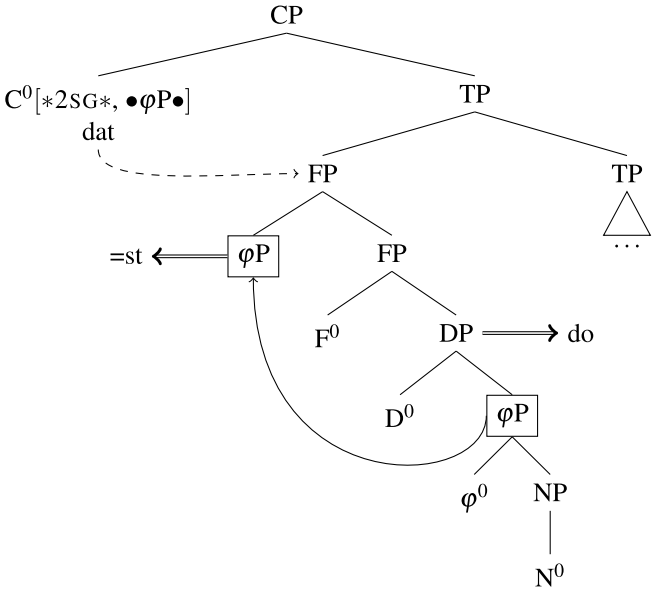
b. * dat-st ek do [. . .] fegetarysk ytst
that-2SG also you vegetarian eat.2SG
'that you, too, eat vegetarian'

c. * dat ek do [. . .] fegetarysk ytst
that also you vegetarian eat.2SG
'that you, too, eat vegetarian'

Let us first concentrate on the derivation of sentences in which there is no intervening element between the complementizer and the subject (50a). The structure corresponding to this derivation is given in (51); the dashed arrow indicates Agree, the solid arrow indicates movement. In this structure, the probe is specified for [$*$2SG$*$, $\bullet\varphi$P$\bullet$], meaning that it agrees with a 2SG subject and triggers movement of the φP substructure of that subject. The positions that the φP can move to are limited: it cannot move out of the subject because of the Subject Condition. Instead, it has to move inside the subject. There are two potential landing sites for the φP inside the clitic: Spec,DP and Spec,FP. Because movement of the φP to Spec,DP is an instance of complement-to-specifier movement, this movement step is ruled out. This only leaves Spec,FP as a possible landing site for movement of the φP, so φP moves to Spec,FP. At PF, φP is spelled out as the clitic, and DP is spelled out as the doubled full pronoun. Because the complementizer in C^0 and the φP in Spec,FP are adjacent after linearization, the clitic leans on the complementizer, giving the appearance of CA.

(51) a. dat-st-o [. . .] fegetarysk ytst
that-2SG-you vegetarian eat.2SG
'that you eat vegetarian'

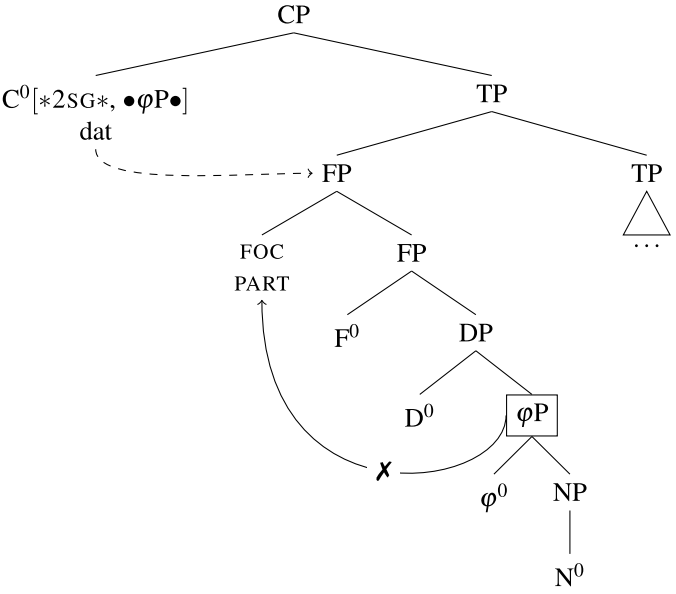
b.



In sentences in which a focus particle intervenes between the complementizer and the subject, the focus particle occupies Spec,FP, as illustrated in the structure in (52).

(52) a. * dat(-st) ek do [. . .] fegetarysk ytst
that-2SG also you vegetarian eat.2SG
'that you, too, eat vegetarian'

b.



In (52), the probe agrees with the 2SG subject and triggers movement of φP. φP cannot move out of the subject due to the Subject Condition. It also cannot move

internally to the subject to Spec,DP, because of antilocality. The only possible landing site for φP movement is Spec,FP. However, Spec,FP is already filled by the focus particle. As a result, φP cannot move. Crucially, the impossibility of movement of φP leads to a violation of the requirement that a doubled clitic must move, repeated from (41) in (53).

(53) If a DP has entered into an Agree relation with a clitic doubling probe, the clitic that doubles the DP must move.
(Modified from Coon and Keine 2021, 671)

I propose that (53) in combination with the restrictions on movement is what causes ungrammaticality in Frisian. If the φP clitic moves, it violates either the Subject Condition or antilocality, which leads to the crash of the derivation. If the φP clitic does not move, it violates (53), which also leads the derivation to crash (Coon and Keine 2021). In other words, there is no successful derivation for a structure in which a focus particle intervenes between the complementizer and a 2SG subject in Frisian. As a result, any attempt at building such a structure leads to ungrammaticality.

We now turn to the derivation of CA in Limburgian. In Limburgian, the CA morpheme attaches to the focus particle under intervention ((54), examples repeated from (8a), (9a)). The CA morpheme is a pro-NP.

(54) a. dat-s-tich de westrijd geis winne
dat-2SG-you the game go.2SG win
'that you are going to win the game'

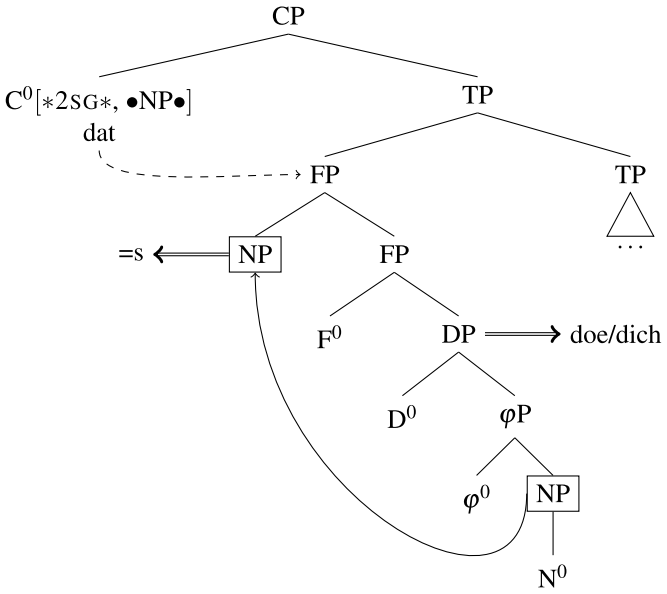
b. dat auch-s-tich waal ens vegetarisch uts
that also-2SG-you sometimes vegetarian eat.2SG
'that you, too, sometimes eat vegetarian'

The structure of a Limburgian clause without intervention is given in (55). The Limburgian C^0 probe has the features [$*$2SG$*$, $\bullet$NP$\bullet$]. It agrees with a 2SG subject, and triggers movement of the NP. Because of the Subject Condition, the NP cannot move out of the subject. Inside the subject, the NP cannot move to Spec,φP, because this would be an instance of complement-to-specifier movement and therefore would violate antilocality. However, NP can successfully move to Spec,DP or Spec,FP.[26] After linearization at PF, NP is realized as a clitic leaning onto the complementizer because they are adjacent, and DP is realized as the full pronoun.

(55) a. dat-s-tich de westrijd geis winne
dat-2SG-you the game go.2SG win
'that you are going to win the game'

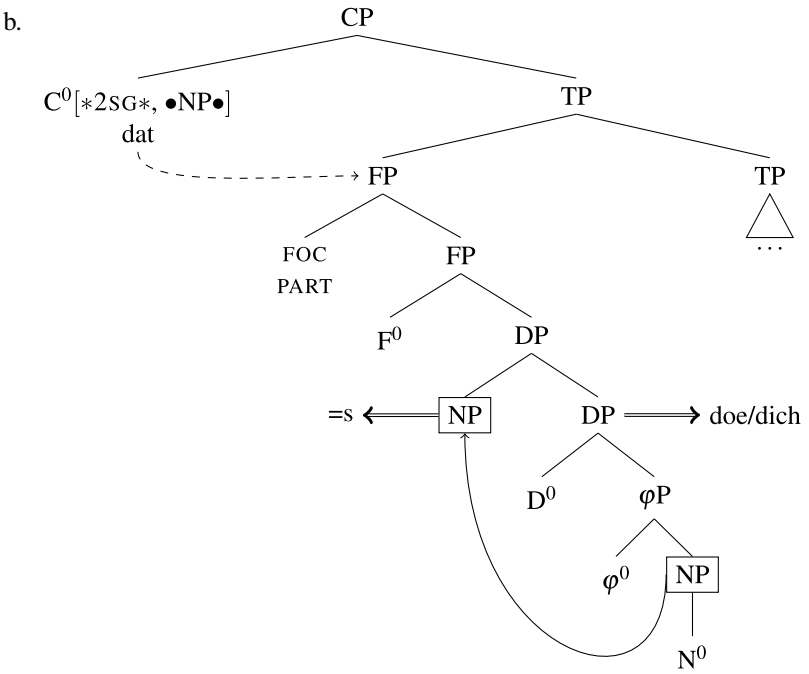
[26]Example (55) represents movement of NP to Spec,FP because I assume that NP moves as far as it can. Nothing in the analysis would change if NP actually moves to Spec,DP.

b.



When a focus particle intervenes between the complementizer and the subject in Limburgian, it occupies Spec,FP (56). When the probe enters into an Agree relation with the 2SG subject, it triggers movement of NP. As in the other derivations considered so far, NP cannot move out of the subject because of the Subject Condition. Internally to the subject, it cannot move to Spec,φP because of antilocality. Because there is a focus particle in Spec,FP, NP also cannot move to Spec,FP. However, NP can successfully move to Spec,DP: because movement of NP to Spec,DP crosses φP, there is no antilocality violation and therefore this movement step is licit. When the structure in (56) is linearized, the focus particle ends up to the right of the complementizer, but to the left of the clitic doubling NP. The NP clitic will therefore lean onto the focus particle, instead of the complementizer, leading to the surprising order of morphemes in Limburgian.

(56) a. dat auch-s-tich waal ens vegetarisch uts
that also-2SG-you sometimes vegetarian eat.2SG
'that you, too, sometimes eat vegetarian'



To summarize: in this section, I argued that the intervention effects on CA in Frisian and Limburgian follow from the proposal that clitic doubling involves partial copying of the DP pronoun (van Craenenbroeck and van Koppen 2008), combined with general restrictions on movement induced by the Subject Condition and antilocality. In Frisian clauses with intervention between the complementizer and the subject, the φP clitic cannot move out of the DP because of the Subject Condition, and cannot move within the DP because of antilocality. Ungrammaticality results from the requirement that a DP must clitic double when it is agreed with by a clitic doubling probe (following Coon and Keine 2021). In Limburgian clauses with intervention, the smaller NP clitic can move to a position below the intervening element, resulting in the noncanonical word order in which the clitic follows the intervener. The clitic doubling analysis thus provides a unified account of the different intervention effects on CA in Frisian and Limburgian.

4.5 On the lack of pied-piping

In the analysis of CA as clitic doubling presented in the previous section, the movement trigger for clitic doubling is located on C^0. The movement that is triggered should therefore target Spec,CP. I have shown that there are independent reasons why the clitic cannot move out of the subject into Spec,CP; instead, the clitic moves to a subject-internal position. Although the clitic itself cannot reach Spec,CP, there is another way in which Spec,CP could be the final landing site for movement triggered by C^0, namely pied-piping of the subject, in parallel with secondary movement and pied-piping in Mayan languages (Heck 2009). In this section I demonstrate why this is not a viable option in Frisian and Limburgian.

In Mayan languages such as Tzotzil and Chol, there are two ways to question the possessor in a possessive construction (Aissen 1996; Cable 2007; Coon 2009; Heck 2009). First, the wh-possessor can front by itself; this is illustrated for Tzotzil in (57a).[27] In addition, the wh-possessor may pied-pipe the possessed noun, as illustrated in (57b). As comparison with the non-wh-possessive phrase in (57c) shows, the order of the possessor and the possessed noun is reversed when the possessor pied-pipes the possessed noun. The idea is that the possessor undergoes intermediate or "secondary" movement inside the possessive phrase (Aissen 1996; Heck 2009).

(57) a. Buch'u$_i$ i-cham [x-cha'amal t_i]?
who CP-die A3-child
'Whose child died?'

b. [Buch'u x-ch'amal]$_i$ i-cham t_i?
who A3-child CP-died
'Whose child died?'

c. I-cham [x-ch'amal li Xun-e].
CP-died A3-child the Xun-ENC
'Xun's child died.' Tzotzil (Aissen 1996, 456–457)

The derivation of the Tzotzil question in (57b) shows a partial parallel to the derivation of CA in Frisian and Limburgian. In Frisian and Limburgian, intermediate movement of the clitic to a subject-internal position takes place, but in contrast to Tzotzil, this is not followed by pied-piping of the subject to the specifier of CP. The question is why pied-piping is excluded in Frisian and Limburgian.[28]

I suggest that the relevant difference between the Tzotzil examples in (57) and CA is the type of movement. In Tzotzil, fronting of the wh-word is an instance of A-bar movement. In contrast, there are several reasons to think that clitic doubling resulting in CA is triggered by an A-movement feature. First, clitic doubling is more generally thought to involve A-movement; see Harizanov (2014). Second, the movement trigger for CA clitic doubling is associated with 2SG features. Van Urk (2015) argues that movement triggered by φ-features is A-movement. Van Urk also observes that A-movement does not trigger pied-piping, whereas A-bar movement can freely do so, which he proposes follows in Cable's (2007) analysis of pied-piping.

According to Cable (2007), the features that are targeted by A-bar movement probes are not the features of a lexical element but features of a phrase that merges with the projection containing the lexical element. For example, in the case of wh-movement, it is not the [wh] feature on a wh-element that drives movement but the feature of a question particle head Q that merges with the phrase containing the wh-element. The merge position of Q is variable. If Q merges with the wh-phrase directly,

[27] Meaning of the glosses: A3 = third person set A affix; CP = completive aspect; ENC = enclitic.

[28] The Frisian and Limburgian pattern also goes against the generalization that secondary movement is possible only if the phrase in which secondary movement takes place moves itself (e.g. Aissen 1996). This is so because the reason for movement is different; in Frisian and Limburgian, intermediate movement is necessitated by the condition, stated in (41), that clitic doubling must take place when triggered. This condition is independent of further movement operations. In Tzotzil, secondary movement is connected to feature interpretation, and the relevant condition for feature interpretation is only met if the whole phrase moves (Aissen 1996; Cable 2007).

the outcome will be simple wh-fronting. If Q merges with a higher phrase, everything within that phrase will move, resulting in pied-piping. The variable merge position of Q (and other heads associated with A-bar movement) is crucial for its ability to pied-pipe. Van Urk (2015) proposes that the features that are associated with A-movement are obligatory in a particular structural position, and will therefore never trigger pied-piping. In the structures with CA, movement of the clitic is triggered by a φP or NP movement feature on C^0 that is dependent on φ-feature Agree. Since both the Agree feature and the movement feature target features that are obligatory in their structural position, the size of the element that moves is constant. Pied-piping of the subject to Spec,CP is therefore ruled out.

5 Concluding remarks

This paper contributes to the debate on the nature of CA in West Germanic languages, by looking at novel and understudied intervention effects in Frisian and Limburgian. In Frisian, intervention between the complementizer and the subject leads to ungrammaticality, while in Limburgian, intervention leads to the realization of CA to the right of the intervener. These effects cannot be accounted for by existing analyses of CA. I presented a new analysis of CA that can derive the intervention effects in Frisian and Limburgian, based on the proposal that it is a clitic. Adopting the idea that clitic doubling is partial copying of the subject pronoun (van Craenenbroeck and van Koppen 2008), I argued that the CA clitic can be of varying structural size. Combined with independent restrictions on movement, this allowed a unified account of the different intervention effects on CA in Frisian and Limburgian.

CA and its analysis have played a role in a wide variety of theoretical analyses of other phenomena. For example, CA has been used as support for feature transfer from C^0 to T^0 (Chomsky 2008), and more recently, it has been argued to be involved in switch reference (Arregi and Hanink 2021). The current paper demonstrates that, at least in Frisian and Limburgian, CA has a unique set of properties compared to other argument-referencing morphemes, and involves a complex derivation. An in-depth and detailed look at the empirical phenomenon is therefore necessary to gain a full understanding of CA, and the role of C^0 agreement in language more generally.

Acknowledgements For their input at various stages of the research for this paper, I wish to thank András Bárány, Sjef Barbiers, Fenna Bergsma, Lisa Cheng, Eric Fuß, Doreen Georgi, Richard Kayne, Olaf Koeneman, Marjo van Koppen, Andreas Pankau, Johannes Rothert, Timea Szarvas, Philipp Weisser, and Jan-Wouter Zwart, as well as audiences at GLOW 43, CamCos 9 New, and colloquia in Amsterdam, Leiden, Leipzig, Potsdam, and Utrecht. Thanks also to three anonymous *NLLT* reviewers, and the editor, Martin Salzmann, for their constructive feedback. I am grateful to the Frisian and Limburgian speakers I consulted for their time and effort. All errors remain my own.

Declarations

Competing Interests The author declares no competing interests.

References

Abels, Klaus. 2003. Successive cyclicity, anti-locality, and adposition stranding. PhD diss., University of Connecticut.

Ackema, Peter, and Ad Neeleman. 2003. Context-sensitive spell-out. *Natural Language and Linguistic Theory* 21(4): 681–735. https://doi.org/10.1023/A:1025502221221.

Ackema, Peter, and Ad Neeleman. 2004. *Beyond morphology: Interface conditions on word formation*. Oxford: Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199267286.001.0001.

Aissen, Judith. 1996. Pied-piping, abstract agreement, and functional projections in Tzotzil. *Natural Language and Linguistic Theory* 14(3): 447–491.

Arregi, Karlos, and Emily Hanink. 2021. Switch reference as index agreement. *Natural Language and Linguistic Theory* 40: 651–702.

Baker, Mark, and Ruth Kramer. 2018. Doubled clitics are pronouns: Amharic objects (and beyond). *Natural Language and Linguistic Theory* 36(4): 1035–1088.

Barbiers, Sjef, et al. 2006. Dynamische syntactische atlas van de Nederlandse dialecten (DynaSAND) [Dynamic syntactic atlas of the Dutch dialects]. Database. http://www.meertens.knaw.nl/sand.

Barbiers, Sjef. 2010. Focus particle doubling. In *Structure preserved: Studies in syntax for Jan Koster*, eds. Jan-Wouter Zwart and Mark de Vries, 21–30. Amsterdam: Benjamins.

Barbiers, Sjef, Olaf Koeneman, and Marika Lekakou. 2010. Syntactic doubling and the structure of wh-chains. *Journal of Linguistics* 46(1): 1–46.

Bayer, Josef. 1984. COMP in Bavarian syntax. *The Linguistic Review* 3(3): 209–274.

Béjar, Susana, and Milan Rezac. 2003. Person licensing and the derivation of PCC effects. In *Romance linguistics: Theory and acquisition*, eds. Ana Teresa Pérez-Leroux and Yves Roberge, 49–62. Amsterdam: Benjamins.

Bendjaballah, Sabrina. 2014. Remarks on nonconcatenative affixation. *Brill's Journal of Afroasiatic Languages and Linguistics* 6(1): 45–73.

Benmamoun, Elabbas, Archna Bhatia, and Maria Polinsky. 2009. Closest conjunct agreement in head final languages. In *Linguistic variation yearbook 2009*, ed. Jeroen van Craenenbroeck, Vol. 9, 67–88. Amsterdam: Benjamins.

Bhatt, Rajesh, and Martin Walkow. 2013. Locating agreement in grammar: An argument from agreement in conjunctions. *Natural Language and Linguistic Theory* 31(4): 951–1013.

Boef, Eefje. 2013. Doubling in relative clauses: Aspects of morphosyntactic microvariation in Dutch. PhD diss., Utrecht University.

Cable, Seth. 2007. The grammar of Q: Q-particles and the nature of wh-fronting, as revealed by the wh-questions of Tlingit. PhD diss., Massachusetts Institute of Technology.

Cardinaletti, Anna, and Michal Starke. 1999. The typology of structural deficiency: A case study of the three classes of pronouns. In *Clitics in the languages of Europe*, ed. Henk van Riemsdijk, 145–234. Berlin: de Gruyter.

Carstens, Vicki. 2003. Rethinking complementizer agreement: Agree with a case-checked goal. *Linguistic Inquiry* 34(3): 393–412. https://doi.org/10.1162/002438903322247533.

Chomsky, Noam. 1973. Conditions on transformations. In *A festschrift for Morris Halle*, eds. Stephen R. Anderson and Paul Kiparsky, 232–286. Holt, Rinehart and Winston.

Chomsky, Noam. 2008. On phases. In *Foundational issues in linguistic theory*, eds. Robert Freidin, Carlos P. Otero, and Maria Luisa Zubizarreta, 133–166. Cambridge: MIT Press.

Coon, Jessica. 2009. Interrogative possessors and the problem with pied-piping in Chol. *Linguistic Inquiry* 40(1): 165–175.

Coon, Jessica, and Stefan Keine. 2021. Feature gluttony. *Linguistic Inquiry* 52(4): 655–710.
de Haan, Germen. 1994. Inflection and cliticization in Frisian: *-sto*, *-ste*, *st*. *NOWELE: North-Western European Language Evolution* 23(1): 75–90.
de Haan, Germen. 2010. Complementizer agreement. In *Studies in West Frisian grammar: Selected papers by Germen J. de Haan*, eds. Jarich Hoekstra, Willem Visser, and Goffe Jensma, 215–232. Amsterdam: Benjamins.
de Haan, Germen. 2001. More is going on upstairs than downstairs: Embedded root phenomena in West Frisian. *Journal of Comparative Germanic Linguistics* 4(1): 3–38.
Déchaine, Rose-Marie, and Martina Wiltschko. 2002. Decomposing pronouns. *Linguistic Inquiry* 33(3): 409–442.
den Besten, Hans. 1989. Studies in West Germanic syntax. PhD diss., Tilburg University.
Don, Jan, Paula Fenger, and Olaf Koeneman. 2013. Microvariation as a tool for linguistic analysis. Unpublished manuscript.
Fuß, Eric. 2004. Diachronic clues to pro-drop and complementizer agreement in Bavarian. In *Diachronic clues to synchronic grammar*, eds. Eric Fuß and Carola Trips, 59–100. Amsterdam: Benjamins.
Fuß, Eric. 2008. Multiple agreement and the representation of inflection in the C-domain. *Linguistische Berichte* 2008(213): 77–106.
Fuß, Eric. 2014. Complementizer agreement (in Bavarian): Feature inheritance or feature insertion? In *Bavarian syntax: Contributions to the theory of syntax*, eds. Günther Grewendorf and Helmut Weiß, 51–82. Amsterdam: Benjamins. https://doi.org/10.1075/la.220.03fub.
Gruber, Bettina. 2008. *Complementiser agreement: New evidence from the Upper Austrian variant of Gmunden*, Master's thesis, University of Vienna.
Gruber, Bettina. 2017. Temporal and atemporal uses of 'you': Indexical and generic second person pronouns in English, German, and Dutch. *Journal of Comparative Germanic Linguistics* 20(3): 199–227.
Haegeman, Liliane. 1990. Subject pronouns and subject clitics in West-Flemish. *The Linguistic Review* 7: 333–363.
Haegeman, Liliane. 1992. *Theory and description in generative syntax: A case study in West Flemish*. Cambridge: Cambridge University Press.
Haegeman, Liliane, and Marjo van Koppen. 2012. Complementizer agreement and the relation between C0 and T0. *Linguistic Inquiry* 43(3): 441–454.
Harizanov, Boris. 2014. Clitic doubling at the syntax-morphophonology interface. *Natural Language and Linguistic Theory* 32(4): 1033–1088.
Harris, James, and Morris Halle. 2005. Unexpected plural inflections in Spanish: Reduplication and metathesis. *Linguistic Inquiry* 36(2): 195–222.
Heck, Fabian. 2009. On certain properties of pied-piping. *Linguistic Inquiry* 40(1): 75–111.
Heck, Fabian, and Gereon Müller. 2007. Extremely local optimization. In *Proceedings of the thirty-fourth Western Conference on Linguistics*, eds. Erin Bainbridge and Brian Agbayani, 170–183. Department of Linguistics, California State University, Fresno.
Hoekstra, Jarich. 1997. Pro-drop, clitisering en voegwoordcongruentie in het Westgermaans [Pro-drop, cliticization, and complementizer agreement in West Germanic]. In *Vervoegde voegwoorden*, eds. Eric Hoekstra and Caroline Smits, 68–86. Meertens Institute.
Hoekstra, Jarich. 2010. On the impersonal pronoun men in modern West Frisian. *Journal of Comparative Germanic Linguistics* 13(1): 31–59.
Hoekstra, Jarich. 2014. Sa kâld net as juster: Eat oer scrambling yn it Frysk [Not as cold as yesterday: On scrambling in Frisian]. *Us Wurk* 63(3–4): 115–154.
Hoekstra, Eric. 2015. Second person agreement and premodification. *Taalportaal*. Retrieved February 12, 2024 from https://taalportaal.org/taalportaal/topic/pid/topic-14115562574967964.
Hoekstra, Eric. 2020. Unspecific or arbitrary 3SG pronoun. *Taalportaal*. Retrieved June 4, 2020 from https://www.taalportaal.org/taalportaal/topic/pid/topic-13998813348869581.
Hoekstra, Eric, and Caroline Smits. 1997. Vervoegde voegwoorden in de Nederlandse dialecten: Wen aantal generalisaties [Inflected complementizers in Dutch dialects: Some generalizations]. In *Vervoegde voegwoorden*, eds. Eric Hoekstra and Caroline Smits, 6–30. Meertens Institute.
Koeneman, Olaf, and Hedde Zeijlstra. 2019. Morphology and pro drop. In *The Oxford encyclopedia of morphology*, ed. Rochelle Lieber. London: Oxford University Press.
Kramer, Ruth. 2014. Clitic doubling or object agreement: The view from Amharic. *Natural Language and Linguistic Theory* 32(2): 593–634. https://doi.org/10.1007/s11049-014-9233-0.
Matushansky, Ora. 2006. Head movement in linguistic theory. *Linguistic Inquiry* 37(1): 69–109.

Neeleman, Ad, and Hans van de Koot. 2008. Dutch scrambling and the nature of discourse templates. *Journal of Comparative Germanic Linguistics* 11(2): 137–189.
Nevins, Andrew. 2011. Multiple agree with clitics: Person complementarity vs. omnivorous number. *Natural Language and Linguistic Theory* 29(4): 939–971. https://doi.org/10.1007/s11049-011-9150-4.
Nübling, Damaris. 1992. *Klitika im Deutschen: Schriftsprache, Umgangssprache, alemannische Dialekte* [Clitics in German: Standard language, colloquial language, Alemannic dialects]. Tübingen: Gunter Narr.
Polinsky, Maria, and Eric Potsdam. 2001. Long-distance agreement and topic in Tsez. *Natural Language and Linguistic Theory* 19(3): 583–646.
Preminger, Omer. 2009. Breaking agreements: Distinguishing agreement and clitic doubling by their failures. *Linguistic Inquiry* 40(4): 619–666. https://doi.org/10.1162/ling.2009.40.4.619.
Preminger, Omer. 2019. What the PCC tells us about "abstract" agreement, head movement, and locality. *Glossa: A Journal of General Linguistics* 4(1): 1–42.
Roberts, Ian. 2010. *Agreement and head movement: Clitics, incorporation, and defective goals*. Cambridge: MIT Press.
Rullman, Hotze. 2004. First and second person pronouns as bound variables. *Linguistic Inquiry* 35(1): 159–168.
Slofstra, Bouke, and Eric Hoekstra. 2021. Case, deficient pronouns and the arbitrary pronoun *men* in Frisian. *Acta Linguistica Hafniensa* 53(2): 242–259.
Vainikka, Anne, and Yonata Levy. 1999. Empty subjects in Finnish and Hebrew. *Natural Language and Linguistic Theory* 17(3): 613–671.
van Alem, Astrid. 2020. Complementizer agreement is not allomorphy: A reply to Weisser (2019). *Journal of General Linguistics* 5(1): 1–10. https://doi.org/10.5334/gjgl.1069.
van Alem, Astrid. 2023. Life of Phi: Phi-features in West Germanic and the syntax-morphology interface. PhD diss., Leiden University.
van Bergen, Geertje, Wessel Stoop, Jorrig Vogels, and Helen de Hoop. 2011. Leve hun! Waarom hun nog steeds hun zeggen [Long live them! Why them still say them]. *Nederlandse Taalkunde* 16(1): 2–29.
van Craenenbroeck, Jeroen, and Marjo van Koppen. 2008. Pronominal doubling in Dutch dialects: Big DPs and coordinations. *Microvariation in Syntactic Doubling* 36: 207–249.
van Craenenbroeck, Jeroen, and Marjo van Koppen. 2018. Phase voidance through clitic movement: Clitic interactions in Dutch dialects. Unpublished manuscript, KU Leuven and Meertens Institute.
van Craenenbroeck, Jeroen, and Marjo van Koppen. 2019. Untangling microvariation: A quantitative-qualitative analysis of morphosyntactic variation in Dutch dialects. Slides of a talk at European Dialect Syntax 9, University of Glasgow.
van der Meer, Geart. 1991. The "conjugation" of subclause introducers: Frisian *-st*. *NOWELE: North-Western European Language Evolution* 17(1): 63–84.
van der Sijs, Nicoline. 2019. Vragenlijstenbank. https://www.meertens.knaw.nl/vragenlijstenbank/.
van Koppen, Marjo. 2005. One Probe, two Goals: Aspects of agreement in Dutch dialects. PhD diss., Leiden University.
van Koppen, Marjo. 2012. The distribution of phi-features in pronouns. *Natural Language and Linguistic Theory* 30(1): 135–177. https://doi.org/10.1007/s11049-011-9159-8.
van Koppen, Marjo. 2017. Complementizer agreement. In *The Wiley Blackwell companion to syntax*, 2nd edn., eds. Martin Everaert and Henk C. van Riemsdijk, 1–40. Wiley Online Library. https://doi.org/10.1002/9781118358733.wbsyncom061.
van Urk, Coppe. 2015. A uniform syntax for phrasal movement: A case study of Dinka Bor. PhD diss., Massachusetts Institute of Technology.
Visser, Willem. 1988. In pear klitisearringsferskynsels yn it Frysk [Some clitic phenomena in Frisian]. In *Wurdfoarried en wurdgrammatika, in bondel leksikale stúdzjes*, eds. Siebren Dyk and Germen de Haan, 175–222. Fryske Akademy.
Weisser, Philipp. 2019. Telling allomorphy from agreement. *Glossa: A Journal of General Linguistics* 4(1): 1–23. https://doi.org/10.5334/gjgl.803.
Wiltschko, Martina. 2014. *The universal structure of categories: Towards a formal typology*. Cambridge: Cambridge University Press.
Yang, Charles. 2000. Internal and external forces in language change. *Language Variation and Change* 12(3): 231–250.
Zwart, Jan-Wouter. 1993. Dutch syntax: A minimalist approach. PhD diss., Rijksuniversiteit Groningen.
Zwart, Jan-Wouter. 1997. *Morphosyntax of verb movement: A minimalist approach to the syntax of Dutch*. Dordrecht: Kluwer. https://doi.org/10.1007/978-94-011-5880-0.
Zwicky, Arnold M., and Geoffrey K. Pullum. 1983. Cliticization vs. inflection: English n't. *Language* 59(3): 502–513.