

## 1. Introduction.

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Baker (2005) proposes an analysis of agreement across lexical categories. Verbs project a functional projection (FP) with an EPP feature, and this feature attracts the subject to the specifier of the FP. As such, the agreement configuration occurs between a head ( $F^0$ ) and its specifier (the NP subject). Because the probe and the goal are in a spec-head configuration, the agreement configuration can inflect for person (and anaphoric)  $\phi$ -features. Adjectives, on the other hand, project an FP without an EPP feature. The probe associated with the adjective thus checks its feature via closest c-command (Chomsky 2000, 2001). The fact that this agreement is not spec-head, along with some additional assumptions, explains the fact that adjectives never agree in person.

Complementizer agreement (henceforth CA) comes in roughly two varieties (Zwart 1997): single-agreement languages are those in which the agreement morpheme on the complementizer is identical to the agreement morpheme on the verb (see (1)). Double-agreement languages are those in which the agreement morpheme on the complementizer is phonologically distinct from the agreement morpheme on the verb (see (2a)).

1. a. ...dat- $\emptyset$  ik kom- $\emptyset$  Single-agreement in *South Hollandic* (Zwart 1997:138)  
     that-1sg I come-1sg  
     b. ...datt- $e$  we komm- $e$   
     that-1pl we come-1pl
2. a. ...dad- $de$  gullie kom- $t$  Double-agreement in *Brabantish* (Zwart 1997:139)  
     that-CA<sup>1</sup> you come-2sg

In this paper, I argue that this difference in agreement morphemes reflects the difference in the configuration of agreement. This is supported by the fact that the agreement morpheme associated with the complementizer in (2a) (which I'll start referring to as 'high agreement,' as opposed to the 'low agreement' morpheme  $-t$ ) can occur on the verb.

2. b. Wanneer kom - $de$  /\*- $t$  gullie? *Brabantish* (Zwart 1997:140)  
     when come-HI /\*-LO you

Whereas prior analyses (Zwart 1997) have attributed which morpheme occurs on the verb to where the verb occurs in the construction, it seems better, in light of the observations in Baker 2005, to instead attribute the difference to the configuration between the probe and the goal. This is principally because, for all double-agreement languages, high agreement occurs on a word if that word precedes the subject, whereas low agreement occurs only when the word is in a spec-head configuration with the subject (that is, only on verbs).

Section 2 explains away some data that appears to be an instance of CA but is in fact not: West Flemish, whose weak subject pronouns cliticize onto the complementizer. Such languages are distinct from those addressed in this paper. Section 3 introduces the full paradigm of double-agreement languages and

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<sup>1</sup> Which features this complementizer agreement morpheme represents will become an issue shortly, in Section 4, so I'll just gloss it as CA (or HI, see below) for now.

draws generalizations from the data. Section 4 presents an analysis of this data based on Baker (2005), and Section 5 reviews single-agreement languages, a *prima facie* problem for the analysis. Section 6 concludes.

## 2. Weak subject cliticization.

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There is at least one Germanic language, West Flemish, whose inflection on the complementizer can be attributed to cliticization of a weak subject pronoun onto the complementizer (see Bennis & Haegeman 1984, Ackema & Neeleman 2004).<sup>2</sup> There are several reasons to think that West Flemish involves subject cliticization rather than true complementizer agreement. First, the inflection on the complementizer is phonetically similar to the pronominal subject; this is especially obvious because the inflection on the complementizer differs for the pronoun *he* and the pronoun *she* (which are both third singular, see (3c) and (3d)).

3. a. ...dan-k (ik) komen<sup>3</sup> *West Flemish* (Bennis & Haegeman 1984)  
       C-I I come  
 b. ...da-j (gie) komt  
       C-you you come  
 c. ...dat-j (ij) komt  
       C-he he comes  
 d. ...da-se (zij) komt  
       C-she she comes  
 e. ...da-me (wunder) komen  
       C-we we come  
 f. ...da-j (gunder) komt  
       C-you-pl you-pl come  
 g. ...dan-ze (zunder) komen  
       C-they they come

Second, the fact that object clitics in West Flemish can cliticize onto the complementizer argue that the complementizer in West Flemish isn't impervious to cliticization of nearby weak pronouns.

4. a. ...da't Jan Marie gisteren gegeven eet *West Flemish* (Zwart 1997:276)  
       C-it<sub>obj</sub> J. M. yesterday given has  
 b. ...da /\*da't Jan 't Marie gisteren gegeven eet  
       C /\*C- it<sub>obj</sub> J. it M. yesterday given has

Third, the same subject pronouns that are cliticized to the complementizer in (3) are cliticizable to the verb, given linear adjacency (see (5b); (3d) is repeated as (5a), and see (6b); (3g) is repeated as (6a)).

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<sup>2</sup> Although West Flemish exhibits subject cliticization onto the complementizer, it additionally and simultaneously exhibits single agreement, like South Hollandic does in (1). The complementizer *da* first receives agreement features from the verb, a process that will be examined in Section 5, and then the subject clitic is attached to the already-inflected complementizer. So, the complementizer in 'da-n-k ik' (*that I*) is C-1sg-I, while the complementizer in 'da-t-j ij' (*that he*) is C-3sg-he. The discussion in this section will only address the second form of complementizer inflection, while the first sort will be discussed in Section 5.

<sup>3</sup> 'C' stands for an inflected (i.e. morphologically complex) complementizer, which will be further decomposed in Section 5 (see footnote 2).

5. a. ...dan-se (zij) komt *West Flemish*  
       C-she she comes
- b. Goa-se (zie) goan werken Zwart (1997:146)  
       go-she she go work  
       *Is she going to work?*
6. a. ...dan-ze (zunder) komen *West Flemish*  
       C-they they come
- b. Goan-ze (zunder) werk een? Zwart (1997:147)  
       go-they they work have  
       *Are they going to have a job?*

Just as the strong subject pronoun is obligatory when there is no weak pronoun cliticizing to the complementizer (a), the strong subject pronoun is obligatory when there is no weak pronoun cliticizing to the verb (b).

7. a. ...dan- $\emptyset$  \*(zunder) goan werk een *West Flemish*  
       C- $\emptyset$  they go work have Zwart (1997:147)  
       ...*that they are going to have a job*
- b. Goan- $\emptyset$  \*(zunder) werk een?  
       go- $\emptyset$  they work have  
       *Are they going to have a job?*

These generalizations cannot be made for any other language or dialect showing inflection on the complementizer.<sup>4</sup> Therefore, we can continue in our discussion of CA, confident that our object of study is truly agreement, rather than phonological or morphological reduction.

### 3. Double agreement.

The data below constitute the full paradigm of all instances of double agreement. As mentioned in Zwart 1997, these paradigms are mostly partial (p.137). For many of these languages, CA is only apparent for one or two specifications of  $\phi$ -feature combinations. I present all of them, starting with a repetition of Brabantish from Section 1. All data are from Zwart 1997:138-9 unless otherwise noted.

8. a. ...da-de gullie kom-t *Brabantish*  
       that-HI you come-LO  $C_{\text{high}} + V_{\text{low}}$
- b. Wanneer kom -de /\*-t gullie?  
       when come-HI /\*-LO you  $V_{\text{high}}$

<sup>4</sup> Although see van der Meer (1991) for an argument that CA in Frisian, too, is subject cliticization. I instead group Frisian with single-agreement dialects, discussed in Section 5, because a) the inflection on the complementizer is phonetically similar to the inflection on the verb, rather than to the subject pronoun; b) CA is only possible in the second person, despite the availability of weak third-person clitics, and c) Frisian does not have any independently-occurring instances of cliticization, as West Flemish does (see (4) – (7)). See also Ackema & Neeleman for an argument that *all* languages showing inflection on their complementizers are instances of subject-cliticization-to-C; this argument, however, is based almost entirely on data from West Flemish and clitic patterns in Middle Dutch, so there is no reason to extend it further.

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|-----|---|--|
| 9.  | a. ...datt-e wy speult<br>that-HI we play-LO                                    | <i>East Netherlandic</i><br>$C_{\text{high}} + V_{\text{low}}$ |
|     | b. Waor speul -e /*-t wy?<br>where play -HI /*-LO we                            | $V_{\text{high}}$  |
| 10. | a. ...datt-e wiej noar't park loop-t<br>that-HI we to.the park walk-LO          | <i>Hellendoorn</i><br>$C_{\text{high}} + V_{\text{low}}$       |
|     | b. Volgens mij lop-e wiej noar't park<br>according.to me walk-HI we to.the park | $V_{\text{high}}$  |
|     | c. Wiej loop-t noar't park<br>we walk-LO to.the park                            | $V_{\text{low}}$   |

Previous (syntactic) analyses of double-agreement languages take on the task of explaining the distribution of the two agreement morphemes: when the verb can get which and why. The two main analyses, Zwart 1997 and Carstens 2003, both correlate the agreement morphemes with the position of the verb. I'll briefly review them here.

Zwart (1997) attributes the difference in agreement morphemes to the difference in the position of the phrase receiving the agreement. "...The only factor distinguishing these forms is the position of the verb" (p. 259), so low goes on the verb when it's in the VP and high goes on the verb when it's in the CP.<sup>5</sup> However, as Carstens (2003) follows Haegeman (2000) in pointing out, this analysis crucially requires the assumption that verbs in verb-final constructions are in situ. This seems implausible for many reasons, primarily because if the verb does not raise to IP it cannot receive tense, which it clearly does.

A second problem with Zwart's approach, which attributes the high morpheme to anything above IP and the low morpheme to anything below the VP, is that he can't account for why, in a topicalized subject construction, the verb still receives low agreement. Specifically, there is no Subj-Verb surface word order in which the verb can receive high agreement, despite the fact that the subject in such a construction could be topicalized to Spec,CP and the verb consequently raised outside of the VP. Zwart, after a long discussion, is forced to conclude that subject topicalization is impossible across languages because the subject is always 'discourse-old' and thus cannot be topicalized (p. 267).

Carstens' (2003) theory of double agreement is less ambitious, in that it doesn't force the syntax to explain when the verb gets which morpheme. She posits two probes (for both single- and double-agreement languages), one on  $I^{\circ}$  and one on  $C^{\circ}$ . The verb gets low agreement when it raises to Spec,IP, as it adjoins with the  $I^{\circ}$  that's agreed with the subject. The only agreement configuration she recognizes is closest c-command after Chomsky (2000, 2001). The subject is then raised to the specifier of IP so that this position's EPP feature can be satisfied. From there, the subject is visible to the second probe (the one on  $C^{\circ}$ ), and they agree in closest c-command.

Here is how Carstens accounts for the distribution of the two agreement morphemes on the verb: if the verb stays in IP, it keeps its low agreement. If the verb continues to raise, it can adjoin to  $C^{\circ}$  and thus receive the agreement morpheme of the second probe (p. 398). In such a scenario, the verb receives high agreement in addition to its LO agreement (and prevents the complementizer from receiving high agreement). So in constructions like the (b) examples in (8)-(16) above, the verb has two different

<sup>5</sup> Or the IP (see pg. 259), more on this possibility later.

inflections: it has both the high and the low morphemes. Carstens resorts to a principle of phonological economy to explain why it's never the case that both morphemes are pronounced:

11. *Morphological economy* (Kinyalolo 1991)

In an adjoined structure, AGR on a lower head is inert iff its features are predictable from AGR on a higher head.

Despite being able to describe the data in a very general sense, Carstens has no explanation for why the two agreement morphemes, high and low, can be phonologically distinct. Both morphemes mark identical agreement configurations: both are instances of a probe agreeing with the subject of the sentence in a closest-c-command configuration. It would be nice if we could account for the difference in the two morphemes while we account for their distribution. The analysis in the next section can do just that.

#### 4. The analysis.

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Zwart (1997) explains the different distribution of the high and low morpheme by saying that the former is assigned under the CP while the latter is assigned under the VP. Carstens (2003) does the same, although by different mechanics. Neither can explain the fact that, if the subject is topicalized and the verb raised to C along with it, the verb still receives low, instead of high, agreement.

This analysis can provide an explanation for the distribution of the high and low agreement morphemes in a way that can correctly predict the low agreement morpheme on the verb in the case of subject topicalization. Furthermore, built into it is an explanation of why the two agreement morphemes differ phonetically.<sup>6</sup>

While Zwart especially focused on the position of the probe in the sentence, this analysis focuses on the configuration of the probe to the goal to explain the distribution of the high and low morphemes. Specifically, the low morpheme signifies an agreement operation that took place between a probe and a goal in a spec-head configuration, while the high morpheme signifies a closest-c-command (more specifically, a *non*-spec-head) configuration between the probe and goal. As such, the former morpheme can inflect for person agreement, while the latter cannot.

This generalization is based on work in Baker (2005). Baker draws his argument from agreement as it behaves cross-categorically, drawing on the generalization that verbs can agree in number, person and gender while adjectives can only agree in number and gender. His analysis, based on claims in Baker (2003), is this: all lexical items can generate a functional projection (FP) above them; this FP contains the uninterpretable features that act as a probe. Verbs additionally license a specifier (that is, they have an EPP feature), whereas adjectives do not. This means that verbs are the only lexical category that have reason to enter into a spec-head agreement with the subject, while adjectives must resort to agreement via closest c-command (which means they can probe either upwards or downwards in their c-command domain). The theory of agreement outlined in Baker (2005) additionally assumes that the person feature is privileged, and so can only be discharged in a spec-head configuration.

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<sup>6</sup> Remember that there are some CA languages, those dubbed 'single-agreement' languages by Zwart (1997), the high and low morphemes do not differ phonetically. Section 5 provides a very explicit discussion of why those languages do not constitute counterexamples to the present analysis.

The present analysis draws on the conclusions above by extending the distinction of the two sorts of agreement configurations to complementizers. In CA constructions, verbs are still the only lexical categories that can form a spec-head configuration with the subject. Complementizers are similar to adjectives because they, too, are incapable of licensing a specifier and therefore must agree in number and gender only. The table below illustrates the configurations of double-agreement phenomena in (8)-(10):

12. Syntactic configurations in double-agreement languages.

	HI	example no.	LO	example no.
Brabantish	C__ subj	(8a)	subj V__	(8a)
	V__ subj	(8b)		
East Netherlandic	C__ subj	(9a)	subj V__	(9a)
	V__ subj	(9b)		
Hellendoorn	C__ subj	(10a)	subj (PP) V__	(10a)
	V__ subj	(10b)	subj V__	(10c)

We can draw the following generalizations from these patterns: 1) the verb is the only phrase that can receive low agreement, and low agreement can only be assigned in a spec-head configuration. Given Baker's (2005), these two facts go hand-in-hand. 2) Any phrase demonstrating high agreement is not in a spec-head configuration with the subject. They must be agreeing, therefore, by probing downwards in their c-command domain.

Two caveats spring to mind: first, if the verb always gets low agreement when it pulls the subject to its specifier, why is it that this agreement is not realized when it goes on to further raise? And second, what's the connection between the nature of the agreement configuration and the nature of the agreement morpheme? I'll address these in turn.

First, I can explain the fact that the verb can show high agreement in the constructions in the second column of (12) by appealing to the same morphological economy principle as Carstens (2003) appeals to. That the verb shows high agreement is not to say that it was never in a spec-head configuration with the subject; it had to have been, in order for the subject to be raised out of the VP. It just means that the low agreement morpheme that is evidence of this agreement was trumped by the new morphology on the verb, namely the one acquired when the verb adjoins to  $C^{\circ}$ . As the principle in (11) allows, the spelling-out of the second (high) agreement morpheme tells us all we need to know about the verb and its configuration with the subject, so spelling out the first (low) agreement morpheme is unnecessary. This explanation follows the one in Carstens (2003) quite closely.

Second, since the alternation of the high and low morphemes corresponds perfectly to the configuration in which the morphemes are licensed, we can again appeal to Baker (2005) to explain why they differ: the low morpheme inflects for person and number while the high morpheme can only inflect for number. This claim is especially easy to investigate given the fact that the agreement paradigms are severely degraded in these three languages. In Brabantish, CA is only visible in the 2<sup>nd</sup>-person plural; in East Netherlandic and Hellendoorn only in the 1<sup>st</sup>-person plural. Given this, there is no morphological evidence against an analysis correlating the difference between the two morphemes with an inflection for person and number on the one hand and just number on the other. In fact, it's a happy addition to a theory which until now had no explanation for the alternation.

(13), (14) and (15) explicitly illustrate these processes. (13) corresponds to the sentences (8a), (9a) and (10a), where there is a complementizer and the verb is low. (14) corresponds to the sentences (8b), (9b) and (10b), where the verb receives high agreement. (15) corresponds to (10c), where the verb raises along with the subject and gets low agreement.

13. ...that-HI we play-LO East Netherlandic, (9a): overt complementizer, verb low
- a.  $[_{VP} V [_{NP} \text{subj}]] \rightarrow [_{IP} I_{+EPP, +\varphi} [_{VP} V [_{NP} \text{subj}]]]$  *I is merged*
  - b.  $\rightarrow [_{IP} V+I_{+EPP, +\varphi} [_{VP} t_V [_{NP} \text{subj}]]]$  *V raises and adjoins to I*
  - c.  $\rightarrow [_{IP} \text{subj} [_{\Gamma} V+I_{+EPP, +\varphi} [_{VP} t_V t_{\text{subj}}]]]$   
*subj raises to Spec,IP +EPP feature and uninterpretable  $\varphi$ -features on  $F'$  are deleted (spelled out as LO)*
  - d.  $\rightarrow [_{FP} F_{+\varphi} [_{CP} C [_{IP} \text{subj} [_{\Gamma} V+I_{+EPP, +\varphi} [_{VP} t_V t_{\text{subj}}]]]]]$  *C is merged along with its FP*
  - e.  $\rightarrow [_{FP} C+F_{+\varphi} [_{CP} t_C [_{IP} \text{subj} [_{\Gamma} V+I_{+EPP, +\varphi} [_{VP} t_V t_{\text{subj}}]]]]]$  *C raises and adjoins to F*
  - f.  $\rightarrow [_{FP} C+F_{+\varphi} [_{CP} t_C [_{IP} \text{subj} [_{\Gamma} V+I_{+EPP, +\varphi} [_{VP} t_V t_{\text{subj}}]]]]]$   
*C+F probes downwards in its c-command domain and uninterpretable  $\varphi$ -features on  $F'$  are deleted (spelled out as HI)*
14. ...walk-HI we to.the park Hellendoorn (10b): verb is high, subject low
- a.  $[_{VP} V [_{NP} \text{subj}]] \rightarrow [_{IP} I_{+EPP, +\varphi} [_{VP} V [_{NP} \text{subj}]]]$  *I is merged*
  - b.  $\rightarrow [_{IP} V+I_{+EPP, +\varphi} [_{VP} t_V [_{NP} \text{subj}]]]$  *V raises and adjoins to I*
  - c.  $\rightarrow [_{IP} \text{subj} [_{\Gamma} V+I_{+EPP, +\varphi} [_{VP} t_V t_{\text{subj}}]]]$   
*subj raises to Spec,IP +EPP feature and uninterpretable  $\varphi$ -features on  $F'$  are deleted (spelled out as LO)*
  - d.  $\rightarrow [_{FP} F_{+\varphi} [_{CP} C [_{IP} \text{subj} [_{\Gamma} V+I_{+EPP, +\varphi} [_{VP} t_V t_{\text{subj}}]]]]]$  *A null C is merged along with its FP*
  - e.  $\rightarrow [_{FP} V_{LO}+C+F_{+\varphi} [_{CP} t_C [_{IP} \text{subj} [_{VP} t_V [_{VP} t_V t_{\text{subj}}]]]]]$  *V raises to adjoin to C, then raises to adjoin to F*
  - f.  $\rightarrow [_{FP} V_{LO}+C+F_{+\varphi} [_{CP} t_C [_{IP} \text{subj} [_{VP} t_V [_{VP} t_V t_{\text{subj}}]]]]]$   
*V+C+F probes downwards in its c-command domain and uninterpretable  $\varphi$ -features on  $F'$  are deleted (spelled out as HI)*
  - g. [morphology]: [V - LO - HI]  $\rightarrow$  [V - HI]
15. We walk-lo to.the park Hellendoorn (10c): verb is high, subject is high
- a.  $[_{VP} V [_{NP} \text{subj}]] \rightarrow [_{IP} I_{+EPP, +\varphi} [_{VP} V [_{NP} \text{subj}]]]$  *I is merged*
  - b.  $\rightarrow [_{IP} V+I_{+EPP, +\varphi} [_{VP} t_V [_{NP} \text{subj}]]]$  *V raises and adjoins to I*
  - c.  $\rightarrow [_{IP} \text{subj} [_{\Gamma} V+I_{+EPP, +\varphi} [_{VP} t_V t_{\text{subj}}]]]$   
*subj raises to Spec,IP +EPP feature and uninterpretable  $\varphi$ -features on  $F'$  are deleted (spelled out as LO)*
  - d.  $\rightarrow [_{FP} F_{+\varphi} [_{CP} C [_{IP} \text{subj} [_{\Gamma} V+I_{+EPP, +\varphi} [_{VP} t_V t_{\text{subj}}]]]]]$  *A null C is merged along with its FP*
  - e.  $\rightarrow [_{FP} V_{LO}+C+F_{+\varphi} [_{CP} t_C [_{IP} \text{subj} [_{VP} t_V [_{VP} t_V t_{\text{subj}}]]]]]$  *V raises to adjoin to C, then raises to adjoin to F*
  - f.  $\rightarrow [_{FP} \text{subj} [_{F'} V_{LO}+C+F_{+\varphi} [_{CP} t_C [_{IP} t_{\text{subj}} [_{VP} t_V [_{VP} t_V t_{\text{subj}}]]]]]]]$  *Subj is topicalized to Spec,FP*
  - g.  $\rightarrow [_{FP} \text{subj} [_{F'} V_{LO}+C+F_{+\varphi} [_{CP} t_C [_{IP} t_{\text{subj}} [_{VP} t_V [_{VP} t_V t_{\text{subj}}]]]]]]]$   
*The uninterpretable features on  $F'$  are deleted when  $F'$  enters a spec-head relation with subj. This is spelled out as LO.*
  - h. [morphology]: [V - LO - LO]  $\rightarrow$  [V - LO]

(15) nicely illustrates a correct prediction made by this analysis that others lack: this analysis predicts that the verb retains low agreement if its last agreement configuration with the subject was spec-head. So in (14) the verb gets low agreement when it enters into a spec-head relationship with the verb in the IP. The verb continues to raise and adjoins to  $C'$ , where it has another opportunity to agree with the subject. However, since the subject doesn't itself raise higher, the verb can only agree this second time by probing downwards. This last agreement configuration assigns the verb high agreement morphology. In

contrast, the subject in (15) raises (or topicalizes) after the verb adjoins to  $C^\circ$ . Because of this, when the verb has its chance to agree with the subject a second time, it's in a spec-head configuration with the subject. A second low morpheme is awarded to the verb, and morphological economy reduces the burden of redundancy by eliminating the first low agreement morpheme.

Because this analysis attributes the difference in agreement morphology to the configuration of agreement rather than the location of agreement, it can correctly predict that the verb receives low agreement even though it's clearly raised to  $C^\circ$ , but only insofar as the subject raises with it.

However, we're not quite out of the woods yet: it appears (and has appeared to Carstens (2003) and Zwart (1997)) that there is one double-agreement language that patterns the opposite of what (15) predicts: namely, there's a language that assigns high agreement to a verb in  $C^\circ$  despite the fact that the subject has moved into a spec-head configuration with the raised verb. This language is Lower Bavarian. Vanilla data demonstrating Lower Bavarian as it patterns with other double-agreement languages is in (16); the data demonstrating that it behaves differently in these topicalized subject cases is in (17b), juxtaposed to the Hellendoorn in (17a) whose derivation we've discussed in (15).

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|-----|---|---|
| 16. | a. ...das -ma mir noch Minga fahr-n<br>that-HI we to Munich go-LO | <i>Lower Bavarian</i><br>$C_{high} + V_{low}$ |
|     | b. Fahr-ma /*-n noch Minga<br>go -HI /*-LO to Munich              | $V_{high}$                                    |
| 17. | a. Wiej loop-t noar't park<br>we walk-LO to.the park              | <i>Hellendoorn</i><br>$V_{low}$               |
|     | b. Mir fahr-ma /*-n noch Minga<br>we go -HI /*-LO to Munich       | <i>Lower Bavarian</i><br>$V_{high}$           |

As I mentioned, both Zwart (1997) and Carstens (2003) have to make separate accommodations for this pair of data. For the forms in (17) (although Zwart instead compares Lower Bavarian to East Netherlandic), he argues that high agreement is always assigned when the verb is in the CP, low agreement is always assigned when the verb is in the VP, and languages differ with respect to how they spell out the morpheme when the verb is in AgrS (as he proposes it is in both forms in (17)). He gives no explanation of this difference (p.259-261).

The contradictory data in (17) is a problem for Carstens' (2003) approach because she assumes that there are only two locales of agreement ( $T^\circ$  and  $Fin^\circ$  in her terminology,  $I^\circ$  and  $C^\circ$  in ours), and that the only way either a complementizer or a verb can acquire agreement is by adjoining to either position. She ends up arguing that the difference between (17a) and (17b) is a difference in the parameterization of Kinyalolo's morphological economy principle (see (11)). Whereas Hellendoorn deletes the high agreement in an instance of potential morphological redundancy, Lower Bavarian deletes the low agreement morpheme in such an instance.

The contrast in (17) falls out much more smoothly in the current analysis because I've made a formal distinction between the three types of apparent CA. Subject-cliticization CA languages are ones in which the inflection on the complementizer is phonetically similar to the subject pronoun, while single-agreement languages have CA morphemes that are identical to the agreement on the verb and double-agreement languages have CA morphemes that are phonetically unrelated to both. We can easily think of

Lower Bavarian as an instance of the first type of agreement. The only instance of CA that is possible is 1<sup>st</sup>-person singular; in this instance, the high agreement morpheme *ma* is phonetically similar to the subject pronoun *mir*. Further evidence for this claim comes from the fact that *mir* can be pro-dropped in these instances (see (16b)). See Zwart (1997:139 fn. 38) for a discussion of this morpheme.<sup>7</sup>

To sum up: we can now explain both the distribution of and the difference between the high and low agreement morphemes in double-agreement languages. The probe associated with the verb, the one in IP, receives its agreement in a spec-head configuration with the subject, and in doing so receives morphology that shows both person and number agreement. The probe associated with the complementizer on the other hand, the one in CP, receives its agreement by probing downwards for the subject. Because of this, it receives morphology that shows only number agreement.

Although this analysis triumphs over the one in Carstens (2003) by explaining the difference in the two morphemes, it cannot explain why a construction with two probes and two different agreement relations might have *identical* morphemes. The next section addresses such languages and argues for why they do not present a problem for the above approach.

## 5. Single agreement.

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Carstens (2003) can't account for the dissimilarity of the agreement morphemes in double-agreement CA languages, but the analysis put forth above can't account for the *similarity* of agreement morphemes in single-agreement CA languages assuming that they, too, have two probes. As mentioned in Section 1, the CA morpheme in some languages is identical to the agreement morpheme on the verb (see (1) and below). I list all of these languages below. All data are from Zwart 1997:138-9 unless otherwise noted.

- |     |   |                     |
|-----|---|---------------------|
| 18. | a. ...dat- <u>st</u> (do) jûn      kom- <u>st</u><br>C-2sg you tonight come-2sg           | <i>Frisian</i>      |
|     | b. ...dat- <u>ø</u> (er) jûn      kom- <u>t</u> <sup>8</sup><br>C-3sg he tonight come-3sg |                     |
| 19. | a. ...of- <u>ø</u> ik kom- <u>ø</u><br>whether-1sg I come-1sg                             | <i>Groningen</i>    |
|     | b. ...of- <u>g</u> toe kom- <u>g</u><br>whether-2sg you come-2sg                          |                     |
| 20. | a. ...ob- <u>ø</u> ech wëll<br>whether-1sg I want-1sg                                     | <i>Luxemburgish</i> |

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<sup>7</sup> It's possible to argue for Lower Bavarian as a subject-cliticization language because it allows pro-drop. Many authors, including Zwart (1997), argue that there's a close correlation between pro-drop and subject cliticization, to the degree that they distinguish the latter. Under this generalization, Frisian, which I've categorized as a single-agreement language, would be a subject-cliticization language instead. Zwart has a footnote about that, too (p. 139 fn. 36). See also van der Meer 1991 and de Haan 1992. I'm happy to remain agnostic about the potential correlation, as it doesn't really matter to the success of this analysis whether Frisian is a single-agreement language or a subject-cliticization language (although I would lose the strength of an interesting independent argument in Section 5, example (30)).

<sup>8</sup> See Zwart 1997:139 for a discussion of the reduction of the third singular morpheme *-t* across these dialects.

- b. ...ob-g          du wöll-g  
 whether-2sg you want-2sg
21. a. ...damid-ø    ich komm-ø *Munich Bavarian*  
 so.that-1sg I    come-1sg  
 b. ...damid-sd komm-sd  
 so.that-2sg come-2sg  
 c. ...damid-ds komm-ds  
 so.that-2pl come-2pl
22. a. ...dat-ø    ik kom-ø *South Hollandic*  
 that-sg I    come-sg  
 b. ...datt-e we komm-e  
 that-pl we come-pl  
 c. ...ovv-e      ze komm-e  
 whether-pl they come-pl
23. a. ...da-n-k    ik kom-en *West Flemish*<sup>9</sup>  
 that-1sg-I I    come-1sg  
 b. ...da-t-j      ij kom-t  
 that-3sg-he he come-3sg  
 c. ...da-n-ze      zunder kom-en  
 that-3pl-they they    come-3pl

In this section, I will argue that these are not counterexamples to the analysis above – it is not the case that the high and low morphemes, though representing two different agreement configurations, happen to sound alike in these languages. Rather, single-agreement CA involves only one instance of syntactic agreement (with a single probe associated with the verb), followed by an instance of phonological agreement (the complementizer inflects to match the agreement on the verb). So we can think of CA in terms of a parameter: in double-agreement languages, complementizers are generated with uninterpretable  $\phi$ -features (so both the verb and the complementizer act as probes), whereas in single-agreement languages, complementizers do not have their own uninterpretable  $\phi$ -features (so only the verb is a probe).

Before I go on to argue why we should think that single-agreement languages involve only one probe, let me first address this notion of a parameter. This parameter isn't unique to my analysis, and it's not needed only to account for single agreement languages. *Any* analysis of complementizer agreement needs a parameter like the one above to account for languages that don't have *any* complementizer agreement. There are two fundamental distinctions in any theory: some languages have double-agreement and some don't. This distinction corresponds to languages whose complementizers are probes and those whose complementizers are not. The second category can be further split into two types: those with phonological complementizer agreement (like the ones in (18)) and those without (like English and most other languages). So although single-agreement languages are a problem for the analysis above (like double-agreement languages are a problem for Carstens' (2003) analysis), they can be explained away without additional stipulation (unlike Carstens, who needs additional further stipulation to explain the morphology in double-agreement languages).

<sup>9</sup> A reminder that the second morpheme attached to the complementizer is a cliticized weak subject pronoun; see Section 2.

So this section aims to argue that CA in single-agreement languages, instead of being the result of a probe associated with the CP agreeing with the subject, is a result of some sort of phonological (not syntactic) agreement with the verb.<sup>10</sup> There is only one probe probing for agreement in single-agreement languages, and there is additionally phonological agreement on the complementizer.

The first reason to think this is that the agreement on the complementizer is always phonetically identical to the agreement on the verb. This is a very important fact; remember that such a thing wasn't true of either the subject-cliticization languages (West Flemish) or the double-agreement languages (like Brabantish).

A second reason is that these are the only languages in which complementizer agreement doesn't require the presence of a complementizer. The data below shows the inflection affixing to a relative clause subordinate phrase or a wh-phrase in lieu of a complementizer.<sup>11</sup>

24. a. ...dat-st (do) jûn kom-st Frisian  
       C-2sg you tonight come-2sg =(18a)  
 b. Ik wit net hoe-st dat bedoel-st van der Meer (1991:64)  
       I know not how-2sg that mean  
       *I don't know how you mean that.*
25. ...az-n koin nait in et laand bliedm will-n Groningen  
       when-3pl cows not in the land stay want-3pl Hoekstra & Smits 1998
26. a. ...ob-s du wëll-s Luxemburgish  
       whether-2sg you want-2sg =(20b)  
 b. ...mat wiem (datt) s de spazéiere gaang ba-s Zwart (1997:141)  
       with whom (that)-2sg you walk gone are-2sg  
       ...with whom you went for a walk  
 c. Géi wuer s de wëll-s Zwart (1997:152)  
       go where 2sg you want-2sg
27. a. ...datt-e we komm-e South Hollandic  
       that-pl we come-pl =(22b)  
 b. ...jonges die-e werk will-e Zwart (1997:152)  
       guys who-pl work want-pl  
       *guys who want a job*  
 c. ...van die rame, waar-e ze de gordijne mee spann-e  
       of these frames where-pl they the curtains with draw-pl  
       *the type of frames which they draw the curtains with*

<sup>10</sup> This phonological aspect of agreement is similar to Boeckx's (2004) "Multiple Agreement" for LDA in Hindi, which he compares to phonological processes like vowel harmony, tone spreading and clitic climbing. I do not draw further associations with Boeckx (2004) because his "Multiple Agreement" seems subject to different restrictions than mine; it can be blocked by intervening overt subjects, is optional, and is not concerned with the linear proximity of the agreeing elements.

<sup>11</sup> Zwart (1997) cites Kathol 1995:163 in recognizing this as a problem: "it would be exceptional from a morphological point of view if inflectional affixes appeared on empty [null] complementizers" (p. 258). To avoid this criticism, he ends up analyzing the high agreement morphemes in instances where there is no overt complementizer as reduced forms of a complementizer clitic, which is independently found only in Frisian (p. 149-153).

These forms show that the copied inflection in single-agreement languages is not very closely associated to the complementizer. Crucially, the only languages that exhibit agreement on wh-words are single-agreement languages.<sup>12</sup> The inflection can show up on a wh-word in either an embedded question or a relative clause. The fact that this inflection doesn't require a complementizer to surface indicates that the morpheme is not the result of agreement via uninterpretable features on the complementizer as it functions as a probe. This therefore gives evidence to the claim that, in single agreement languages, a single probe (the verb) agrees with the subject, and all further instances of agreement morphemes are instances of phonological agreement with the agreement on the verb.

A less appealing explanation of the data in (24)-(27) is one proposed in Zwart (1997): namely that single-agreement languages involve two probes, one associated with the CP, and that data like those above just involve a null complementizer. The null complementizer, under this theory, would be generated with uninterpretable features just like any other probe. But the agreement morpheme, being phonologically bound, cliticizes to the wh-phrase in lieu of having an overt phonological complementizer to adjoin to.

Some data from Luxemburgish indicates that this assumption is not correct; agreement on wh-words isn't necessarily the result of the inability of the morpheme to adjoin to its probe, C.

28. Kenns de déi Leit, déi-en dat behaapt-en? *Luxemburgish*  
 Know-2sg you these people who-pl that claim-pl Zwart (1997:152)  
 Do you know the people who claim that?

In (28), despite the presence of an overt complementizer, the wh-word rather than the complementizer receives the agreement. This is impossible under the assumption that single-agreement languages involve a second probe associated with C; there is no analysis in which the uninterpretable features, if associated with the CP, would go on the specifier of this phrase rather than its head. This can only be explained by a phonological explanation of the higher agreement morpheme.

If this argument is correct, we need to provide an explanation for the fact that Luxemburgish gives us a minimal pair: (26c) is an example in Luxemburgish where both a wh-word and a complementizer are pronounced; the agreement goes on the complementizer. As we've just seen, (28), however, is an example in Luxemburgish where both a wh-word and a complementizer are pronounced, and the agreement goes on the wh-word. I'll reproduce this pair below in (29).

29. a. ...mat wiem (datt) s de spazéiere gaang bas *Luxemburgish*  
       with whom (that)-2sg you walk gone are-2sg Zwart (1997:141)  
       ...with whom you went for a walk  
 b. Kenns de déi Leit, déi-en dat behaapt-en? Zwart (1997:152)  
       Know-2sg you these people who-pl that claim-pl  
       Do you know the people who claim that?

<sup>12</sup> I list 6 single-agreement languages in (Frisian, Groningen, Luxemburgish, Munich Bavarian, South Hollandic, and West Flemish) and present evidence that their CA morphemes can attach to wh-words for only 4 of them (Frisian, Groningen, Luxemburgish, and South Hollandic). I have no evidence that the remaining 2 single-agreement languages, Munich Bavarian and West Flemish, actually *lack* this ability. Few sources discuss this phenomenon specifically (they instead group CA with agreement on wh-phrases as the same thing, 'agreement with subclause introducers' to borrow terminology from van der Meer (1991)). This analysis predicts, but does not hinge upon, the ability of Munich Bavarian and West Flemish to attach agreement morphemes to wh-words.

The fact that agreement can go on the complementizer in (29a) and the wh-word in (29b) indicates that the higher agreement phenomenon in single-agreement languages must be phonological, rather than syntactic. The most obvious explanation for the distribution of the high agreement morpheme is that it needs to be a certain (phonological) distance away from the verb. In (29a), there is an overt subject and an auxiliary verb in between the complementizer and the verb, which is in final position. However, in (29b), no phonological material separates the complementizer and the verb, so phonological agreement is placed on the highest phrase in the clause, the wh-word.

For additional support of this explanation, we can appeal to at least one other single-agreement language. In Frisian, when the verb moves from its final position, CA is disallowed.

30. a. Heit sei dat-st do soks net leauwe moa-st. *Frisian*  
 Dad said that-2sg you such things believe must-2sg Zwart (1997:198)  
 b. Heit sei dat /\*dat-st do moa-st soks net leauwe.  
 Dad said that /\*that-2sg you must-2sg such things believe  
*Dad said that you should not believe such things.*

(30) shows independent evidence that CA in single-agreement languages cannot take place when the two (matching) agreement morphemes are too (phonologically) close to one another.

This further solidifies the current explanation that single-agreement languages, in which the agreement morpheme on the verb and the agreement morpheme on the complementizer (or wh-word) are identical, involve one syntactic agreement configuration (the agreement of the probe associated with the VP with the subject) and one phonological agreement configuration (the agreement of the complementizer or other elements in the CP with the subject agreement on the verb). The arguments I've presented are these: 1) the phonological identity of the two morphemes, 2) the fact that the morpheme can surface in the absence of a complementizer, and 3) the fact that agreement on the complementizer is ill-formed if it's too close to the verb. None of these arguments can be made for the languages exhibiting double-agreement.

## 6. Conclusion.

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Carstens (2003) proposes that all CA languages involve two different probes; one associated with the verb (or IP) and one associated with the CP. Each of these probes' uninterpretable features are checked in a closest c-command configuration; because of this, Carstens cannot account for why (in double agreement languages) the two agreement morphemes are phonologically distinct.

I introduce an analysis that attributes the phonologically different morphemes to two agreement configurations (argued for in Baker 2005): low agreement occurs when the probe agrees with the subject in a spec-head configuration (and thus can only occur on the verb), whereas high agreement comes occurs when the probe merely c-commands the goal.

Single-agreement languages appear to pose a problem for this new analysis: if these languages, like double-agreement languages, are analyzed as an instance of two probes agreeing with the subject in two different configurations, why are their agreement morphemes phonologically identical? This last section argues that CA in single-agreement languages does not in fact involve subject agreement with two separate probes. The verb is associated with a probe, as always, that agrees with the subject in a spec-head

configuration. But the complementizer is not associated with a probe (just like it is not associated with a probe in English). Instead, it gets its inflection by a phonological process of agreement. We know that this process is phonological because it isn't tied exclusively to the complementizer head and because it is sensitive to linear proximity.

In sum, there are three different varieties of what appear to be complementizer agreement: West Flemish clearly inflects its complementizer when a weak subject pronoun is cliticized to it. Single-agreement languages involve a different sort of phonological agreement process; the complementizer is inflected to match the agreement morpheme on the verb. Finally, double-agreement languages are the only syntactically interesting instances of CA. In them, both the verb and the complementizer are associated with a probe. Because the verb can agree with the subject in a spec-head configuration, it can inflect for person. Because the complementizer can only agree with the subject in a non-spec-head, c-command configuration, it cannot inflect for person and thus involves a morphologically distinct morpheme.

Although this analysis demonstrates that CA can be used as further evidence for Baker's (2005) differentiation of agreement configurations, it (and instances of double agreement in general) poses a problem for theories for which movement is feature-driven. If the verb can check the subjects'  $\phi$ -features, what further motivation does the subject have to move, given that these are instances where it's clear that the complementizer doesn't have an EPP feature? And, if the verb checks the subjects'  $\phi$ -features, how is it that the uninterpretable features on the complementizer can be satisfied? This is part of a larger question that I will have to leave unanswered (although see Carstens 2001, 2003 for an attempt).

Finally, this paper comes without an explanation of why some languages have CA and some don't. Hoekstra and Smits (1998) suggest that CA is only found in languages in which the auxiliaries have phonologically identical present and preterit morphemes. This explains why South Hollandic, on the one hand, has (single-agreement) CA while Standard Dutch, on the other hand, does not. However, this generalization only holds for single-agreement languages. It has been suggested to me (Mark Baker, p.c.) that the fact that these Germanic languages have CA may correlate with the fact that they are unique in having head-initial CPs while having head-final VPs. Despite being able to explain any correlation between the two, I must point out that this would not predict the subtle differences between the three 'types' of CA exposed here: subject cliticization, single-probe CA and double-probe CA. I therefore leave any typological explanation to future research.

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