AGREEMENT AT THE BOUNDARIES: SYNCHRONIC AND DIACHRONIC APPROACHES TO φ-AGREEMENT IN THE LEFT PERIPHERY

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SYNCHRONIC AND DIACHRONIC APPROACHES
TO φ-AGREEMENT IN THE LEFT PERIPHERY

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This dissertation examines complementizer agreement (CA) phenomena in which φ-features appear on a complementizer, clause-linking marker, or otherwise, syntactically speaking, at the C^0 position.

This dissertation will argue that CA is in fact a straightforward output of the syntax module under standard Minimalist assumptions, and that the analysis of CA requires that we simplify rather than complicate our understanding of the probe-goal relationship. CA may be the result of a uφ-probe at C^0 acting alone, agreeing with a closest goal in situ. More common are cases where CA in relative clauses results from the combination of Agree and movement into specC.

An independent φ-probe at C^0 is both synchronically necessary, and also to be diachronically expected given the source constructions. I argue that the goals available for probes at C^0 are fed into the closest goal position by the lower structure and that argument structure—e.g., the placement and feature checking of subjects and objects—and information structure—e.g., the raising of Topics—may feed arguments and their φ-features into the path of C^0's probes and yield CA. Cross-linguistic differences in the ability of non-subjects to agree at C follow straightforwardly from differences in the reusability of φ-features in different languages (cf. Carstens 2003).

Diachronically, having uφ probe at C^0 is the natural output of syntactic directionality (as argued for by, e.g., van Gelderen 2009). φ-features of source constructions influence the φ-features found in their descendants; upward- (Bantu) and downward- (Germanic) agreeing CA are the outputs of different diachronic developments. One has its source in the inherent φ-features of a pronoun (goal reanalyzed as probe), while the other is a reanalysis of a verb as a complementizer (T-to-C reanalysis).

I propose that CA—while typologically exotic—is syntactically normal. Accounting for CA with a normal Agree relation solves several theoretical issues for the C-T relationship and provides valuable insight into the nature of probes and the behavior of Agree.

BIOGRAPHICAL SKETCH

Sarah Courtney was raised in Newton, Massachusetts, and graduated from Newton North High School in 2002.

She attended Amherst College from 2002 to 2006 and graduated summa cum laude with a BA in Music and Women's and Gender Studies, writing her undergraduate thesis on messages about gender in folklore and fairy tales.

She began her graduate studies at Cornell University in 2007, and although she left for several years after her A-exam to explore a career in academic publishing, she returned to finish her dissertation long distance. So here it is, at last.

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My initial interest in complementizer agreement stemmed from a project in Syntax II with John Bowers, who encouraged my curiosity and reminded me of my interest in the subject when I came to him casting around for a dissertation topic. His pushing me for clarity in my syntactic claims has helped my curiosity sharpen into an understanding of my topic and of the methods of syntactic inquiry. My gratitude goes to Michael Weiss both for his guidance with respect to the process of language change, and for his patience. Despite his frequent insistence that he doesn't "do" syntax, he has advised and taught so many of us who do, and has had a significant positive impact on our work and our understanding of language change. Wayne Harbert has continued to both support me and push me to sharpen my claims and my writing throughout many iterations of both this project and others. He has been there asking me all the tough and necessary questions through many topic changes and research dead-ends, and I am extremely grateful.

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ry classes with language questions. And Angelika Kratzer and Cheryl Zoll gave me my first tastes of synchronic linguistics—and the push to go out and find more.

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Most of all I have relied on the support of my husband, Ben Heidenreich. His support, his encouragement, and his ability to lift my spirits have been unfailing. His desire to understand what the heck I've been doing all these years has pushed me to explain myself clearly, without falling back on too much field-specific jargon, and in a terms a curious physicist can understand. I hope I have approximated that level of clarity.

TABLE OF CONTENTS

INTRODUCTION

Complementizer agreement (CA) is a term that is used to cover a variety of cross-linguistically rare phenomena in which φ-features appear on a complementizer, clause-linking marker, or otherwise, syntactically speaking, at the C^0 position. Due in part to the typological rarity of such patterns, they have often been argued to be syntactically deviant, requiring syntactic processes or syntactic structure outside of the normal requirements for generating other φ-agreements. CA data also complicates several recent syntactic theories which have received widespread attention and acceptance within the field, notably giving difficulty to the notion of C-to-T feature inheritance and the limiting of φ-probing to phase boundaries (Chomsky 2005, Richards 2007), and to the special relationship between T and the subject (Pesetsky and Torrego, 2004). It is tempting to render a phenomenon that is both rare in the world's languages and thorny for otherwise well-motivated theory as a complicated syntactic outlier, and to propose that an exotic analysis is necessary to account for it.

This dissertation will argue the opposite: that CA is in fact a straightforward output of the syntax module under standard Minimalist assumptions, and that the analysis of CA requires that we simplify rather than complicate our understanding of the probe-goal relationship and the functioning of involved φ-features as a driver of agreement. The possibility of an independent φ-probe at C^0 will be shown to be both synchronically necessary to account for the cross-linguistic data, and also to be diachronically expected as a typological option given the source constructions that give rise to complementation structures. Probes at C^0 will be compared to those at T^0 and will be argued to operate in the same way: the

process of probe-goal valuation is a simple one and probes are bound to find the closest relevant goal to value their features. The specification of the features of both probe and goal are crucial to the operation of the Agree relation as the relation cannot be sensitive to any features not specified as part of the numeration or not marked in some way (often uninterpretably) on the functional projection.

The simplicity of φ-probes and the insensitivity of probes to structure allows syntactic structure—combined with featural specification—to feed agreement. Both argument structure and information structure will be examined as possible feeders of agreement and movement. I will argue that where CA does occur cross-linguistically it behaves as expected within the confines of the local argument structure, and is set up by the surrounding syntax of TP and CP.

Diachronically, CA is a rare, but not entirely unexpected, development from the source constructions that give rise to complementation structures. The syntactic structures of CA arise naturally from surface ambiguities of earlier stages of the relevant languages and fit well within the expected developments of syntactic reanalysis. Rather than requiring any special diachronic phenomena to yield the pattern of CA, ruling out the development of φ-probes at C^0 (as Zwart 2012) requires complications to the mechanism of syntactic change that we can do away with. Overall, CA will be shown to be not as "weird" when taken together as a cross-linguistic phenomenon as when viewed as an oddity language-by-language.

Chapter 1 will address the cross-linguistic distribution of CA, introducing a wide range of agreement patterns that will be given theoretical underpinnings in the following chapters. Both the core cases of CA in which φ-agreement is directly morphologically

spelled out on a complementizer, and more oblique cases where C^0 participates in or blocks the agreement or movement of a φ-bearing goal, are addressed here. This data shows that although canonical CA is typologically rare, the syntax of φ-at-C is not.

Chapter 2 gives an analysis of the featural content of C^0 that can yield CA, arguing that the presence of a uφ-probe at C^0 accounts for the core cases of CA simply. Both matrix and subordinate subjects will be shown to be potential goals for Agree at a distance; Diercks' (2012) account of operator-based agreement will be adopted to show that matrix CA as in Bantu is still essentially closest goal agreement. The combination of uφ and other C-related features—wh-, focus, topic, and edge features—will also be accounted for as cases of probe "bundling" in which multiple unvalued features are joined to form a single probe. Bundled probes must find a single goal and the valuation of bundled φ-features cannot be achieved separately from the checking of the probe's other features.

Chapter 3 argues that TP structure feeds CP agreements. Languages in which CA may be with non-subjects will be shown to have TP-internal structures which position non-subjects as closest goal for probes in C^0. This chapter will also argue that T^0 probes may behave more like C^0 probes in these languages and that the theoretical connection between TP and subjecthood is not consistently borne out by the data. Both argument structure and information structure will be shown to feed Agree relations at T^0 and C^0.

Chapter 4[1] focuses on CA in Germanic and compares the pure syntax approaches to CA (like that developed here) with the extra-syntactic analyses developed elsewhere. I argue that the extra-syntactic and pure syntax CA analyses describe different grammars and that the data used to differentiate the two analyses can in fact be shown to belong to differ-

[1] A version of this chapter previously appeared in Mathieu, Eric and Robert Truswell. 2017. *Micro-change and Macro-change in Diachronic Syntax.* Oxford University Press.

ent dialects. The ambiguity of most surface outputs from either grammar will be leveraged to show that the regularization of the CA pattern by learners yields the pure syntax grammar over time. The pure syntax CA pattern is proposed as an end point along a cline of grammaticalization that yields uφ-probes in C^0 through the reanalysis of inherent φ-features.

Chapter 5 takes a broad look at the diachrony of CA, extending the argument that uφ at C^0 is the natural output of syntactic directionality (as argued for by, e.g., van Gelderen 2009). I will argue that the φ-features of source constructions influence the φ-features found in their descendants, and will show that upward- (Bantu) and downward- (Germanic) agreeing CA are the outputs of two very different diachronic developments. While the synchronic constructions both have been reanalyzed to contain uφ-probes, one has its source in the inherent φ-features of a pronoun (goal reanalyzed as probe), while the other is a reanalysis of a verb as a complementizer (T-to-C reanalysis) where the agreement comes along for the ride.

In the conclusion I will draw together the synchronic and diachronic arguments and make the case that CA—while typologically exotic—is syntactically normal. I will argue that including CA in the family of normal Agree relations solves several theoretical issues for the C-T relationship and provides valuable insight into the nature of probes and the behavior of Agree.

CHAPTER 1

A CROSS-LINGUISTIC TYPOLOGY OF φ AT C

This chapter presents some of the cross-linguistic variety found in the interaction of probes at C^0 and φ features. The data here will cover both the core cases of CA, in which complementizers show overt morphological agreement features, and several other types of φ-C interaction that have not always been considered as part of the CA canon.[1] This spectrum of data will show that while full morphological agreement on C is rare, the appearance of φ-sensitive probes at C^0 is much more widespread. The data will be presented without a particular theoretical account—which will be deferred to the following chapters—but will be described using some basic minimalist and generative concepts such as CP and TP, spec-head relationships, and the probe-goal framework of accounting for agreement.

Canonical complementizer agreement—where the morpheme that occupies the C^0 position shows agreement with the φ-features of an argument of either the matrix clause that selects the CP or from within the CP itself—is the most studied version of the phenomenon. Full φ-feature spell-out on the complementizer is a cross-linguistically rare phenomenon and has received a lot of previous attention from syntacticians. The first section of this chapter will address this type of complementizer agreement and provide a typology of complementizers that bear φ-features from the higher or lower clause. A typology of CA will also be provided here. In the first and second sections, the complementizer agreement examined is with an argument from a lower clause. Section 1.1 looks at agreement between

[1] Van Koppen (forthcoming) also uses the term to refer to cases in which complementizers bear tense features. However, this usage is not common in the syntax literature and will not be adopted here.

a subordinating (non-relative) complementizer and the subject of the lower clause. Section 1.2 looks at agreement on relative complementizers. While still looking at agreement where the source φ-features originate in the lower clause, in this case agreement is only with extracted elements. This type of CA appears to be the most common cross-linguistically and a few variations on the type will be examined, including those that have broader implications for the way that argument structure and information structure must be encoded in different languages. Section 1.3 treats co-relative clauses. Section 1.4 looks at complementizers that are only compatible with certain argument structures in lower clauses. Section 1.5 will address the cases of "upwards agreeing" complementizers. These are cases in which the φ-features encoded on the clause-linking C^0 are those of the matrix clause subject. Section 1.6 looks at cases where a complementizer blocks agreement between an argument and the verb in a subordinate clause.

1.1 CA with a lower clause subject without argument extraction

In many cases of CA the subordinating complementizer that links a declarative clause with its matrix clause bears the φ-features of the embedded subject while no argument—subject or otherwise—is extracted. The subject remains in its canonical subject position within the lower clause.

1.1.1 Germanic CA data

Several Germanic languages show complementizer agreement where complementizers take suffixal morphology that agrees with the lower clause subject. This varies cross-

linguistically in terms of how complete a paradigm is evinced and whether the morphology on C is identical to that used for verbal agreement.

The most complete paradigm of this type of CA is shown in West Flemish (Indo-European, Germanic). The agreement morphology on C is doubled in some persons by en-clitic pronouns that appear on the complementizer and may be further doubled by full pro-nominal subjects.

(1) a. Kpeinze *dan-k* (ik) morgen goan.
I-think that-I (I) tomorrow go
'I think that I'll go tomorrow.'
b. Kpeinzen *da-j* (gie) morgen goat.
I-think that-you (you) tomorrow go
'I think that you'll go tomorrow.'
c. Kvinden *dan* die boeken te diere zyn.
I-find that-PL the books too expensive are
'I find those books too expensive.' (West Flemish, Haegeman, 1992)

(2) a. da-n *(=k) ik werk-en
that-1SG (1SG) I work-1SG
b. da-t *(=j) gie werk-t
that-2SG (2SG) you work-2SG
c. da-t *(=j) ij werk-t
that-3SG (3SG.MASC) he work-3SG
d. da-t (=ze) zie werk-t
that-3SG (3SG.FEM) she work-3SG
e. da-t (=t) tet werk-t
that-3SG (3SG.NEUT) it work-3SG
f. da-n (=me) wunder werk-en
that-1PL (1PL) we work-1PL
g. da-t *(=j) gunder werk-t
that-2PL (2PL) you.PL work-2PL
h. da-n (=ze) zunder werk-en
that-3PL (3PL) they work-3PL (Shlonsky, 1994)

The clitic pronouns in all but the 1sg, 2sg and pl and 3sg masculine are optional. Without the pronominal clitics and without any pronominal subject, a singular/plural agreement marked on the complementizer remains in West Flemish.

(3) a. Kpeinzen *da* Valère morgen goat
I-think that Valère tomorrow go
'I think that Valère will go tomorrow'
b. Kpeinzen *da-n* Valère en Pol morgen goan
I-think that-PL Valère and Pol tomorrow go
'I think that Valère and Pol will go tomorrow' (West Flemish, Haegeman, 1992)

Several other Germanic languages[2] show paradigmatically impoverished versions of this agreement. None show the presence of clitics at C^0, but they do give either suffixal singular/plural distinctions on the complementizer, or distinctions between 2nd person morphology and default morphology.

(4) a. dat ik kom
that I come
b. datte we komme
that-PL we come-PL (South Hollandic, Zwart, 1993)

(5) a. of ik kom
whether I come
b. of-s toe koms
whether-2SG you come-2SG (Groningen, Zwart, 1993)

(6) a. datst (do) jûn komst
that-2sg (you) tonight come-2sg
b. dat (er) jûn komt
that (he) tonight come-3sg (Frisian, Zwart, 1993)

(7) a. damid ich komm
sothat I come
b. damidsd kommsd
sothat-2SG come-2SG
c. damidds kommds
sothat-2PL come-2PL (Munich Bavarian, Zwart, 1993)

(8) a. ob ech well
whether I want

[2] The distribution of CA in both Bavarian and Dutch is somewhat off from a geographical perspective. Hoekstra and Smits (1998) describe the distribution within the Dutch area as "defective" (Hoekstra and Smits 1998; 192) due to the discontinuous area in which the construction is found. I will return to the issue of distribution and dialect variation within CA in Chapter 4.

b. obs du wëlls
whether-2sg you want-2sg
c. datte mir wëllen
that-PL we want-PL (Luxemburgish, Zwart, 1993)

These agreements occur in the absence of any movement or extraction out of the lower clause. With the exception of the cliticization in West Flemish—which will be treated in Chapter 2—no movement of the lower clause subject is seen.[3] These are all cases of "agree at a distance."

1.1.2 CA on non-complementizers

In Germanic languages where the morphological marking of agreement on C is different from standard verbal agreement, the CA in fact exhibits the morphology associated with verbs in "inversion contexts" where another element precedes the verb and the subject is realized below the verb.[4]

(9) a. Wij speul-t/*-e.
we play-1PL
b. Waar speul-e/*-t
Where play-1PL
'Where do we play?' (Eastern Netherlands, Fuß, 2008)

(10) a. datte wiej noar 't park loopt
that-PL we to the park walk
'that we are walking to the park'
b. Volgens miej lope wiej noar 't park.
according-to me walk-PL we to the park
'According to me we are walking to the park.'

[3] The agreement does co-occur with optional pro-drop in Frisian. Although the full explanation of pro-drop licensing is beyond the scope of this chapter, the agreement morphology would help with "recoverability" and be in line with most analyses of pro-drop licensing. Bayer (1984) explores the relationship between Germanic CA and pro-drop.
[4] In fact Hoekstra and Smits (1998) argue that the impoverished nature of CA morphology in many dialects is due to agreement on C being limited to person and number and excluding tense, thus CA is only marked for persons and numbers where the present and preterite forms of the verbal paradigm used in inversion contexts are the same.

c. Wiej loopt noar 't park.
we walk-PL to the park
'We are walking to the park.' (Hellendoorn, Carstens, 2003)

1.2 Relative complementizer agreement

Another form of agreement between a complementizer and φ-features in a lower clause is "relative CA," or the agreement between the complementizer and an element extracted from the lower clause. In these cases, the complementizer agrees with the extracted element from the lower clause. Unlike the CA in section 1.1, movement of the agreeing argument from the lower clause is necessary for relative CA.

1.2.1 Full noun class agreement in Bantu relative clauses

A number of Bantu languages show agreement between complementizers—morphologically prefixes on the verbal complex—and the noun class of the relativized argument. Carstens (2001, 2003, and 2005) treats the phenomenon in Kilega (Niger-Congo, Bantu).

(11) bitondo bí-ku-ténd-a úzo mwána ta-bí-lí bi-sóga
8word 8CA-PROG-say-FV 1that 1child NEG-8SA-be 8agr-good
'The words that that child is saying are not good.' (Kilega, Carstens, 2003)

In Kilega, agreement with the relative argument usurps subject agreement throughout the lower clause. Subject agreement (SA)—usually realized as a prefix on the verb in a clause with no C-morphology—is absent. This will be returned to in more detail in section 1.6.

(12) Mutu t- á- ku- sol- ág- á maku wéneéne.
1person NEG-1AGR-PROG-drink-HAB-FV 6beer alone
'A person does not usually drink beer alone.' (Kilega, Carstens, 2005)

Diercks (2009) and Henderson (2011) have similar—but crucially not identical—data from Lubukusu, and Zulu respectively (both Niger-Congo, Bantu). The differences in the expression of lower clause agreement in these languages will be examined in section 1.6.

(13) a. ba-ba-andu ba-a-kula ka-ma-tunda likoloba
2-2-people 2s-pst-buy 5-5-fruit yesterday
'The people bought the fruit yesterday'
b. ba-ba-andu ba-ba-a-kula ka-ma-tunda likoloba
2-2-people 2c-2s-pst-buy 5-5-fruit yesterday
'The people who bought the fruit yesterday'
c. kama-tunda *(ni-ko) ba-ba-andu ba-a-kula likoloba
6-fruit comp-6 2-2-person 2s-pst-buy yesterday
'the fruit that people bought yesterday' (Lubukusu, Diercks, 2009)

(14) inja e-mfana wa-yi-thenga in-hle
9dog 9CA-1boy 1SA-9OA-buy 9SA-good
'The dog which the boy bought is good.'
(Zulu, Poulos 1982 cited in Henderson, 2011)

1.2.2 Subject/object asymmetries in Indo-European

Differential complementizer realization in subject vs. object relativization is widespread in Indo-European languages and is one of the earliest types of CA to attract syntactic attention from those working in a government and binding framework. In French, the two elements *qui* and *que* may both appear in C^0 position in relative clauses, with *qui* appearing with relativized subjects as in (15) and *que* with relativized objects as in (16).

(15) ...l'homme qui *t* viendra...
...the man who *t* come.FUT
'...the man who will come'

(16) ...l'homme que j'aime *t*
...the man whom I love *t*
'...the man that I love'[5] (French, Bennis and Haegeman, 1984)

[5] As the gloss shows, a similar effect of case marking of the trace in base generated position appearing on the wh- element in its moved position was once productive in English in the

West Flemish relative complementizers follow the same pattern, although the phenomenon is obligatory in French and optional in West Flemish. In Flemish, subject relatives may take either *dat* or *die*, while object relatives may take only *dat*.

(17) ...den vent dat/*die Jan *t* gezien heet
...the man that/*who Jan *t* see has

(18) ...den vent dat/die *t* hier geweest heet
...the man that/who *t* here been has
'the man who has been here' (West Flemish, Haegeman, 1983)

Previous accounts of French and West Flemish relative CA (e.g., Pesetsky, 1982) and Bennis and Haegeman (1984) treat the phenomenon as one of deletion where either C^0 or specC may be filled but not both. They treat the form present in object relativization as a complementizer in head position and the form realized in subject relativization as a wh- pronoun occupying specC with an empty C^0 position. This case was bolstered by the morphological identity of *que* and *qui* with the standard, non-relative complementizer in French and with a wh- word respectively. The object form *que* is the canonical French complementizer and the one that occurs in cases of complementation when no trace or movement is involved.

(19) Je crois que mon chien est fou.
I believe that my dog is crazy.

Qui is a wh- pronoun and can occur in sentences where there is no complementizer present.

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form of the *who/whom* distinction. *Who* (like *qui*) was used for subjects and nominal marked elements, *whom* for accusative marked elements that were given case by their lexical governors (verbs or prepositions). Morphological case marking is not productive in English, nor in French, and although it does seem that the Case checking process, along with ϕ-feature checking, is involved with CA, I will not be using the *who/whom* distinction further.

(20) Qui viendra?
Who come.FUT?
'Who will come?'

Pesetsky (1982) argues that both a wh- pronoun and complementizer *que* are present in all cases, but either the head or spec contents are deleted at spell-out. Bennis and Haegeman (1984) adopt a similar deletion story for Flemish. However, such a story is problematic given that motivating the deletion of an element in either C^0 or specC is not straightforward, as such elements can co-occur even—as pointed out by Haegeman (1983)—in West Flemish.

(21) Ik weten niet wien dat Jan gesien heet.
I know not whom that Jan seen has.
'I do not know who Jan has seen.' (West Flemish, Haegeman, 1983)

This makes it difficult to motivate the type of deletion mentioned above to account for non-co-occurrence of *die* and *dat* other than by stipulating that the two types of elements cannot co-occur.

Rowlett (2007) motivates the treatment of *qui* and *que* as complementizers rather than wh- elements, pointing out that they may co-occur in some forms of French with relative pro-forms as in (22) and are thus not pro-forms themselves.

(22) le principe selon lequel que la copie privée n'est pas un droit
the principle according.to which that the copy private NEG-is not a right
'the principle according to which private copying is not a right'
(French, Rowlett, 2007)

Additional support for this analysis also comes from the role of complementizer *qui* for both animate and inanimate subjects, while wh- *qui* is limited to animate antecedents.

(23) la tarte qui a été faite
the tart that has been made (French, Rowlett, 2007)

Thus, we can safely assume that both French and West Flemish do in fact show a species of relative CA, and it will be treated as such in Chapter 2.

1.2.3 Subject/Object asymmetry with agreement in Gothic

Harbert (1992, 2012) also points out a complementizer in Gothic (Indo-European, Germanic) that he describes as particularly "exotic." Gothic has a subject/object asymmetry similar to an English *that*-trace effect (see section 1.4) in which a subject relativization must use a relative pronoun strategy but an extracted non-subject may appear with a complementizer and no relative pronoun.

(24) sahwazuh sa-ei [–] ni gamarzjada in mis... (Luk 7:23)
whoever who COMP not is-offended in me
'whoever is not offended in me'

(25) hwazuh sa-ei [–] matjiþ þana hlaif... (K 11:27)
whoever who COMP eats the bread
'whoever eats the bread'

(26) [$_{\text{np}}$ þishwammeh [þei [wiljau [–]]]], giba þata (Luk 4:6)
to-whomever COMP I-want I-give that
'to whomever I want I give that'

(27) [$_{\text{np}}$ þishwaduh [þei [gaggiþ in gard [–]...]]] (Mk 6:10)
wherever COMP you-go into house
'wherever you go into a house'

(28) [$_{\text{np}}$ þishwah [þei [bidjis guþ [–]...]]] (Joh 11:22)
whatever COMP you-ask God
'whatever you ask God' (Gothic, Harbert 2012)

However, another pattern of subject relativization with no relative pronoun exists. Instead of the pronoun, an agreeing complementizer may be used. In addition to sensitivity for subjecthood (the complementizer is otherwise disallowed), the agreeing complementizer is also sensitive to gender, taking the form *izei* for masculine subjects and *sei* for feminine.

(29) sahwazuh izei usqimiþ izwis (Joh 16:2)
whoever IZEI kills you
'whoever kills you'

(30) managei sei stoþ hindar marein (Joh 6:22)
multitude SEI stood beyond sea
'the multitude that stood beyond the sea' (Gothic, Harbert 2012)

1.2.4 Relative verbs

Welsh (Indo-European, Celtic) shows a pattern of relativization similar to the other Indo-European languages above. Two patterns of relativization are used: one with an overt, morphological complementizer (see footnote 8), and one based on a relative verb form. The relative verb is a form of the verb "to be" (colloquial *sy*, formal *sydd*) used only in the case of a relativized, fronted subject, and only in the affirmative.[6]

(31) Beth sy 'n digwydd?
What be.PRES.REL PROG happen.INF
'What's happening?'

(32) Pwy nad yw 'n gwybod am y gân adnabyddus hon?
Who COMP.NEG be.PRES.3s PROG know.INF about the song well.known DEM.FS
'Who doesn't know about this well-known song?'[7]
(Welsh, Borsley, Tallerman, and Willis, 2007)

The relative verb does not agree in φ-features with the extracted subject, but this is the expected behavior of a Welsh verb in post-verbal position due to the Anti-Agreement effect (Borsley, Tallerman, and Willis 2007, 131) in which verbs do not agree with their fronted subjects. The relative verb is strictly present tense and standard non-relative forms of the verb *bod* "to be" appear in non-present tense subject relatives.

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[6] Borsley, Tallerman, and Willis (2007) give *sydd*—Middle Welsh *ysydd*—as part of the copular construction and its use in wh- and relative clauses appears relatively stable over time despite phonological reduction (OW *ysydd* > Formal Welsh *sydd* > Colloquial Welsh *sy*).

[7] Borsley, Tallerman, and Willis (2007) also show that colloquial Welsh allows the relative verb in negative constructions where the negation follows the verb.

(i) Pwy sy ddim yn gwybod am y gân adnabyddus hon?
Who be.PRES.REL NEG PROG know.INF about the song well.known DEM.FS
'Who doesn't know of this well known song?'

(33) Beth oedd yn digwydd?
What be.IMPF.3s PROG happen.INF
'What was happening?'
(Welsh, Borsley, Tallerman, and Willis, 2007)

The verbal pattern is only available when the verb of the relative clause is "to be." With other verbs the complementizer strategy is used, and a subject/object asymmetry does not surface.[8]

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[8] Welsh also shows a complementizer alternation that may be tangentially related to CA. Two relative complementizers *a* and *y* are used to form relative clauses: *a* when a subject or direct object is relativized; *y* when the extracted element is something other than subject or direct object, e.g., the object of a preposition, or a nominal possessor.

(i) y bachgen a welodd y ci
the boy COMP saw.3sg the dog
'the boy who saw the dog'
'the boy that the dog saw' (Welsh, Tallerman, 1990)

(ii) Fe yw'r dyn lladdwyd ei wraig mewn damwain car.
He is-the man kill.PASS his wife in accident car
'He is the man whose wife was killed in a car accident.' (Welsh, Jones, 2007)

Breton (Indo-European, Celtic) uses complementizers with similar agreement patterns to mark affirmative main clauses. The particle takes the form *a* when the fronted element is a subject or object, or if it is the non-tensed VP.

(iii) a. Me a lenn al levr
I PRT read the book
'I read the book'

b. Al levr a lennan
The book PRT I-read
'I read the book' (Breton, Anderson 2000)

Rezac (2005) argues that sentences like this are not neutral or acceptable in out-of-the-blue contexts. Instead this example shows object focus; only subject-initial and VP-initial sentences receive a neutral interpretation.

(iv) [Debriñ krampouezh]$_1$ a ran t_1.
eat pancakes R do.I t_1.
'I EAT PANCAKES.' (Breton, Rezac 2005)

If the preverbal element is a PP, adjective or adverb, the particle *e* is present.

(v) a. D'ar merc'hed / gant ar post / dec'h e kasas ar pakad-se
to the girls / by the post / yesterday R sent-he the package-this
'He sent this package to the girls / by the post/ yesterday.'

b. Brav e kavan ar pezh-c'hoari-se.
beautiful R find.1.SG the piece-play-this
'I find this play beautiful.' (Rezac, 2005)

1.3 Co-relative structures

Although not involving a true complementizer—and thus not representing a case of CA—another instance of agreement in relative structures is found in languages that use a co-relative structure. In these languages, there is no complementizer at the C^0 position. Instead, both clauses include an agreeing relative pronoun. The pattern is common in modern Indo-Aryan languages, and is well documented as the relative pattern that was used in Sanskrit. Example (34) below is from Sanskrit.

(34) sahásraśr̥ṅgo vr̥ṣabhó yáḥ samudrā́d udā́carat /
thousand-horned bull which sea-ABL out rose
ténā sahasyènā vayáṃ ní jánān svāpayāmasi // (RV 7. 55.7)
that-INSTR mighty-INSTR we in people-ACC put.to.sleep
'the thousand-horned bull that rose from the sea, with that mighty one
we put the people to sleep.' (Vedic, Kiparsky, 1995)

Many modern Indo-Aryan languages also use a similar pattern.

(35) mai us/o genna-ki thak-ya si jer-a clasay vich
1sg.F.PLN DEM man-OBL see-M PST REL-M class in
par-a-na ona si
teach-CAUS-IMPF use PST
'I saw that man who used to teach in class.'

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c. Dec'h en devoa (ar merour) gwerzhet
yesterday R.3.SG.M had the farmer sold
(ar merour) leue e vuoc'h ruz.
the farmer calf his cow red
'Yesterday the farmer had sold the calf of his red cow.'
(Kervella 1995:373, cited in Rezac 2005)

The agreement in the Breton cases been argues to be based on category (N, D, etc.). Rezac (2005) argues that the initial position is filled by movement driven by a probe comprised of an uninterpretable categorical feature, which selects the category for the nearest syntactic element as its goal. If Rezac's analysis is correct, this categorical agreement could potentially make the Welsh and Breton complementizer alternation look more like CA, however, the alternation can also be explained as one based on whether the preverbal element is moved or adjoined. This alternation will not receive further attention here.

(36) o kuri jer-i ka-ni ai boni soni ai
DEM girl REL-F eat-IMPF.F is very beautiful is
'The girl who is eating is very beautiful.' (Potwari, Nazir, p.c.)

Like Sanskrit, no plain subordinating complementizer is used.

(37) mahaila o party per ay-ya si
1sg.think 3sg.M.PLN party to come-M-PST BE.PST.3.SG.
'I think he came to the party'

(38) o soch-na ai o party per ay si
3sg.M.PLN think-IMPF-PRS 3sg.F.PLN party to come BE.PST.3.SG
'He thinks that she came to the party.'
(lit. 'He is thinking that she came to the party.')

(39) o soch-na ai mai party per gi sa
3sg.M.PLN think-IMPF PRS 1sg.F.PLN party to go.F BE.PST.1.SG
'He thinks that I went to the party.' (Potwari, Nazir, p.c.)

It is not completely straightforward in these cases to separate co-relative from relative clauses. These clauses look like Sanskrit co-relatives. Farah Nazir and some other syntacticians refer to these constructions as using a "relativizer" or a complementizer. Davison (2009) writes about modern Hindi and Urdu as still having a co-relative structure.

(40) [joo kitaab(i) maiN-nee kal khariidii] woo(i) khoo gaii hai
rel book I-ERG yesterday buy-PF 3SG be-lost go-pf is
The book(i) [which(i) I bought t(i) yesterday] has gotten lost.
(Hindi, Davison, 2009)

The ambiguity of such constructions will be addressed in Chapter 5.

1.4 THAT-trace effect and complementizer argument compatibility

A type of construction that is related to complementizer alternation is the type that yields what is known as a THAT-trace or complementizer-trace effect. Here, the alternation is not between two morphological complementizer forms as in 1.2.2, but between the phonologi-

cal expression of a complementizer and a null C^0 position. In English, the complementizer *that* is compatible with an extracted object, but not an extracted subject.

(41) Who do you think that Mary knows.

(42) a. *Who do you think that plays the clarinet
b. Who do you think plays the clarinet.

While extracted objects may be raised out of a lower clause headed by either a null or phonologically realized complementizer, subjects cannot be extracted past a lexically realized complementizer.

The phonologically null nature of the "permeable" complementizer is not necessary for the distinction, however. Modern Hebrew (Afro-Asiatic, Semitic) shows the same dichotomy—one C^0 realization that does not discriminate S-raising from O-raising and one which does—when both complementizers are phonologically realized.

(43) a. Mi at ma'amina še- lo ohev salat xacilim?
who you believe that NEG like salad eggplants
'Who do you believe doesn't like baba ganouj?'
b. Ze ha- iš še- ani ma'amina še- (hu) lo ohev salat xacilim
this the man that I believe that he NEG like salad eggplants
'This is the man that I believe that (he) doesn't like baba ganouj.'
c. Eize iš amar- ta le- Xanan še- yodi'a le- Aliza še- carix le- hagi'a?
which man said you to Xanan that will inform to Aliza that must to arrive
'Which man did you tell Hana to tell Aliza that is due to arrive?'
d. Hine ha- iš še- amar- ta le- Xanan še- yodi'a le- Aliza še- (hu)
here the man that said you to Xanan that will inform to Aliza that he
carix le- hagi'a
must to arrive
'Here is the man that you told Hana to inform Aliza that [he] is due to arrive.'

(44) a. *Mi ein- ex yoda'at 'im mešaret ba- milu'im?
who not- you know whether serves in reserves
'Who don't you know whether serves on reserves?'
b. Et mi ein- ex yoda'at 'im ha- milu'im me'aifim?
ACC who not- you know whether the reserves tire
'Who don't you know whether reserves-duty tires?'

c. *Eize saxkan kolno'a lo haiy- ti batu'ax 'im kore iton?
which actor film NEG was- I certain whether reads newspaper
'Which film actor wasn't I certain whether he reads the paper?'

d. Eize saxkan kolno'a lo haiy- ti batu'ax 'im efšar lir'ot
which actor film NEG was I certain whether possible to-see
ba- televiziya?
on- television
'Which film actor wasn't I certain whether it is possible to see on television?'
(Hebrew, Shlonsky, 1988)

1.5 Upwards agreeing complementizers

Another type of CA that may appear on complementizers marking the boundary between a main and a subordinate, non-relative clause is CA that takes φ-features corresponding to the higher clause subject in Bantu and to a more semantically complicated "information source" argument in Mande.

1.5.1 Matrix-subject linked CA in Bantu

In some Bantu languages, such as Lubukusu, the complementizer agrees with the subject of the matrix clause.

(45) a. baba-ndu ba-bol-el-a Alfredi ba-li a-kha-khil-e
2-people 2S-said-AP-FV 1Alfred 2-that 1S-FUT-conquer
'...The people told Alfred that he will win.'

b. Alfredi ka-bol-el-a baba-ndu a-li ba-kha-khil-e
1Alfred 1S-said-AP-FV 2-person 1-that 2S-FUT-conquer
'Alfred told the people that they will win.' (Lubukusu, Diercks, 2013)

Agreement may only be with the syntactic subject, regardless of the relationship between the subject and the lower clause. Examples (46) and (47) below show the agreement even when the subject is not the information source or when there is another argument that serves a causative role.

(46) khw-a-ulila khukhwama khu Sammy khu-li (*ali) ba-limi
1pls-PST-hear from LOC 1Sammy 1pl-that 2-farmers
ba-a-funa ka-ma-indi
2S-PST-harvest 6-6-maize
'We heard from Sammy that the farmers harvested the maize.'

(47) n-a-suubi-sya Alfredi n-di (*ali) ba-keni khe-be-echa
1sgS-PST-believe-CAUS 1Alfred 1sg-that 2-guests PRG-2S-coming
'I made Alfred believe that the guests are coming.'

(48) John ka-sindu-sia ba-ba-ana a-li ba-keni b-ol-ile
1John 1S-surprise-CAUS 2-2-children 1-that 2-guests 2S-arrive-PST
'John caused the children to be surprised that guests arrived.'
(Lubukusu, Diercks, 2013)

In passive constructions, a derived subject in the matrix clause may trigger CA unless a by phrase is present.

(49) Sammy ka-bol-el-wa a-li ba-keni b-ola
1Sammy 1S-say-AP-PASS 1-that 2-guests 2S-arrived
'Sammy was told that the guests arrived.'

(50) Nelson ka-bolel-wa nende ese mbo (*n-di) ba-keni ba-a-cha
1Nelson 1S-told-PASS by me that (*1sg) 2-guests 2S-PST-go
'Nelson was told by me that the guests left.'[9] (Lubukusu, Diercks, 2013)

[9] A complicating factor is that CA appears to have an effect on the expression of a speaker's commitment to the truth value of what is being said. Diercks (2011) gives the following examples from his field work.

(i) Mosesi a-lom-ile ___ Sammy k-eb-ile chi-rupia.
1Moses 1S-say-PRF COMP 1Sammy 1S-steal-PST 10-money
'Moses has said that Sammy stole the money.'
A. Moses saw the event, and the speaker believes him: *bali/√ali
B. Moses did not see the event, but reported what people have said: √bali/*ali
C. Moses says he saw the event, but the speaker doesn't believe him: √bali/ *ali

(ii) Mosesi a-ul-ile ___ Sammy k-eba chi-rupia
1Moses 1S-hear-PST COMP 1Sammy 1S-stole 10-money
'Moses heard that Sammy stole the money.'
A. If Moses does believe it: √bali /√ali
B. If Moses doesn't believe it, or if the speaker doubts it: √bali/*ali

Similar C-agreement is found in Chokwe, Luchazi, Lunda, and Luvale, as described by Kawasha (2007). However, in these cases the CA is reduced—i.e., not full noun class—and marks the subject as information source vs. non-subject as information source.

(51) a. Chokwe
Ka-na-amb-e ngwenyi mw-angana h-a-fw-a
SA1-TAM-say-fv COMP1 1-chief TAM-SA1-die-fv
'He said that the chief is dead.'

b. Luchazi
Mbambi u-a-san-ene ngweni mbati.
9.duiker SA1-TNS-call-RP COMP 9.tortoise
'The duiker called (that), "tortoise".'

c. Lunda
Mu-kwénzi w-e-eluk-ili nindi mpáta y-a-telela
1-youth SA1-TNS-know-RP COMP1 8.country SA8-TNS-ought
ku-himp-ew-a.
INF-change-PASS-fv
'The youth knew that the country ought to be changed.'

d. Luvale
Ø-na-tu-lwez-e ngwenyi na-ngu-land-a.
SA1-TAM-OM1-l-tell-fv COMP1 SA1-FUT-buy-fv
'He has told us (that), "I will buy".'

(52) a. Chokwe
Ngu-ne-ev-o ngwo mu-angana h-a-fw-a.
SA1sg-TAM-hear-fv COMP2 1-chief TAM-SA1-die-fv
'I hear that the chief is dead.'

b. Lunda
Ø-na-tiy-i náwu wú-na-ku-keña ku-swana ku-Mayoña.
SA1sg-TAM-hear-fv COMP2 SA2g-TAM-INF-want INF-inherit LOC-Mayoña
'I hear that you want to inherit at the Mayoña.'

c. Luvale
Tu-ne-evw-u ngwavo ku-Kawita ku-li nyama.
SA1pl-TAM-hear-fv COMP2 LOC-Kawita INF-be meat
'We hear that there is meat at the Kawita's.' (Kawasha, 2007)

(iii) Mosesi a-many-ile ___ Sammy k-eba chi-rupia
1Moses 1S-know-PRF COMP 1Sammy 1S-stole 10-money
'Moses knows that Sammy stole the money.'
A. If Moses is absolutely certain: √ali / *bali
B. If Moses is absolutely certain, but the speaker doubts: *ali /√bali

1.5.2 Agreement with a semantically determined argument

Other languages show a pattern similar to that seen in Lubukusu in that the complementizer bears features from a higher clause argument, but that appear to be semantically rather than purely syntactically determined.

Several Mande languages show φ-features on clause-linking markers that mark subordinate clauses such as quotatives or reported information. Idiatov (2010) gives the following examples from Jula of Samatiguila (Niger-Congo, Mande; taken from Braconnier 1987: 48–51).

(53) a. Ń / Ăn náà á fɛrà n-kò Sěkù tɛ shɔn
1SG/1PL PFV 3SG say-PFV 1-CLM PROP 1PFV.NEG agree
'I/We said (it) that Selu will not agree.'
b. Mùsà / Ì náà á fɛrà kò Sěkù tɛ shɔn
PROP / 2SG PFV 3SG say-PRV [NON<1>]CLM PROP 1PFV.NEG agree
'Musa/You said (it) that Seku will not agree.'

(54) a. Ń / Ăn yè á fɛ n-kò Sěkù yè tàgà
1SG / 1PL COP 3SG at 1-CLM PROP SUBJ go
'I/We want (lit: "I/We are at it") that Seku goes away.'
b. Mùsà / Ì yè á fɛ kò Sěkù yè tàgà
PROP / 2SG COP 3SG at [NON<1>]CLM PROP SUBJ go
'Musa/You want(s) (lit: "Musa is/You are at it") that Seku goes away.'

However, unlike the Lubukusu examples in section 1.5.1, these agreements must be with the information source or the speaker in a quotative, and not necessarily with the syntactic subject.

(55) Wô lé tén fɔ-nìn ăn bòrò n-kò byɛ yè nà bí
DEM FOC PST say-PTCP.PFV 1PL by 1-CLM all IPFV come today
'It was asked by us that everybody comes today.'

This type of CA maintains a closer relationship between the verb and the subject, and only certain types of subject-verb relationships allow CA to be expressed.

1.6 Complementizers as agreement blockers

The final type of interaction between complementizers and clausal arguments treated in this chapter is a case that deviates from those treated in the previous sections. While agreeing complementizers take on the φ-features of an argument from either the lower (sections 1.1–1.4) or higher (section 1.5) clause, the expression of the arguments in both clauses and the expression of φ-features of arguments on verbal elements is not interrupted. (We will return to examples from Bantu where it appears that relative CA can replace verbal agreement in certain cases. These data will be revisited below in section 1.6.2.) However, other languages allow the expression of a complementizer to block the expression of agreement features on a non-complementizer in the domain below the CP. This may be either an agreeing or non-agreeing complementizer.

1.6.1 Non-agreeing complementizers that block verbal agreement

The Algonquian languages represent a set of cases where the expression of a complementizer—which surfaces as a verbal prefix—has a significant impact on the expression of verbal morphology. Algonquian languages have two classes of verbal morphology: one for use in matrix clauses (the absolute form), and the other in subordinate (the conjunct form).[10] The agreements that may be expressed on the conjunct verb are limited in relation to those expressed on the absolute.

(56) a. ku-nâw-uk— uwô— pan— eek [Independent]
2 see INV non1.PL PRET PL
'They saw you (PL)'

[10] Conjunct forms appear in relative clauses (e.g., those introduced by 'if' or 'when') and in some wh- questions. For a full account of the use of the conjunct and a syntactic account of verbal raising in Algonquian, see Richards (2004).

b. nâw-uquy-âk— up [Conjunct]
see INV 2PL PRET
'They saw you (PL)' (Wampanoag, Richards, 2004)

The agreement expressed in the absolute is based on the animacy hierarchy (2>1>3>obv) and the prefixal agreement represents the highest animacy argument. The lower animacy argument in a transitive verb is expressed in the suffixal morphology, and an additional morpheme following the verbal stem indicates which argument is the subject.

(57) K-ucem-a-k.
2-kiss-Dir-3P
'You kissed them.'

(58) K-ucem-ku-k.
2-kiss-Inv-3P
'They kissed you.' (Passamaquoddy, Bruening, 2005)

In a "direct" verb, the higher animacy argument acts on the lower animacy argument. In an "inverse" verb, the lower animacy argument is the subject and acts on the higher animacy one.

The relationship between this type of agreement pattern and the expression of the CP layer will be addressed in Chapter 3.

1.6.2 CA as a replacement for verbal agreement

Bantu relative CA was already shown in section 1.2. However, one additional issue regarding the interaction of complementizer agreement and verbal agreement remains. In section 1.2, the focus of the examples given was on the φ-features expressed on the C-prefix to the verbal complex rather than agreements within the verbal complex that are not part of CA. In fact, there is some variation in the way these agreements interact. Examples (59)–(60) below are repeated from section 1.2.1.

(59) Mutu t- á- ku- sol- ág- á maku wéneéne.
1person NEG-1AGR-PROG-drink-HAB-FV 6beer alone
'A person does not usually drink beer alone.' (Kilega, Carstens, 2005)

(60) a. ba-ba-andu ba-a-kula ka-ma-tunda likoloba
2-2-people 2s-pst-buy 5-5-fruit yesterday
'The people bought the fruit yesterday'
b. ba-ba-andu ba-ba-a-kula ka-ma-tunda likoloba
2-2-people 2c-2s-pst-buy 5-5-fruit yesterday
'The people who bought the fruit yesterday'
c. kama-tunda *(ni-ko) ba-ba-andu ba-a-kula likoloba
6-fruit comp-6 2-2-person 2s-pst-buy yesterday
'the fruit that people bought yesterday' (Lubukusu, Diercks, 2009)

(61) inja e-mfana wa-yi-thenga in-hle
9dog 9CA-1boy 1SA-9OA-buy 9SA-good
'The dog which the boy bought is good.'
(Zulu, Poulos 1982 cited in Henderson, 2011)

In (61), it is clear that CA does not replace SA in Zulu, as both are marked in different places in the example. The CA cliticizes to the subject—although it immediately follows the extracted object with which it agrees—and the subject agreement appears in its standard position at the beginning of the verbal complex. The Lubukusu examples are somewhat more complicated. In (60a and b) it is not clear whether the agreement has been usurped. The agreement morpheme for a relativized subject is doubled, but this is ambiguous. However, in (60c) where an object has been extracted and a stand-alone complementizer *ni-* inserted, it is clear that object-agreement goes on *ni-* while the verb bears agreement with its subject—which also occurs in its same preverbal subject position as in (60a).

There are several contexts other than relative clauses where Carstens (2005) shows that Kilega can show Agreement effects with raised non-subjects.

(62) Mu-zízo nyumbá mu-á-nyám-é bána wálúbí.
18-10-that 10house 18SA-A-sleep-FV 2child one.day.period
'There will sleep children in those houses tomorrow.'

(63) a. Mutu t- á- ku- sol- ág- á maku wéneéne.
1person NEG-1AGR-PROG-drink-HAB-FV 6beer alone
'A person does not usually drink beer alone.'
b. Maku ta- má- ku- sol- ág- á mutu wéneéne.
6beer NEG-6AGR-PROG-drink-HAB-FV 1person alone
'No one usually drinks beer alone.'

(64) Ku-Lúgushwá kú-kili ku- á- twag- a nzogu maswá.
17-Lúgushwá 17SA-be.still 17SA-A-stampede-FV10 elephant 6farm
'At Lugushwa are elephants still stampeding over (the) farms.'
(Kilega, Carstens, 2005)

Carstens (2011) explains this as an effect of the availability of Gender in Bantu as a reusable uninterpretable feature. When we return to the syntactic structures in Chapter 3, this feature of Bantu will be crucial to explaining the cross-linguistic variation in the availability of object agreement in object relative extractions.

Inversion of locative and subject—although not object inversions as in Kilega—are also available in Lubukusu.

(65) a. Omwana a- tom- aki imukanda
1child 1SA-send-PERF 5letter
'The child sent a letter.'
b. Imukanda mu- tom- aki omwana
5letter 5CA-send-PERF 1child
'The letter, the child sent it.' (Dzamba, Henderson, 2011)

(66) a. Kú-mú-saala kw-á- kwá mu-mu-siiru
3- 3- tree 3S-PST-fall 18- 3- forest
'A tree fell in the forest.' (Declarative)
b. Mú-mú-siirú kw-á- kwá-mó kú-mú-saala
18- 3- forest 3S-PST-fall-18L 3- 3- tree
'In the forest fell a tree.' (Disjoint Agreement)
c. Mú-mú-siirú mw-á- kwá-mó kú-mú-saala
18- 3- forest 18S-PST-fall-18L 3- 3- tree
'In the forest fell a tree.' (Repeated Agreement) (Lubukusu, Diercks, 2011)

The internal structure of Bantu and IE TPs and thus the availability of their φ-features for agreement will be treated in more depth in Chapter 3. It will, however, be crucial to the following analysis of relative CA that such matrix clauses are a possibility in Bantu languages

and that they are not available in Indo-European languages. While the word order possibilities for such inversions exist in English, they never involve agreement with the relativized element and never usurp the subject's position directly to the left of the verb.

(67) a. At Lugashwa, elephants are stampeding.
b. *At Lugashwa stampede elephants.

(68) a. Beer one does not usually drink alone.
b. *Beer does not one usually drink alone.

The ability of subject agreement to be blocked at the TP-layer will be investigated in Chapter 3, as will the way that this agreement phenomenon interacts with CA.

This chapter has given examples of the types of complementation behavior that will be examined in the following chapters. Synchronic (Chapters 2 and 3) and diachronic (Chapters 4 and 5) explanations of the ways in which complementizers interact with argument structure and the syntactic features and processes that create the variety of patterns described in the foregoing sections will be developed to create a unified account of agreement at C^0 and the interaction between C^0 and TP.

CHAPTER 2

φ-REALIZATION AND THE PROBE-GOAL RELATIONS OF CP

This chapter examines the CP layer and the role of φ-features within C^0 in the realization of agreement on the complementizer in both subordinate declarative and relative clauses. The proposal given here will be a strictly syntactic one and will seek to unify previously proposed syntactic accounts for Germanic-type (downward agreeing) and Bantu-type (upward-agreeing) complementizers under the umbrella of a straightforward, closest-goal Agree relation. Although extra-syntactic accounts of CA will be treated here briefly, a full exploration of their place in the typology of CA will be postponed until Chapter 4. The differences between these patterns will also be examined and attributed to typological differences in the languages involved, but not in the behavior of the CP layer. These typological differences will be further explored in the following chapter (Chapter 3) when this dissertation turns its attention to the relationship between C and T.

Through this chapter and the next, I will argue that both C^0 and T^0 are potential sites for uφ probes and that the valuation of these probes is done independently and not through the passing of features between them. C^0 and T^0 have both uφ and non-φ variants and languages may realize both possibilities (i.e., agreeing and non-agreeing variants) or only one. The valuation of φ at one layer is not conditional on the valuation at the other. In fact, mismatches between C and T features occur and will be leveraged here to argue for separate probes in each layer. The full spectrum of possibilities for C^0 and T^0 φ realization is represented in the world's languages, from no φ realization at either C or T (as in Japa-

nese), to realization of separate and non-overlapping sets of φ-features at C and T (as in Zulu).

Agreeing C and T—Zulu, some Germanic languages
Agreeing C without T (subject agreement usurped)—Kilega, Lubukusu
Agreeing T (possible restricted CA)—French, most IE languages
No C or T agreement—Japanese[1]

The first section of this chapter deals with CA in declarative subordinate clauses, where agreement occurs at a distance with an element that does not undergo movement associated with the agreement. Both agreement with a lower clause subject (as found in several Germanic languages) and agreement with a matrix clause subject or information source will be examined here.

The presence of uφ features at C^0 can co-occur with the other functions of the CP layer such as fronting arguments for Focus, or wh- raising. Languages differ as to whether the φ-features of any element moved into the CP layer are able to value C^0's φ-features, or if agreement can only occur between C^0 and a subject. I will argue that this asymmetry is driven by the differing availability of subjects and objects as the closest relevant goal for C^0's probe. Unlike the cases of CA with no moved element, CA with a moved argument requires the combination of a uφ probe with another, D-linked feature (wh-, Focus, edge features) to cause the movement. This type of CA will be addressed in section 2.2. The combination of uφ probes with other C^0 elements will be treated as an Agree relation. Rather than absolute closest goal agreement as in section 2.1, the agreement in 2.2 occurs through the valuation of "bundled" probes—those containing both uφ and another unvalued element. This bundling will be leveraged to explain cases where CA occurs with an argument

[1] The languages given here are only examples of the type and not meant to be an exhaustive list of any type.

other than the absolute closest φ-bearing element: a bundled probe cannot see a potential goal that does not value both its features, therefore a φ-bearing goal without the other bundled features (wh- for instance) will be invisible to a bundled probe.

2.1 CA by Agree

A number of languages—including Lubukusu (Bantu) and West Flemish (Germanic) from which most of the following data will be drawn—show agreement between the complementizer and a subject (subordinate or matrix) which occurs in the canonical subject position. In other words, the placement of the subject is not affected by its interaction with the complementizer. The complementizer itself bears the φ-features of the subject and this may accompany verbal agreement with the same subject, or in the case of matrix subject agreement, with a different subject. Section 2.1.1 looks at such agree relationships between complementizers and subordinate clause subjects. Section 2.1.2 examines the Bantu cases in which the complementizer shows the noun-class features of the matrix clause subject.

2.1.1 CA with a subordinate subject

As the data given in section 1.1.1 show, several Germanic languages show agreement between the complementizer and the lower clause subject. Examples (1-3) are repeated below.

(1) a. Kpeinze *dan-k* (ik) morgen goan.
I-think that-I (I) tomorrow go
'I think that I'll go tomorrow.'
b. Kpeinzen *da-j* (gie) morgen goat.
I-think that-you (you) tomorrow go
'I think that you'll go tomorrow.'

c. Kvinden *dan* die boeken te diere zyn.
I-find that-PL the books too expensive are
'I find those books too expensive.' (West Flemish, Haegeman, 1992)

(2) a. da-n *(=k) ik werk-en
that-1SG (1SG) I work-1SG
b. da-t *(=j) gie werk-t
that-2SG (2SG) you work-2SG
c. da-t *(=j) ij werk-t
that-3SG (3SG.MASC) he work-3SG
d. da-t (=ze) zie werk-t
that-3SG (3SG.FEM) she work-3SG
e. da-t (=t) tet werk-t
that-3SG (3SG.NEUT) it work-3SG
f. da-n (=me) wunder werk-en
that-1PL (1PL) we work-1PL
g. da-t *(=j) gunder werk-t
that-2PL (2PL) you.PL work-2PL
h. da-n (=ze) zunder werk-en
that-3PL (3PL) they work-3PL (Shlonsky, 1994)

(3) a. Kpeinzen *da* Valère morgen goat
I-think that Valère tomorrow go
'I think that Valère will go tomorrow'
b. Kpeinzen *da-n* Valère en Pol morgen goan
I-think that-PL Valère and Pol tomorrow go
'I think that Valère and Pol will go tomorrow' (West Flemish, Haegeman, 1992)

As the examples in (2) show, the agreement suffixes on the complementizer can be accompanied by clitic doubling in the case of pronominal subjects. This pattern is absent in most of the Germanic languages that show the suffixal agreement only, although several languages show CA only with pronominal subjects. Examples (4)–(8) from Chapter 1 are repeated below to show this pattern.

(4) a. dat ik kom
that I come
b. datte we komme
that-PL we come-PL (South Hollandic, Zwart, 1993)

(5) a. of ik kom
whether I come

b. of-s toe koms
whether-2SG you come-2SG (Groningen, Zwart, 1993)

(6) a. datst (do) jûn komst
that-2sg (you) tonight come-2sg
b. dat (er) jûn komt
that (he) tonight come-3sg (Frisian, Zwart, 1993)

(7) a. damid ich komm
sothat I come
b. damidsd kommsd
sothat-2SG come-2SG
c. damidds kommds
sothat-2PL come-2PL (Munich Bavarian, Zwart, 1993)

(8) a. ob ech well
whether I want
b. obs du wëlls
whether-2sg you want-2sg
c. datte mir wëllen
that-PL we want-PL (Luxemburgish, Zwart, 1993)

The subject in all these cases remains in the canonical subject position, and does not raise into the CP layer, but remains in specTP. As already suggested by Carstens (2005), this type of CA can be treated as a straightforward case of an unvalued φ-feature being valued through agreement with the absolute closest goal.

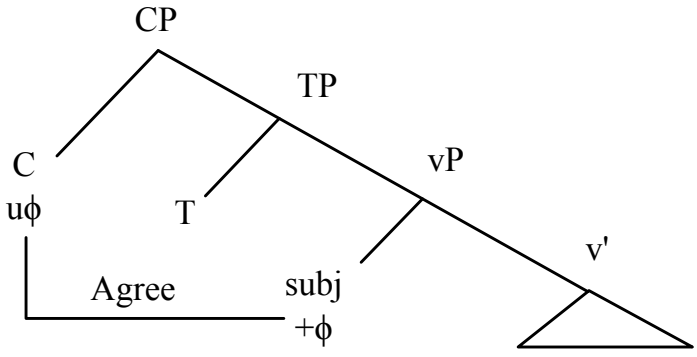

Figure 2.1

The subject is the closest φ-bearing goal to a probe in C^0 whether it remains in base position or has raised into T^0.[2]

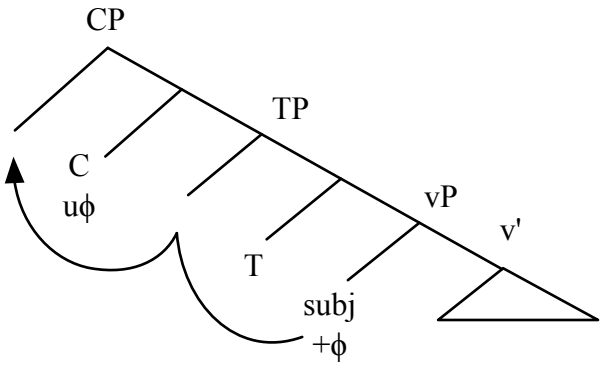

Figure 2.2

We will return to the relationship between TP and CP φ-features in Chapter 3. Crucially, the φ-features that occur in C in non-relative CA do not co-occur with any other unvalued features—such as wh-, topic, or focus features—that may serve as a probe and trigger movement or agreement. When no such movement-triggering feature is present, Agree occurs at a distance, essentially moving a copy of the goal's φ-features into the probe's head position and realizing them as an affix. Only if a probe contains features such as wh- or EPP features that may take an NP goal does movement occur. No such features are present in C^0 in these non-relative complementizers.

[2] The availability of separate T and C projections in subordinate clauses in West Germanic is somewhat controversial due to the lack of verb raising in these clauses. However, I will maintain here that the subordinate C-system must be possible as it provides the structure necessary to host both preverbal subjects as in examples (1)–(8) above and the extracted external possessor in the West Flemish external possessor construction treated below.

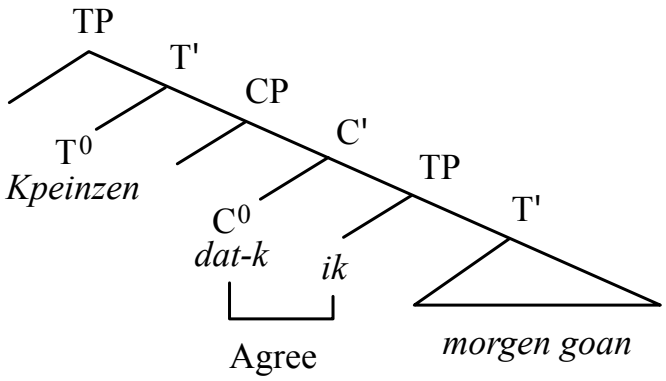

Figure 2.3

The clitics in example (2) are an apparent complication to this lack of movement as the clitic pronoun raises from the TP layer to cliticize to the C^0 head. However, the status of clitics as pronouns and yet elements whose behavior is markedly different from full NP/DPs means they cannot be treated as straight-forward moved pronouns. While NP/DPs may agree at a distance, clitic pronouns show different distribution, leaning on or merging with the head to which they attach. This is not unlike the behavior of agreement features themselves which—taken from the NP/DP subject in situ—attach to the verb (or complementizer) hosting the uφ-probe in order to value and check its features. DiGirolamo (forthcoming) addresses the typology of pronominal φ-expressions, treating clitics as pronouns with behavior more similar to that of an affix. The clitic is moved into the head position with the probe rather than into a spec position where a full (DP) pronoun would land. While movement of a DP into a spec position requires the presence of an edge feature to move it, clitic movement does not appear to have such a requirement. Hence the appearance of clitics on a higher head position in constructions where full DPs remain lower. We will return to the way that φ-probing interacts with edge features when the issue of probe bundling is addressed in section 2.2. However, clitics are treated in this section as moved

into head position by a plain uφ probe of the same type that triggers agreement. The diachronic pathway between clitic and agreement morphemes will be revisited in Chapter 4, but for now it is sufficient to say that they do not interfere with the general treatment of declarative CA as Agree at a distance, as the clitics double a full pronominal subject which remains in situ. They are also always a doubling of a true agreement morpheme and are optional in most persons.

The morphology associated with this type of CA may also appear on verbs, but only in the circumstances where the subject is not raised into the preverbal position and the verb is preceded by a non-subject element. In Germanic languages when the morphological marking of agreement on C is different from that on a verb, verbs take the standard verbal agreement paradigm when subjects precede the verb, but take the "complementizer" agreement paradigm when another element precedes the verb and the subject is realized below the verb.

(9) a. Wij speul-t/*-e.
we play-1PL
b. Waar speul-e/*-t
Where play-1PL
'Where do we play?' (Eastern Netherlands, Fuß, 2008)

(10) a. datte wiej noar 't park loopt
that-PL we to the park walk
'that we are walking to the park'
b. Volgens miej lope wiej noar 't park.
according-to me walk-PL we to the park
'According to me we are walking to the park.'
c. Wiej loopt noar 't park.
we walk-PL to the park
'We are walking to the park.' (Hellendoorn, Carstens, 2003)

These are exactly the cases usually treated as verbal raising into C^0. Thus the agreement on C^0 is realized as closest-goal agreement, whether the lexical content of C^0 is a complemen-

tizer or a raised verb. Figure 2.4 below gives the structure for (10a), while Figure 2.5 gives the verbal raising structure assumed for (10b).[3]

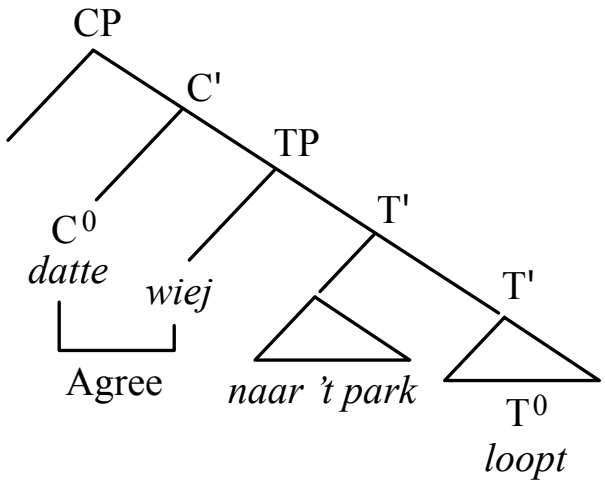

Figure 2.4

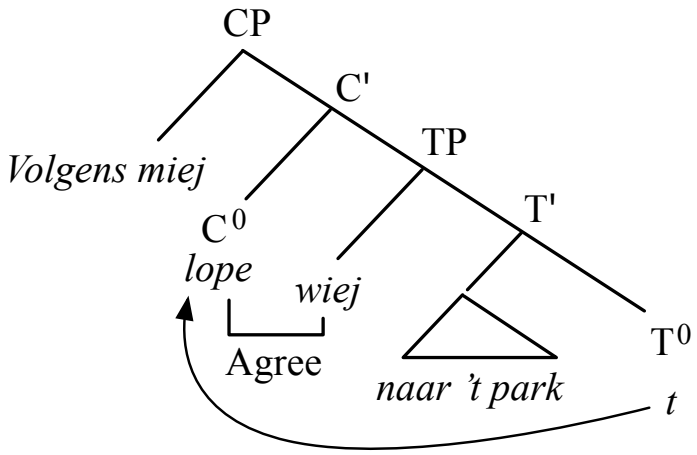

Figure 2.5

The choice of preverbal element (subject, object, PP, etc.) in a V2 language like West Flemish is usually treated as a matter of information structure. The preverbal element can be

[3] The recursion of TP or adjunction structure needed to place a PP is ignored here; although multiple layers of TP are shown in the trees, this is not crucial to the analysis and an adjunction structure at TP is also possible.

either a topicalized element moved into the CP layer—presumably by a topic feature present at the numeration (we will return to this possibility in the next chapter)—or by the subject. The subject in these cases is raised as the closest D-element to the EPP probe. When another element fills the preverbal position, additional structure at CP exists and hosts the preverbal non-subject. The verb raises into C. The presence of the subject at specTP, however, means that it remains the closest goal for the uφ-probe at C^0.

Crucially, all of the foregoing examples show agreement between the C^0 head and the subject. This makes the analysis of all of these as cases of closest goal agreement straightforward. However, there are a few alternatives to this pattern that must be dealt with. Notably, some Flemish speakers allow agreement between a non-subject and the complementizer, specifically in the so-called "external possessor" construction, in which the possessor NP is extracted from a complex DP subject consisting of a possessor and possessum (Haegeman & Danckaert, 2013).

In some Flemish dialects[4] it is possible to separate the possessor NP from the full DP with an intervening temporal adjunct.

(11) a. dat [Jehan [zenen kleenen]] toen juste in de klinieke was.
that Jehan his little then just in the hospital was
'...that just then John's little one was in hospital.'
b. % dat [Jehan] toen juste [zenen kleenen] in de klinieke was.
that Jehan then just his little in the hospital was
'...that just then John had his little one in hospital.'

(12) a. dat [men moeder [euren pols]] toen juste in de ploaster zat.
that my mother her wrist then just in the plastercast sat
'...that just then my mother's wrist was in a plaster cast.'

[4] The distribution of this pattern is covered in depth in Buelens and D'Hulster (2014) and Haegeman and Danckaert (2013). However, it is unclear that any region has this pattern accepted by all speakers. However as a significant minority of speakers in several regions accept and produce the pattern, it is fair to treat it as a possible i-language feature, as I do here.

b. % dat [men moeder] toen juste [euren pols] in de ploaster zat.
that my mother then just her wrist in the plaster sat
'...that my mother just then had her wrist in a plastercast.'
(West Flemish, Haegeman & Danckaert, 2013)

The b examples above are accepted by some speakers, although not all. More speakers in the west of Flanders accept the pattern than in the central region, however the pattern is not rejected by all speakers in this region either. Haegeman and Danckaert (2013) and Buelens and D'Hulster (2014) examine the distribution and acceptability of the pattern, but a larger study would be needed to definitively place the pattern as part of a specific dialect group.

Interestingly for the present study, an external possessor may trigger CA as in example (13) below.

(13) a. omda-n/*omdat [André en Valère] toen juste gebeld oan/*oat.
because.PL/because.SG André and Valère then just phoned had.PL/*SG
'...because André and Valère called just then.'
b. omda-n/*omdat [André en Valère] toen juste [underen computer]
because.PL/*because.SG André and Valère then just their computer
kapot was/*woaren.
broken was.SG/were.PL
'...because André and Valère's computer broke down just then.'
(West Flemish, Haegeman & Danckaert, 2013)

Note that in (13b) the verbal agreement is with the full DP subject, while the CA is usurped by the possessor and cannot take the singular features of the full subject. This is markedly different than what occurs in other cases in which a non-subject intervenes between C and a subject. In cases where an object intervenes, subject CA becomes degraded, but (14c) below in which the object usurps CA from the subject is completely ungrammatical.

(14) a. 'kpeinzen da zelfs Valère zukken boeken niet leest.
I.think that.SG even Valère such books not reads
b. ?? 'kpeinzen da zukken boeken zelfs Valère niet leest.
I.think that.SG such books even Valère not reads

c. * 'kpeinzen da-n zukken boeken zelfs Valère niet leest.
I.think that.PL such books even Valère not reads
(West Flemish, Haegeman & Danckaert, 2013)

This distinction has been leveraged to argue against a number of extra-syntactic accounts of CA, notably those detailed in Miyagawa (2009) and Ackema and Neeleman (2004).

Both of these accounts rely on post-syntactic feature checking to get the subject's φ-features onto the complementizer. Ackema and Neeleman suggest that the post-syntactic feature checking of C^0's features occurs between C^0's probe and a φ-bearing goal. However, both of these accounts undergenerate. There are in fact a number of dialects, such as those treated in Haegeman and van Koppen (2012) where CA occurs even when both adjacency and prosodic unity are disrupted by a PP or temporal adjunct. This will be addressed more fully in Chapters 3 and 4, but given that strict adjacency and prosodic grouping are both insufficient to generate the full spectrum of CA, I will follow a pure syntactic analysis here.

Instead, this data suggests that CA may only be usurped by a goal that occupies a subject-like position. The extracted possessor occupies the position of the closest φ-bearing goal for the uφ-probe at C^0. This is exactly the structure proposed for the external possessor by Haegeman and van Koppen (2012). Figure 2.6 below gives the structure for (13b).

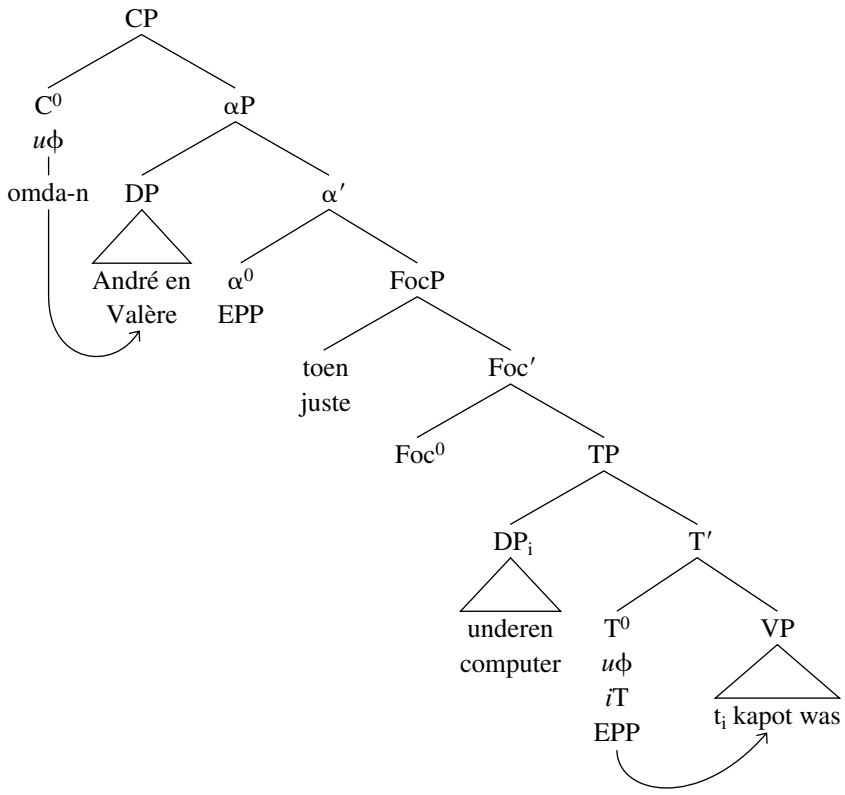

Figure 2.6, taken from Haegeman and van Koppen Figure 16 (Haegeman and van Koppen, 2012; 450)

The possessor occupies a high subject position that Haegeman and van Koppen call αP. With the temporal adverb in Focus and the remainder of the full DP subject (the possessum) occupying the specTP subject position, αP must be a position higher than either TP or FocP. I will argue in the next chapter that Haegeman and van Koppen's αP likely corresponds to Rizzi's (1997) high TopP, but for now it is most crucial that material in αP is the closest available goal for a probe in the highest C position.

I will return to this account in the next chapter when I address the relationship between C and T and treat additional cases where C and T bear separate φ-features.

2.1.2 CA with a matrix subject

As described in section 1.5.1 of the previous chapter, it is also possible in some Bantu languages for CA to be with the matrix subject.

(15) a. baba-ndu ba-bol-el-a Alfredi ba-li a-kha-khil-e
2-people 2S-said-AP-FV 1Alfred 2-that 1S-FUT-conquer
'...The people told Alfred that he will win.'
b. Alfredi ka-bol-el-a baba-ndu a-li ba-kha-khil-e
1Alfred 1S-said-AP-FV 2-person 1-that 2S-FUT-conquer
'Alfred told the people that they will win.' (Lubukusu, Diercks, 2013)

Crucially, this CA is dependent on the subjecthood of the triggering element.

(16) Sammy ka-bol-el-wa a-li ba-keni b-ola
1Sammy 1S-say-AP-PASS 1-that 2-guests 2S-arrived
'Sammy was told that the guests arrived.'

(17) khw-a-ulila khukhwama khu Sammy khu-li (*ali) ba-limi
1pls-PST-hear from LOC 1Sammy 1pl-that 2-farmers
ba-a-funa ka-ma-indi
2S-PST-harvest 6-6-maize
'We heard from Sammy that the farmers harvested the maize.'
(Lubukusu, Diercks, 2013)

As (16) above shows, derived subjects can trigger this CA, while non-subjects cannot as can be seen in example (17).[5]

I will adopt the analysis given in Diercks (2013) and argue that it fits the general pattern of closest-goal Agree with an unextracted element. Diercks (2013) suggests that the lower clause contains a null-subject anaphor which is valued by the φ-features of the matrix clause subject. This null operator is bound as a reflexive anaphor by the matrix subject, but the anaphor itself is c-commanded by the complementizer, and the anaphor's φ-features are available as a goal for the φ-probe in C. Since the anaphor is properly bound

[5] This is the case for the Bantu languages that show this pattern, but not for the Mande languages discussed in 1.6.2 and analyzed by Idiatov (2010). These quotative markers show agreement with the information source only and are not analyzable as a purely syntactic pattern. This pattern will be revisited in Chapter 4.

and governed by the matrix subject, it will bear its φ-features, and those will be the ones found by the probe when it looks downwards into the subordinate clause. The null anaphor occurs in a higher position than the subordinate clause's own subject. The anaphor is in a position similar to the "high subject" position (perhaps Rizzi 1997's TopicP) proposed by Haegeman and van Koppen (2012).

The binding domain for this anaphor is the same domain that Perez (1986) suggests for anaphor binding in Bantu. Perez examines contexts in which Bantu subjects raise from a subordinate finite clause to the matrix subject position. In this example from Shona (Bantu, Zimbabwe) the embedded subject shows agreement on both subordinate and matrix verbs.

(18) Mbavhá$_i$ í — no — fungir — w — a kuti [e$_i$]
9 thief 9 pres. suspect pass. in. that
y — áka — vánd — á mú — bako.
9 far past hide in. 18 cave
'The thief is suspected to be hidden in the cave.' (Shona, Perez 1986)

The idea that the Bantu finite subordinate clause does not form a barrier to movement, agreement, or government, and the matrix clause forms a minimal domain for binding, is not new or limited to solving the problems of CA. Both the government of the anaphor and the probe-goal relation obey standard conceptions of locality.

Given the connection between the subject and information source, it is possible that the position is derived from the speaker phrase proposed by Halle (1997)—although this is a more likely structure for the Mande cases where the operator is strictly limited to information source (i.e., speaker or indirect speaker). However, the speaker phrase and a Mande-like information source construction could be a historical source for the more ambiguous αP. The idea that an information source agreement might be a diachronic source for a subject-linked Agree pattern is developed further in Chapter 5.

This "indirect agreement" provides a story for Lubukusu CA that does not violate our understanding of Agree, nor does it allow agreement to operate outside of the local domain of the probe. Each stage of the operation is local—the government and the probe-goal relation—even if it creates a coreferring chain that is unfamiliar from more well-studied languages.[6]

This analysis has much to recommend it. It accounts for the fact that the agreement pattern in Lubukusu declarative embedding is rigidly subject-oriented and not dependent on information source. When a non-subject is the source of the information, it does not trigger agreement on C. Agreement is also possible with matrix verbs that are not logophoric verbs of information transfer ("saying," "declaring") or belief. For instance the subject of verbs such as "hear" may trigger CA.

(19) khw-a-ulila khukhwama khu Sammy khu-li (*ali) ba-limi
1pls-PST-hear from LOC 1Sammy 1pl-that 2-farmers
ba-a-funa ka-ma-indi
2S-PST-harvest 6-6-maize
'We heard from Sammy that the farmers harvested the maize.'
(Lubukusu, Diercks, 2013)

Diercks locates the null operator in the lower clause in specC, presumably base-generated there to satisfy some requirement of C^0 similar to an expletive subject. However, what feature of C this operator is satisfying is not spelled out. The operator in specC is not present in every clause, as not all complementizers agree. Since Diercks (2013) specifies that the matrix clause verb determines the complementizer that is used and whether or not agreement is triggered, we can assume that the complementizer is selected by the matrix verb above it. Diercks (2013) does suggest that the operator may be in "some sort of CP-level

[6] Icelandic long-distance reflexives appear to have a similar syntactic behavior and a similar logophoric context (Thraínsson 1991, Sigurđson 1986).

functional projection related to speaker-orientation, evidentiality, or logophoricity (p. 16)." However, such a position need not be controlled by the subject when the subject is in specT of the matrix clause where Diercks locates it. Diercks gives the following structure for the relevant matrix and embedded clause positions.

(20) $[_{TP}$ Subject$_1$ ... $[_{CP}$ OP$_1$[... C ...] ...]...]
Binding Agree Reproduced from Diercks (2013)

The operator is the closest goal for the uφ-probe in C^0; the fact that it is fed its features anaphorically does not change this. The exact position of the operator is not given by Diercks.

2.2 CA with a moved argument

In addition to the CA patterns treated in the previous section, a number of languages also show interaction between the φ-features of C^0 and arguments that are extracted out of the lower clause.

Complementizer agreement in relative clauses is well known in both Indo-European and Bantu languages. In many Bantu languages, there is full noun-class agreement between a relativized argument and a complementizer prefix.

(21) bitondo bí-ku-ténd-a úzo mwána ta-bí-lí bi-sóga
8word 8CA-PROG-say-FV 1that 1child NEG-8SA-be 8agr-good
'The words that that child is saying are not good.' (Kilega, Carstens, 2003)

(22) a. ba-ba-andu ba-a-kula ka-ma-tunda likoloba
2-2-people 2s-pst-buy 5-5-fruit yesterday
'The people bought the fruit yesterday'
b. ba-ba-andu ba-ba-a-kula ka-ma-tunda likoloba
2-2-people 2c-2s-pst-buy 5-5-fruit yesterday
'The people who bought the fruit yesterday'
c. kama-tunda *(ni-ko) ba-ba-andu ba-a-kula likoloba
6-fruit comp-6 2-2-person 2s-pst-buy yesterday
'the fruit that people bought yesterday' (Lubukusu, Diercks, 2009)

In IE languages, an asymmetry between complementizers used with relativized subjects and objects is often seen.

(23) ...l'homme qui *t* viendra...
...the man who *t* come.FUT
'...the man who will come'

(24) ...l'homme que j'aime *t*
...the man whom I love *t*
'...the man that I love' (French, Bennis and Haegeman, 1984)

(25) ...den vent dat/*die Jan *t* gezien heet
...the man that/*who Jan *t* see has

(26) ...den vent dat/die *t* hier geweest heet
...the man that/who *t* here been has
'the man who has been here' (West Flemish, Haegeman, 1983)

Both Carstens (2001, 2005) and Henderson (2006, 2011) analyze Bantu relative CA as essentially a probe-goal relationship that operates between C^0 and its closest potential goal. I argue that each probe in fact agrees only with its closest potential goal, and that the closest goal for a given probe must be defined as a goal that can satisfy the features that are "bundled" together in CP.[7] In other words, a probe cannot overlook its wh- (or other D-linked, movement-triggering) feature in order to value its φ-features. φ-elements that do not bear the other relevant bundled features are not potential goals for such a probe.[8] In

[7] I am not necessarily talking about multiple features being generated in the same head position. It is possible to formulate this same idea with multiple heads that are realized as a single position precisely because they may be valued together. I thank Wayne Harbert for this important suggestion. In this case, the φ-features would be generated in Fin and the wh- features in Focus. Only the presence of a single goal that could satisfy both accounts for their realization as a single complementizer.

[8] Although they do not fall under our present discussion of "φ at C," it is interesting to note that non-φ-linked wh-agreement on C also appears to be possible. McCloskey (2001) describes the behavior of complementizers in Irish which show sensitivity to whether wh-extraction has occurred. The complementizer *aL* (*a* plus the triggering of lenition on the following consonant) is present only when a wh- element has been extracted, or in clefts or

the case of relativized subjects, this is straightforward. The subject is the closest goal for both uφ and wh, whether it has raised into T^0 or not.

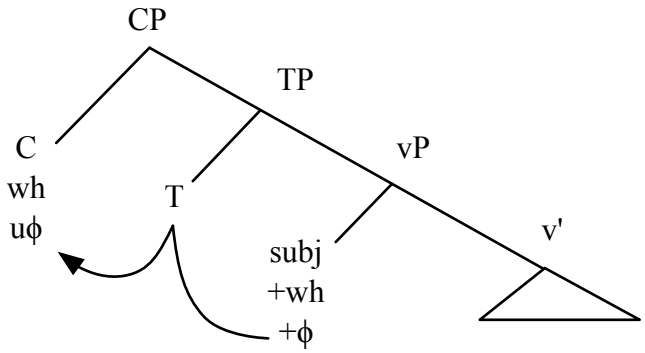

Figure 2.7

For relativized objects, the situation is somewhat more problematic. The object will never be the absolute closest φ-bearing goal for a probe in C^0, as the subject will always occupy a higher position. Carstens (2005) proposes a structure for relativized objects in Kilega that allows the goal selected by the wh-probe in C^0 to still be the closest goal both for wh and for uφ by raising the object over the subject through operator movement to a position above TP. However, Carstens' structure is specifically designed to block subject-verb agreement in cases of object CA and cannot account for data in which agreement of T with an element other than the relativized one is not ruled out, as in Zulu. Ruling out the availa-

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relative clauses. An alternate complementizer appears if there is a resumptive pronoun in situ, so this agreement appears to be triggered by movement.

(i) Deir siad gur ghoid na síogaí í.
say they C-[PAST] stole the fairies her
'They say that the fairies stole her away.'

(ii) an ghirseach a ghoid na síogaí _
the girl aL stole the fairies
'the girl that the fairies stole away'

(iii) an ghirseach ar ghoid na síogaí í
the girl aN stole the fairies her
'the girl that the fairies stole away' (Irish, McCloskey 2001)

bility of the subject should not be necessary, however, if we assume that C's non-wh-marked subject is invisible to C's wh-probe. The subject must be in a position where it is an available goal for T, but it is not selected as a goal by the probe in C.

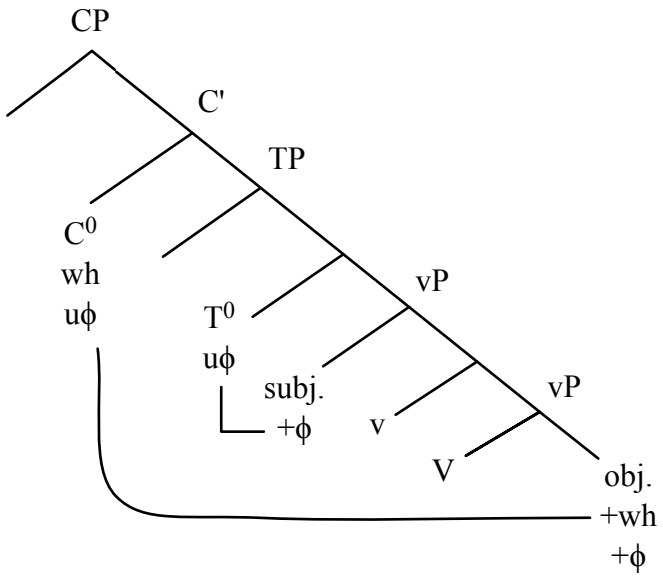

Figure 2.8

C^0 here is both uφ and +wh and must find a +φ and wh-marked goal. The features φ and wh- here cannot act as independent probes and find separate goals, thus a goal that satisfies only the uφ probe will not be an available goal for the C^0 probe. The absolute closest φ-bearing goal—the subject—is not available as a goal and is overlooked. The object is the nearest potential goal that can satisfy both the uφ- and wh-probes. As Carstens (2001, 2011) notes, the nature of gender as a reusable uninterpretable valued feature in Bantu means that the object still has a valued φ-feature to be probed even when it is governed and case-marked by the verb.

The structure in Figure 2.8 above corresponds to cases where both complementizer agreement and verbal agreement occur, but where the agreement is with different goals, as in (27) and (28).

(27) inja e-mfana wa-yi-thenga in-hle
9dog 9CA-1boy 1SA-9OA-buy 9SA-good
'The dog which the boy bought is good.'
(Zulu, Poulos 1982 cited in Henderson, 2011)

(28) mukanda mú-ye baasiba-tind-aki awa
5letter 5CA-REL 2women2AGR-send-PST here
'the letter that the women sent here'
(Lingala, Bokamba 1981, cited in Henderson, 2011)

However, object relativization structures that do not allow differential T and C φ-feature valuation are also possible, even sometimes in languages that also allow examples such as (27) and (28) above. The variation cannot be treated as a parametric one in which a language either allows a C and T mismatch or it does not. Instead it appears that the contents of C^0 and T^0 may vary from construction to construction even within the same language. Both Zulu and Lingala employ alternate strategies for object relativization that do not show double agreement.

(29) incwadiisitshudeni a-isi-yi-funda-yo
9letter 7student REL-7SA-9OA-read-RS
'the letter that the student is reading' (Zulu, Henderson, 2011)

(30) mukanda mú-tind-aki baasiawa
5letter 5CA-send-PST 2womenhere
'the letter that the women sent here'
(Lingala, Bokamba 1981, cited in Henderson, 2011)

(29) shows no complementizer agreement, while in (30) only CA is shown while subject agreement is blocked. It is cases such as those in (30) that Carstens (2005) seeks to rule out with the operator movement structure in Figure 2.9.

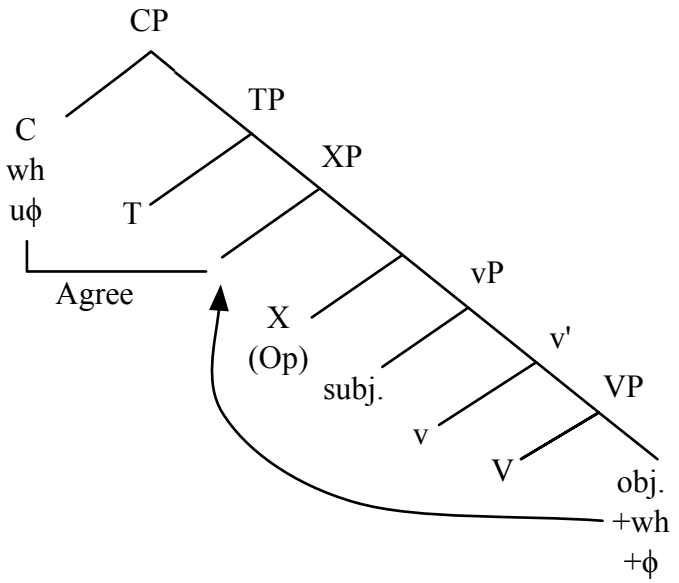

Figure 2.9

Carstens proposes that in object relativization structures, the object is first operator-raised into a position higher than the subject, from which it becomes the closest goal for the probe in C^0. Henderson (2011) proposes that if Carstens' explanation for the data in (30) is correct, then we should expect CA with objects without verbal agreement with subjects in languages that also have other XVS orders where agreement is with the fronted element rather than the subject, since the operator-moved object is the closest goal for any φ-probe in T^0 as well as C^0. In fact, as will be shown in the next chapter, exactly this type of non-subject verbal agreements are possible in Kilega.

However, such XVS orders are not fully predictive of the behavior of relative clauses, as the multiple relative options in Zulu and Lingala show. Henderson (2011) proposes that both C and T contain φ-probes that may either be valued through a normal probe-goal relation or through selection from above. In Henderson's model all uφ enter Match relations with all available φ-features and at the end of the derivation an Agree relation is estab-

lished with the closest Match pair. He argues that the φ-features of C, valued by the relativized object, are equidistant from the uφ in T^0 as the subject, and could serve to value T^0's uφ through selection.

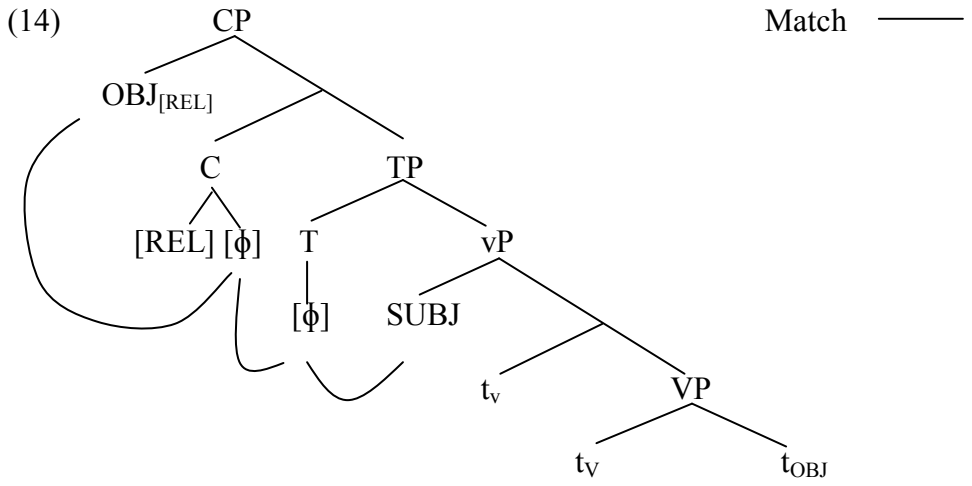

Figure 2.10 copied from Henderson's Figure 14 (2011:748)

This amounts to allowing C-to-T inheritance to apply in cases where C and T share φ-features and for C and T to probe separately in cases where they do not—essentially allowing the language to "choose." However, it is difficult to see how the two structures could be differentiated, or how C^0 could ever be ruled out as the source of φ-features for T^0, as it will always be a closer or equidistant goal for Match.

Henderson reaches an additional conclusion that will be helpful in formulating a probe-goal story for the above facts: a crucial difference is made by the subject raising to specT or not. When the subject does not raise to specT, only φ-agreement with an operator is possible, as the operator will be the nearest φ-bearing goal. However, it remains unclear in Henderson's account why valuation of T's φ-features by those of the operator—either

directly or through inheritance from C—is not possible. In fact, cases of C and T both agreeing with an object occur.

(31) mukanda (mú-ye) mú-tind-aki Poso
5letter 5CA-REL 5AGR-send-PST Poso
'the letter that Poso sent' (Lingala, Henderson, 2011)

The most straightforward explanation is the one that Henderson rejects[9]: T^0 may contain φ-features or not. Since the same language may show both agreeing and non-agreeing T^0 patterns, the variation here would be one of different featural specifications per construction rather than a language-to-language difference. Presumably a construction with a uφ probe at T^0 and one where T^0 bears no probe would differ at their numeration. The possibility of a T^0 that contains no φ-probe explains both the lack of subject raising to T and the lack of an agreement morpheme other than CA. This possibility also provides a neater explanation for the availability of two relativization structures: the two will have different numerations under this theory, one containing a T^0 with uφ and one containing a radically empty T^0. The C^0 position also appears to be able to have or to lack uφ. All the logically possible combinations are represented in Bantu. If C^0 does not contain uφ and T^0 does, we will find structures as in (29). If both C^0 and T^0 contain uφ, structures such as (28) may be found. It is also possible for T^0 to lack uφ-features when C^0 bears them, as in (30). The two sets of features remain unrelated, although they may be valued by the same goal. This will be revisited in Chapter 3.

The Indo-European relativization pattern requires that object agreement of the type accounted for in Figures 2.8 and 2.9 above be ruled out, as objects may never trigger CA in these languages and must appear with a default complementizer when relativized. To ad-

[9] In fact, Henderson had proposed T always lacking uφ features in Zulu in previous work, and here posits that it in fact always bears them.

dress this type of relativization I turn to Rizzi's (1990) account of THAT-trace effects in English.[10]

Rizzi examines cases like the following:

(32) a. Who do you think [*t* 0 [*t* left]]
b. Who [*t* left] (English, Rizzi, 1990)

These types of sentences clearly contrast with ungrammatical examples where an overt lexical complementizer is used.

(33) a. *Who do you think [*t* that [*t* left]]
b. *Who that [*t* left]] (English, Rizzi, 1990)

Rizzi explains this type of data with the hypothesis that there are two possible elements generated in English COMP (CP): *that* and AGR. *That* is clearly not a lexical governor and cannot assign or check Case or otherwise properly govern a trace, hence the inability of the subject to move into the spec of C if *that* is the element at C^0. AGR, however, can do these things and can check the subject's features. Rizzi also reserves the possibility of a "radically empty" C position through which inflected auxiliaries can raise in do-support constructions. AGR in C can check case on subject traces. Object traces are already properly governed by their verb lexical governors. To put this in the language of minimalism, C^0 may contain either phonological material or a probe.

[10] Several more recent treatments of THAT-trace effects exist, however Rizzi's remains the one that fits most elegantly with the cross-linguistic comparison of complementizers and their featural specifications being developed here. Rizzi and Shlonsky (2006) develop an account based on Criterial Freezing in which subjects raise to subject position to satisfy a subject criterion and are thus incapable of being further extracted. They propose that complementizers which allow subject extraction (e.g., French *qui*, English null COMP) satisfy the subject criterion themselves by being +Fin and +φ. Pesetsky and Torrego (2000) propose that C^0 is in fact filled by movement and *that* is a reflex of T moved into C^0 to check a uT feature. This would rule out checking of the uT feature by the subject. Both of these appear to be complex ways of justifying the presence of an AGR or AGR-like feature at C^0, and I will continue to assume that the uφ feature present at C^0 can be base generated there, and is part of the featural specification of the complementizer that occupies C^0.

The *that*-trace analysis also works as an explanation for the Welsh relative verbs seen in section 1.2.4 of the previous chapter with one additional step. The phonologically null complementizer that allows for extraction of the subject and checking of its Case and φ-features also leaves the C^0 head open as a potential landing site for the verb, which raises and incorporates into the C^0 position. The verb is then spelled out as the relative verb *sydd*, bearing both verbal features and those of a relativizing complementizer.

I argue that the same type of variation is available in languages that have overt complementizers for both extractions. The key difference remains the same: in the case of an extracted subject, the complementizer enters into an Agreement relationship with the subject, while this Agree relation is blocked for the object. The advantage of examining the contents of C^0 as a probe that must select either a subject or object as its goal is that it allows greater uniformity in how we talk about complementizers. CP may have substantially the same analysis in languages like French, Zulu, and West Flemish. The C^0 head may either contain a probe or not and different instantiations of C^0 may either check or ignore the features of a raised subject or object.

Returning to Carstens' (2005) analysis of Bantu gender features as "reusable," it is clear that φ-features in Indo-European are not reusable in this manner. Objects in languages that do not have recourse to reusable, inherent interpretable features send their features to spell-out and make them inaccessible after they enter into a relation with a lexical governor. The object checks φ-features and Case within vP, and no longer has active φ-features to serve as a goal for a C^0 probe when CP is merged. Unvalued φ-features on C^0 in such a language can only find the subject to value them. But a non-wh subject is not a potential goal for a C^0 that contains both φ and wh-features.

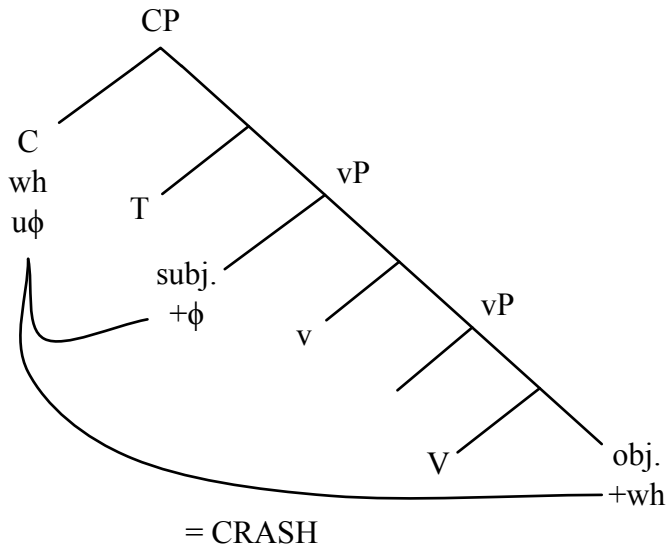

Figure 2.11

If the φ features of C^0 are valued by the subject, the derivation will crash.

However, object relativizations do not crash, they converge, just without any morphological φ-agreement. Instead, the wh-feature is checked by the object and C's φ feature is given a default –φ value. When the bundled φ-probe does not find a goal, the derivation does not crash. Bundled uφ must be a passive probe that is valued only if the goal of the main—in this case wh-—probe has an interpretable feature that can value it. John Bowers (personal communication) suggests a parallel with Romance participles, which also appear to agree only if a goal is available, and to take a default marking otherwise.

Although Rizzi's account compares a lexical C^0 with a radically empty one, it is possible to extend this analysis to other complementizer alternations where both options have lexical content but different specification of φ-probes. In fact such an analysis appears to be necessary to account for optionality found in both Zulu and West Flemish. The data seen in section 1.5 for Modern Hebrew can also be accommodated by this analysis. The complementizer *'im* behaves like English *that*—compatible only with extracted objects. *ˆSe* howev-

er does not have such a restriction, so it appears to be able to check the features of an extracted subject, but not to crash the derivation if an object is extracted and no checking relationship is established.

Both Zulu and West Flemish show optionality with respect to CA. (34b) is an alternate, non-agreeing relative pattern. Contrast this with the agreeing pattern in (34a) (repeated here from 27 above).

(34) a. Inja e-mfana wa-yi-thenga in-hle
9dog 9CA-1boy 1SA-9OA-buy 9SA-good
'The dog which the boy bought is good.'
b. Inja umfana o-wa-yi-thenga-(yo) in-hle.
9dog 1boy REL-1SA-9OA-buy-RS 9SA-good
'The dog that the boy bought is good.'
(Zulu, Poulos, 1982, cited in Henderson, 2011)

In West Flemish (unlike in French), the object-relative form can be used with relativized subjects as a non-agreeing form.

(35) ...den vent dat/*die Jan *t* gezien heet
...the man that/*who Jan *t* see has

(36) ...den vent dat/die *t* hier geweest heet
...the man that/who *t* here been has
'the man who has been here' (West Flemish, Haegeman, 1983)

The optionality can be accounted for as two different numerations, yielding two different sentences and agreement structures. Non-agreeing complementizers would be generated by φ-less functional heads and the agreeing complementizers by functional heads containing an unvalued φ-probe.

The agreeing complementizers in Gothic described in section 1.2.3 show both a sensitivity to subject φ-features similar to West Flemish (among other Germanic languages) and also an asymmetry in the extraction of subjects vs. objects like that found in English THAT-

trace effects. For a non-subject relative in Gothic, the relativized element is fronted and a bare complementizer is used.

(37) [$_{NP}$ þishwammeh [þei [wiljau [–]]]], giba þata (Luk 4:6)
to-whomever COMP I-want I-give that
'to whomever I want I give that'

(38) [$_{NP}$ þishwaduh [þei [gaggiþ in gard [–]...]]] (Mk 6:10)
wherever COMP you-go into house
'wherever you go into a house' (Gothic, Harbert 2012)

Two patterns exist for subject relativization. One pattern requires a relative subject pronoun and disallows an overt complementizer. (24) and (25) from Chapter 1 are repeated below as (39) and (40) to show this pattern.

(39) sahwazuh sa-ei [–] ni gamarzjada in mis... (Luk 7:23)
whoever who COMP not is-offended in me
'whoever is not offended in me'

(40) hwazuh sa-ei [–] matjiþ þana hlaif... (K 11:27)
whoever who COMP eats the bread
'whoever eats the bread' (Gothic, Harbert 2012)

However, a pronoun-less pattern is available if an agreeing complementizer is used. (29) and (30) from Chapter 1 are repeated here as (41) and (42).

(41) sahwazuh izei usqimiþ izwis (Joh 16:2)
whoever IZEI kills you
'whoever kills you'

(42) managei sei stoþ hindar marein (Joh 6:22)
multitude SEI stood beyond sea
'the multitude that stood beyond the sea' (Gothic, Harbert 2012)

Both patterns of subject extraction involve the movement of a φ-bundle—either as part of a pronoun or as Agreement. The relative pronouns in (39)–(40) are a combination of the demonstrative pronoun and the complementizer *ei* (Harbert 2012).

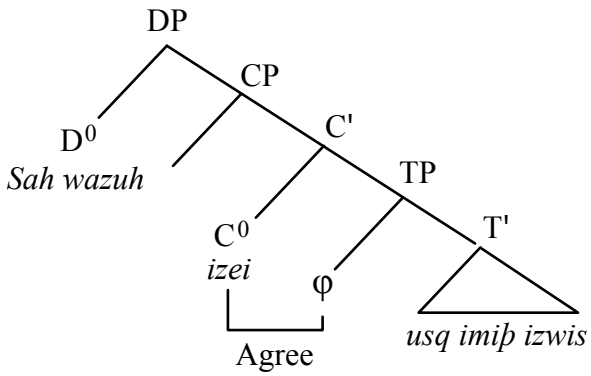

Figure 2.12

Following Harbert (2012), I treat *izei* and *sei* both as true agreeing complementizers, occupying the C^0 position and being φ-features of the moved subject.

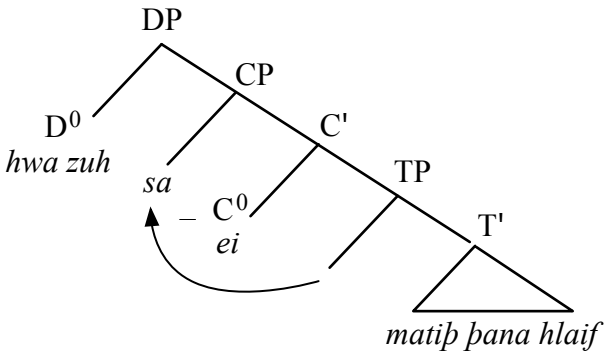

Figure 2.13

Both subject extraction patterns rely on a uφ-probe at C^0 either to trigger movement or agreement. These seem to be two flavors of the uφ-probe. In comparison with Rizzi's (1990) proposal for English, the non-Agreeing Gothic complementizer *þei* corresponds to the English non-Agreeing THAT.

In fact, all the logical possibilities of φ-valuation at T and C are represented,[11] and the φ-probe and radically empty variants of both heads may exist in the same language, as seen above. However, some languages have only +φ or only –φ variants.

Agreeing C and T—Zulu, some Germanic languages
Agreeing C without T (subject agreement usurped)—Kilega, Lubukusu
Agreeing T (possible restricted CA)—French, most IE languages
No C or T agreement—Japanese

In some languages where C and T may agree separately, object agreement at C is possible. This is dependent on movement below CP which puts the object into a position to be the closest relevant goal for C^0's probe (e.g., the closest wh-marked goal for a relative construction). The object would have to be the closest φ-bearing goal overall to trigger non-movement-based CA. Such movement would also make the object the closest goal for T-agreement. In languages where C-agreement is restricted to subjects, T agreement is also with subjects. Agreement of either head with the object is blocked.

These patterns are also fed by the ability of objects and subjects to be scrambled below TP. Carstens (2011) proposes that the reusability of Gender as a φ-feature in the Bantu language allows non-subjects to agree at T. This will be explored in Chapter 3.

[11] The Brythonic alternating complementizers mentioned in footnote 8 of Chapter 1 do not fit nearly into the typology. However, Rezac (2005) has argued for Breton that the complementizer is sensitive to categorical features. Rezac proposes a feature *∂*, which acts as an unvalued categorical probe which operates with an EPP feature to fill the preverbal position. One possibility is that the particle shows agreement in category with the preverbal element, i.e., the Welsh particle *a* is a reflex of agreement with category N, while other categories take particle *y*. For the Breton cases in which a non-tensed VP occupies the preverbal position it is possible to adopt Jouitteau's (2005) account of Breton verbal nouns as having 3rd person singular φ-features inserted at vP. As such, these φ-features are available as a potential goal for agreement. It is possible that the particle is sensitive to φ-features on either the vP or the extracted nominal. Preverbal elements with no φ-features (adverbs, PPs) cannot check the φ-feature of the particle *a*, but are instead compatible with particle *y.*

Conclusion

To account for the full range of data, both C^0 and T^0 must be able to contain φ-probes. The possible relationship between these two phrases will be examined in the next chapter. The probes themselves are simple in that they always find the closest relevant goal and they may not skip over a goal with which they have a sufficient feature match. A probe which is bundled—i.e., one that includes both φ-features and wh-features—may select as its goal the closest wh-bearing element. The wh-probe will move a relativized element and the φ-agreement will "come along for the ride," valuing the φ-features of C. If no movement-triggering probe is in C^0, then the φ-features may probe on their own, potentially resulting in CA at a distance—the type of pattern examined in section 2.1. Of course, a radically empty C^0 is also an option, meaning that C^0 can contain any of the following options, uφ, uφ and a wh-/focus/EPP feature, or no probe at all.

These probes can also co-occur with uφ in T^0, but the presence of uφ at T^0 is not a requirement of CA. The next chapter will examine this relationship and look at cases where the availability of φ-features for goals of CA is fed by the TP layer and also cases where CP either usurps or blocks agreement at TP. Although I will argue against an identity or inheritance relationship between the TP and CP phrases, I will address the relationship between the layers as one where movement of arguments within TP effects the realization of CA and where selectional criteria of CP may effect the syntax of the TP layer it selects.

CHAPTER 3

FEEDING AGREEMENT FROM BELOW:

ARGUMENT STRUCTURE AND INFORMATION STRUCTURE

This chapter examines the relationship between TP and CP and the role that internal structure plays in the realization of agreement at C^0 and T^0. I will argue that the relationship between C and T is not one of feature inheritance as has been proposed by Chomsky (2007) and Den Dikken (2014) or of feature splitting à la Obata and Epstein (2011), and that when φ-probes are present at C^0 and T^0 they do not interact. Instead this chapter will show that the argument and information structure of TP feeds agreements at higher levels by positioning arguments from within TP as the closest goal for a probe at C^0 or T^0.

Two arguments crucial to the development of a theory of independent T^0 and C^0 φ-probing will be developed here. I will extend the argument from Chapter 2 that φ-probes are inherently simple, taking the φ-features of the closest available goal, to show that T^0's φ-probes behave in the same way. The second piece crucial to accounting for T and C agreement is the ability of movement driven by features other than uφ to feed agreement. This chapter will address such movements through the frameworks of operator movement as proposed by Carstens (2005) for Bantu and information-structure-based movement similar to that described in a split CP analysis like that of Rizzi (1997). I will argue that both a traditional high Topic (Rizzi, 1997) and a low, TP internal Topic position may feed agreement. Split CP and TP structures are necessary to account for the agreement variation both between and within languages.

The final section of the chapter addresses the motivation for argument movements that occur prior to agreement, arguing that such movements are possible both before and after the valuation of φ-features, depending on the specific structure and featural specification of the numeration. This allows for variation with respect to what was traditionally viewed as A vs. A-bar movement, and accounts for the apparent cross-linguistic variation in the restriction against A-bar landing sites participating in Agree relations.

3.1 Against a C to T inheritance

Cases of simple CA—where the agreement features of the tensed verb and complementizer match—have been used to bolster a case for a single φ-probe copied or split between the two heads and movement of features proceeding head-to-head leading to the same features at T^0 and C^0 (see e.g., Zwart 1997, Watanabe 2000). In this account the probe controlling CA exists in the "canonical" uφ position at T^0 and its features are realized on C^0 thanks to head-to-head movement.

Since Chomsky (2007) first suggested the φ-features of C and T are shared, it has become increasingly common for syntactic accounts of φ-valuation at C and T to treat φ-features as a single shared feature below the two heads. Chomsky suggests that the φ-probe entering the derivation at C^0 is passed down to T^0 through inheritance. This is partly to protect the notion of phase edges as the only places that can host probes. The problem with this is that it is overly restrictive, predicting that CA and especially mismatches between the φ-features of C^0 and T^0 should be impossible. Several refinements of the C to T inheritance theory have been proposed to try to limit its applications to instances where it is strictly necessary. Den Dikken (2014) proposes that feature inheritance is linked to the

presence of an EPP feature on T, allowing feature inheritance to apply only when subjects raise into specT. While Den Dikken uses the limitation only to better motivate the existence of inheritance within minimalism, this proposal could additionally go some way toward limiting the application of inheritance. For example, cases of CA with movement are usually cases where the extracted argument is moved not by the EPP to specT but by a bundled feature indicating information structure (IS) or wh- features. Den Dikken specifically excludes IS movements from his EPP-based theory, so they remain a case of movement in which an EPP feature would be absent and inheritance would not be triggered. However, the absolute number of uφ-probes generated under Den Dikken's (2014) theory does not differ from that proposed by Chomsky (2007)—a unitary φ-probe at C^0 is passed to T^0. This does not allow for cases in which C and T show separate φ-features, a pattern that does in fact occur in specific cases in both West Flemish and several Bantu languages.[1]

Obata and Epstein (2011) argue that rather than valued features being simultaneously transferred from C to T, as Chomsky and Den Dikken both assume, a single probe is in fact split with some features being valued at C^0 and others at T^0. In languages Obata and Epstein call "English-type," i.e., languages without agreement at C, they claim that φ and Case features are passed to T^0 while other features like wh- remain in C. So a relative clause with a relativized subject would value the subject's wh- feature at C^0, but its φ-features at T^0, essentially two probes agreeing with a single goal. They attempt to extend that C to T

[1] In a personal communication, Den Dikken indicated that multiple φ-feature valuation must be dealt with by generating multiple uφ-probes within C^0, one of which is passed on to T^0 while the other is valued at C^0. However, this does not provide any explanation for the ordering of probes or any way to determine which uφ-probe is handed down to T. Presumably one φ-probe is linked with another C^0-feature (i.e., bundling), but the precedent of generating multiple probes in a single head is arguably undesirable. Additionally, the ability of a uφ-probe to remain at C^0 at all—even if one of two—appears to undermine inheritance.

inheritance analysis to languages where C^0 clearly contains φ-features, arguing that the differences between languages where agreement can and cannot occur at C^0 are parametric. The split of features in languages with CA then allows the φ-features to remain with wh-features at C, passing only Case features down to T. However, this extension of inheritance also runs into problems. It predicts that we should not find examples of T bearing separate φ-agreement when C has a φ-feature, much less agreement with a separate goal.

However, cases of C and T agreeing with separate goals do occur. Most notably in Zulu, a relativized non-subject may trigger agreement on C^0 without interrupting verbal agreement with the subject.

(1) inja e-mfana wa-yi-thenga in-hle
9dog 9CA-1boy 1SA-9OA-buy 9SA-good
'The dog which the boy bought is good.'
(Zulu, Poulos 1982 cited in Henderson, 2011)

It is impossible to explain this data as the output of a single probe at C—split or not—or as an Agree relationship between C and T.

Even in more familiar languages, C and T φ-mismatches do occur, although they are not completely disjoint (e.g., CA with the object and verbal agreement with the subject), but rather agreement between C^0 and a subpart of the subject, such as the possessor. Haegeman and van Koppen (2012) have argued that both first conjunct agreement and CA with an external possessor are examples of C^0 and T^0 probes acting independently. In cases where the subordinate clause subject is coordinated, CA may be either with the full subject or with the first conjunct only, as seen in section 1.2.

(2) Ich dink de-s doow en ich os kenne treffe
I think that-2SG [youSG and I] each.other-1PL can-PL meet
'I think that we (you and I) can meet each other.'
(Tegelen Dutch, van Koppen, 2007)

(3) Oa-n Bart en Liesje nie ipletn...
If-3pl Bart and Lisa not watch.out...
'If Bart and Lisa don't watch out...' (Tielt Dutch, van Koppen, 2007)

Bavarian allows both types of agreement.

(4) a. daß-sd du und d'Maria an Hauptpreis gwunna hab-ds
that-2sg [you$_{sg}$ and the Maria]$_{2pl}$ the first.prize won have-2pl
'that you and Maria have won the first prize'
b. daß-ds du und d'Maria an Hauptpreis gwunna hab-ds
that-2pl [you$_{sg}$ and the Maria]$_{2pl}$ the first.prize won have-2pl
'that you and Maria have won the first prize' (Bavarian, van Koppen, 2007)

Van Koppen accounts for this variation by showing that both the first conjunct and the full DP subject node are equally close goals for a φ-probe in C^0.[2] Coordination structures place both coordinated NPs at the same hierarchical level but with the first conjunct appearing to the left of the second, making the first conjunct a possible goal for probes.[3]

A similar structural explanation applies to external possessor agreement (see section 2.1.1).

(5) a. 'kpeinzen da zelfs Valère <u>zukken boeken</u> niet leest.
I.think that.SG even Valère such books not reads
b. ?? 'kpeinzen da <u>zukken boeken</u> zelfs Valère niet leest.
I.think that.SG such books even Valère not reads
c. * 'kpeinzen da-n <u>zukken boeken</u> zelfs Valère niet leest.
I.think that.PL such books even Valère not reads
(West Flemish, Haegeman & Danckaert, 2013)

[2] Bahloul and Harbert (1993) make a similar case for non-CA examples of first conjunct agreement, and this seems to be a fairly common possibility cross-linguistically due to the structure of coordination.

[3] In fact, according to De Vries (2005), second conjuncts should be invisible to C-command relations, and conjunction structures are non-hierarchical. A first conjunct under De Vries' structure would appear to be more accessible than the entire structure. However, the coordinated node must be able to bear the plural φ-features of both conjuncts or agreement with coordinated DPs (rather than first conjuncts) would be unexpected. It is, in fact, cross-linguistically common.

Following Haegeman and van Koppen, I assume that the possessor must be raised out of the complex DP subject and hosted in a position above TP but below CP. Haegeman and van Koppen call this position αP and position it above the Focus position that hosts the temporal adverb. This αP—which appears from its positioning to be the same position as Rizzi's (1997) high Topic P—places the extracted possessor in the filled spec position closest to the unvalued φ-features of T. In this case the extraction of the possessor inadvertently feeds the agreement at C^0. Extraction of the possessor is an option with or without C agreement, and appears to be triggered by information structural considerations; constructions with a non-extracted possessor are entirely grammatical, but imply slightly different things about how affected the possessor is by the event (Haegeman and Danckaert, 2013). Extracted possessors must be animate and affected by the event (e.g., by not reading the books in the example above).

These examples show that structures below CP—conjunction, information structural movement—are able to feed CA by determining the element which will appear in the closest goal position when C's φ-probe searches its domain. The next section will address other cases in which movement below CP positions a non-subject as a goal for a C^0 probe. Although this does appear to violate the assumption that A-bar movement cannot feed A-movement, I will argue that movements that occur within the TP—even when driven by information structural (traditional A-bar) probes—can in some languages feed Agree relations if their φ-features are available for the probe. For non-subjects to be fed to C's φ-probe they must first occupy the closest goal position. While this section has provided a few minor examples in West Flemish, we will now return to the more complex cases in which a full argument other than the subject usurps the closest goal position.

3.2 Agreement with non-subjects at T

In this section I will argue that there is no special relationship between T^0 and a subject, leveraging cases of verbal agreement with non-subjects to show that T^0's φ-features are valued by the absolute closest goal without reference to subject-specific features. Many otherwise SVO languages allow non-subjects to occur in preverbal position. However, only in a subset of those languages do preverbal non-subjects usurp verbal agreement. Many languages which show subject agreement in SVO sentences maintain this agreement pattern in XV (S/O) sentences, while a few allow agreement between the fronted non-subject element and the verb in select cases.

A link between TP and subjecthood has been proposed by Pesetsky and Torrego (2000) and Roberts and Roussou (2002). They argue that the subject carries an unvalued tense feature that needs to enter into a checking relationship with T^0. Thus, T^0 values the subject's tense feature while the subject values the unvalued φ and Case features of T^0. This implies that a special relationship between T and the subject must obtain if the tense feature is borne only by a subject. However, this does not appear to be the case in all languages, as T agreement is seen with non-subjects in some cases. This would imply a subject's tense feature would go unchecked in these cases and the derivation would crash.

Languages that do follow Pesetsky and Torrego's (2000) prediction may have non-subjects fronted without disrupting the special relationship between T^0 and the subject. For instance, German, a V2 language, shows agreement between subject and verb even when a non-subject occupies the preverbal position.

(6) Ich habe das Buch gelesen.
I have.1s the book read
'I have read the book.'

(7) Das Buch habe ich gelesen.
The book have.1s I read.
'The book, I have read.'

(8) Gestern habe ich das Buch gelesen.
Yesterday have.1s I the book read
'Yesterday I read the book.' (German)

To value the φ-features of T^0, the verb enters into an agree relationship with the subject—its closest goal—but the verb is raised into CP to value features of CP (see Figure 3.1). The movement of non-subjects into the CP domain is governed by the probe in C and has specCP as a landing site (Branigan, 1996). This structure applies to all declarative matrix clauses in languages with a main/subordinate clause asymmetry in their V2. That is to say, all main clauses in German are assumed to include T to C raising of the verb, and a single specCP landing site for a subject or non-subject (Harbert, 2007). The agreement is unaffected by this.

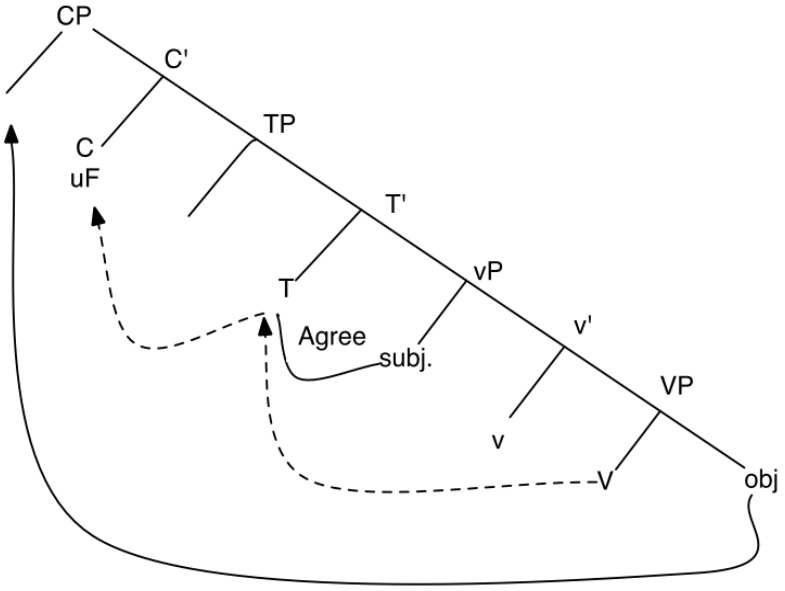

Figure 3.1

However, not all languages that allow preverbal non-subjects leave their subject agreement intact. Several Bantu languages show this pattern; data in this section will be taken from

Kilega, Lubukusu, Swahili, and Dzamba. All of these languages show standard SVO order and subject-verb agreement in neutral declarative sentences.

(9) Mutu t- á- ku- sol- ág- á maku wéneéne.
1person NEG-1AGR-PROG-drink-HAB-FV 6beer alone
'A person does not usually drink beer alone.' (Kilega, Carstens, 2005)

(10) Kú-mú-saala kw-á- kwá mu-mu-siiru
3- 3- tree 3S-PST-fall 18- 3- forest
'A tree fell in the forest.' (Lubukusu, Diercks, 2011)

(11) Mtoto a- li (ki)- soma kitabu
1child 1SA-PST-70A-read 7book
'The child read the book.' (Swahili, Henderson, 2011)

(12) Omwana a- tom- aki imukanda
1child 1SA-send-PERF 5letter
'The child sent a letter.' (Dzamba, Henderson, 2011)

This agreement can be interrupted by the fronting of a non-subject. In examples (13) and (14) below, the neutral examples from (9) and (12) above are repeated as (13a) and (14a), while the b examples show the verbal agreement with the object when the object usurps the preverbal position.

(13) a. Mutu t- á- ku- sol- ág- á maku wéneéne.
1person NEG-1AGR-PROG-drink-HAB-FV 6beer alone
'A person does not usually drink beer alone.' (Kilega, Carstens, 2005)
b. Maku ta- má- ku- sol- ág- á mutu wéneéne.
6beer NEG-6AGR-PROG-drink-HAB-FV 1person alone
'No one usually drinks beer alone.' (Kilega, Carstens, 2005)

(14) a. Omwana a- tom- aki imukanda
1child 1SA-send-PERF 5letter
'The child sent a letter.'
b. Imukanda mu- tom- aki omwana
5letter 5CA-send-PERF 1child
'The letter, the child sent it.' (Dzamba, Henderson, 2011)

In addition to the object agreement pattern in (13) above, Kilega also shows agreement between a verb and a fronted locative.

(15) Ku-Lúgushwá kú-kili ku- á- twag- a nzogu maswá.
17-Lúgushwá 17SA-be.still 17SA-A-stampede-FV10 elephant 6farm
'At Lugushwa are elephants still stampeding over (the) farms.'
(Kilega, Carstens, 2005)

While in Kilega such agreement is obligatory, Lubukusu allows agreement either with the fronted locative or with the post verbal subject. 16a shows the verbal agreement with the preverbal subject. 16b shows agreement with a fronted locative. And 16c shows agreement with a post verbal subject, although a fronted locative is present.

(16) a. Kú-mú-saala kw-á- kwá mu-mu-siiru
3- 3- tree 3S-PST-fall 18- 3- forest
'A tree fell in the forest.' (Declarative)
b. Mú-mú-siirú kw-á- kwá-mó kú-mú-saala
18- 3- forest 3S-PST-fall-18L 3- 3- tree
'In the forest fell a tree.' (Disjoint Agreement)
c. Mú-mú-siirú mw-á- kwá-mó kú-mú-saala
18- 3- forest 18S-PST-fall-18L 3- 3- tree
'In the forest fell a tree.' (Repeated Agreement) (Lubukusu, Diercks, 2011)

More will be said about the contrasting data in the two Lubukusu examples above in the next section.

It is worth examining the syntax of these examples to locate the raised arguments with respect to traditional subject positions and whether raised non-subjects in these Bantu languages should be treated as occupying the same position as a preverbal subject or a different higher position.

3.2.1 The position of non-subjects in TP

As is clear from the widespread syntactic analyses of V2 languages, it is not necessary for languages with XVS orders to allow non-subjects in subject-like positions, nor to allow verbal agreement. The German examples above involve preposing a non-subject into a CP level A-bar position—no interaction with Agree, and no uφ features. The Bantu cases, however,

appear to show non-subjects behaving subject-like, and several previous accounts make the case that such preverbal non-subjects do, in fact, occupy the canonical subject position specTP.

Ndayiragije (1999) argues that objects in Kirundi may occupy specTP when the subject has been moved out of vP for information structural reasons, i.e., when the subject has been extracted, the object becomes the closest goal for probes in TP, both φ and EPP. Ndayiragije proposes that a TP internal Focus position exists in Kirundi between VP and TP, and that this Focus phrase is head final, realizing focused elements to the right of the clause.

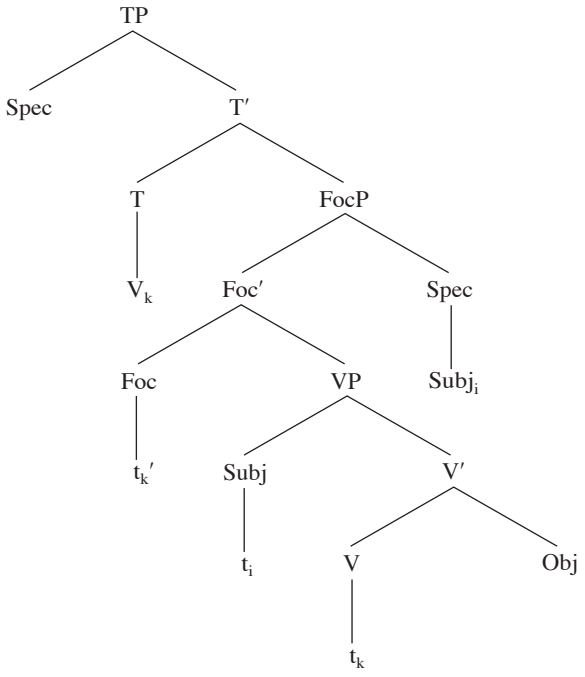

Figure 3.2, taken from Ndayiragije (1999), p. 401

This is borne out by the data: a neutral, subject initial sentence in Kirundi is SVO, takes subject-verb agreement, and includes the anti-focus particle *–ra-* in the verbal complex as in

(17a) below. Without the article, the postverbal object receives contrastive focus as in (17b).[4]

(17) a. Abâna ba-á-*ra*-nyôye amatá. SVO
children 3P-PST-F-drink:PERF milk
'Children drank milk.'
b. Abâna ba-á-nyoye amatá. SVO (Focus = Obj)
children 3P-PST-drink:PERF milk
'Children drank milk (not water).' (Kirundi, Ndayiragije, 1999)

The same focus interpretation applies to subjects in final position. When the subject appears postverbally, it bears contrastive focus.

(18) a. Petero a-á-*ra*-guze ibitabo. SVO
Peter 3S-PST-F-buy:PERF books
'Peter bought books.'
b. Ibitabo bi-á-guze Petero. OVS
books 3P-PST-buy:PERF Peter
[Lit.: 'Books bought Peter.']
'Peter (not John) bought books.'
c. Ibitabo bi-á-(*ra)-guze Petero. OVS
books 3P-PST-(F)-buy:PERF Peter (Kirundi, Ndayiragije, 1999)

OVS sentences in Kirundi also allow pro-drop, while A-bar moved arguments do not.

(19) a. Yohani a-á-ra-somye ibitabo.
John 3S-PST-F-read:PERF books
'John has read books.'
b. pro a-á-ra-somye ibitabo.
3S-PST-F-read:PERF books
'He has read books.'

[4] An object-initial sentence may be neutral only if it is passive, as in (ib) below. Note the antifocus particle and the subject expressed with a PP. This interpretation is not possible without the PP subject.

(i) a. Ivyo bitabo bi-á-(*ra)-guze Petero. OVS
those books 3P-PST-(F)-buy:PERF Peter
[Lit.: 'Those books bought Peter.']
'Peter (not John) bought those books.'
b. Ivyo bitabo bi-á-*ra*-guz-*u*-e (na Petero). Passive
those books 3P-PST-F-buy-PASS-PERF by Peter
'Those books were bought (by Peter).' (Kirundi, Ndayiragije, 1999)

(20) a. Ibitabo bi-á-somye Yohani.
books 3P-PST-read:PERF John
'John (not Peter) has read (the) books.'
b. pro bi-á-somye Yohani.
3P-PST-read:PERF John
'John (not Peter) has read them.' (Kirundi, Ndayiragije, 1999)

Additionally, Kirundi uses different negation markers for matrix declarative clauses versus those with raised relativized elements. Matrix clauses take the negation marker *nti*-, which precedes verbal agreement, while relative clauses take the marker -*ta*-, which follows the agreement marking.

(21) Yohani *nti*-a-á-somye ivyo bitabo.
John NEG-3S-PST-read:PERF those books
'John didn't read those books.'

(22) Ibitabo$_1$ [$_{CP}$ Op$_1$ [$_{TP}$ Yohani a-*ta*-ásomye t_i]] ...
books John 3S-NEG-PST-read:PERF
'Books that John didn't read...'

OVS orders take the matrix clause marker.

(23) Ibitabo *nti*-bi-á-somye Yohani.
books NEG-3P-PST-read:PERF John
'John (not Peter) didn't read the books.'
(= It was not John who read the books (it was Peter).) (Kirundi, Ndayiragije, 1999)

The same negation pattern applies in Kilega, where fronted locatives pattern with preverbal subjects rather than with wh- elements. Standard SVO sentences, as well as those with locative preposing take the negation marker *ta*-, which precedes verbal agreement. Relativized elements, however, take negation by -*tá*-, which follow the relative agreement morphology.[5]

[5] Kinyalolo (1991) also reports that some verbs in Kilega allow "Object-NP preposing" which looks somewhat similar to the Kirundi OVS pattern. Most notably these sentences take the same negation pattern as SVO and Loc VS sentences.

(24) bána ta—bá—ku—kít—ag—a búbo
2child neg-2agr-prog-do-hab-fv 14that
'children don't usually do that'

(25) mu-zízo nyumbá ta—mú—ku—nyám—a bána wálúbí
18-10that 10house neg-18SA-fut-sleep-fv 2child one day period
'There will not sleep children in those houses tomorrow'

(26) nází u—tá—ku—ténd—ág—á na Lusángé?
1who 1RM-neg-prog-speak-hab-fv with Lusángé
'who does not usually speak with Lusange?' (Kilega, Kinyalolo, 1991)

These facts suggest that the non-subjects that trigger verbal agreement in Kirundi and Kilega are in the structural subject position. There is, however, some trouble in defining how this occurs. As seen above, Ndayiragije (1999) has suggested that the possibility of object fronting in Kirundi arises from the rightward movement of the subject to a TP internal Focus position. This explanation has the semantic appeal of aligning with speakers' judgments of focus, i.e., the rightward moved subject is contrastively focused. However, as can be seen in (17a and b) above (repeated here as 27), the object can also bear such focus if it appears to the right of the verb. (27a) is a neutral sentence, while (27b) has an object bearing contrastive focus.

(27) a. Abâna ba-á-*ra*-nyôye amatá. SVO
children 3P-PST-F-drink:PERF milk
'Children drank milk.'

(i) a. mutu t—á—ku -sol -ág—á maku wéneéné
1person neg-1agr-prog-drink-hab-fv 6beer he:alone
'a person does not usually drink beer alone'
b. maku ta—má—ku -sol -ág—á mutu wéneéné
6beer neg-6agr-prog-drink-hab-fv 1person he:alone
'no one usually drinks beer alone'

(ii) kisí ki—á—b—á ki —kéké, ta—ki—úmb—il—e ú-mozi
7country 7agr-A-be-fv 7agr-small neg-7agr-A-start-IL-fv 1agr-one
'no one can build a country alone, however small'

However, since these cases are lexically restricted, Kinyalolo does not spend much time on them. There is no reason, however, to rule them out of the present analysis.

b. Abâna ba-á-nyoye amatá. SVO (Focus = Obj)
children 3P-PST-drink:PERF milk
'Children drank milk (not water).' (Kirundi, Ndayiragije, 1999)

Kinyalolo rules out the idea that the subject remains low in specvP (as Ura 1996 had suggested for Dzamba, where a similar OVS verbal agreement pattern is present) because adverbs may intervene between the focused object and the verb, but may not intervene between a final object and a verb in a neutral sentence. Kinyalolo attributes this to the VP modifier needing to left-adjoin to the VP, and thus occurring to the left of the head-final Focus phrase. However, as Kinyalolo acknowledges, this explanation is dependent on a type of rightward movement that is theoretically undesirable and not found elsewhere in Kirundi. I will propose an alternative structure for Kirundi OVS orders below, after reviewing Carstens' (2005) account of operator movement, which proposes a different, non-focus, TP-internal position.

Carstens (2005) suggests that objects that trigger verbal agreement are raised into a TP internal XP higher than the subject's native specvP and thus become the target of uφ-probes that would otherwise find the subject as their closest goal. The previous chapter looked at Carstens' operator movement account in relation to relative clauses where CA occurs between a relative complementizer and a relativized object. The structure given there was one like that below.

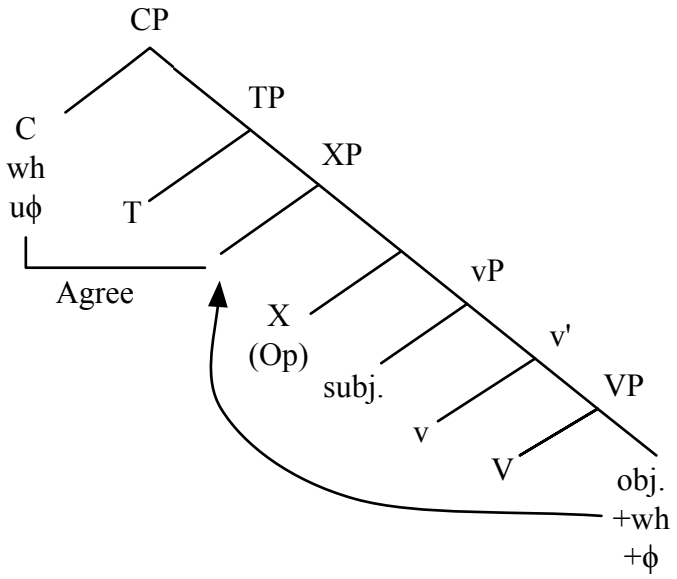

Figure 3.3

However, the data in this section does not have +wh features on the object. The operator movement in Figure 3.3 feeds the checking of the wh- and uφ-features of C. The operator movement Carstens (2005) proposes is not necessarily triggered by either wh- or uφ, and in addition to the CA, such movement can also position the object as the closest goal for T. In Figure 3.4 below, I do not specify the feature (F) that triggers the movement of the object into XP, nor the identity of XP. Carstens likewise does not identify the "operator" feature responsible for the movement. This revision of Carstens' structure still relies on the reusability of Gender features of Bantu arguments, which I will continue to assume throughout the following sections.

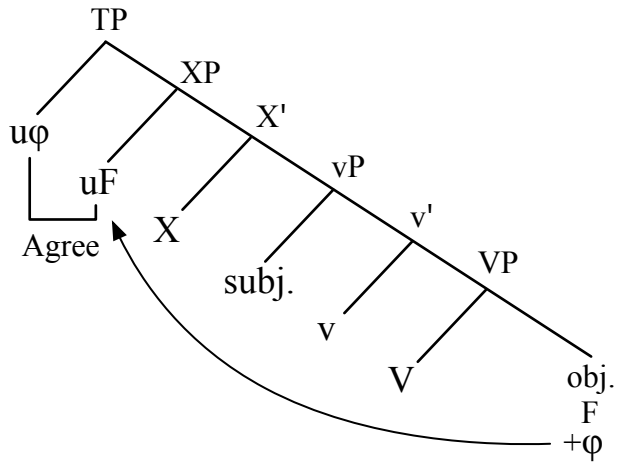

Figure 3.4

In the previous chapters, and certainly in cases of relativization, the feature could clearly be a Focus feature or wh- feature. While Carstens suggests that the XP landing site for relativized objects is TP internal, the object in these cases raises beyond the TP boundary and into specCP. The TP internal placement of XP is crucial, as the movement of an object into specX must precede the probing of T^0's uφ-features for the object's φ–features to be available as a goal to value T's unvalued features.

What feature then accounts for the operator movement of non-subjects into XP? Given the data addressed in this chapter and the information structural account given by Ndayiragije (1999), I argue that the relevant feature is Topic, and that XP is a low topic position below TP. Contra the argument of Ndayiragije (1999) for a head-final TP-internal focus position into which focalized elements raise rightwards, we have a more standard head-initial, TP-internal Topic position into which topicalized (given information, non-contrastive, *non*-focalized) elements raise leftward. The feature +Focus is assigned to the rightmost element, which remains low.

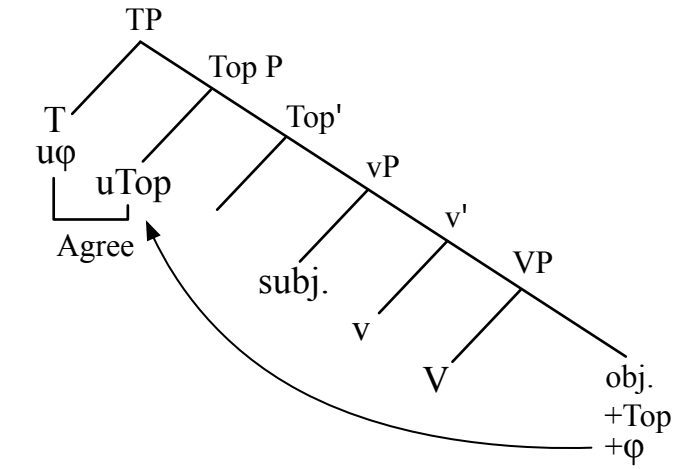

Figure 3.5

If the object does not bear a Topic feature, the subject will remain the closest goal for T.

In fact the low Topic position also provides a convenient host for the morpheme *-ra-* which occurs in complementary distribution with focus interpretations. If *-ra-* is present, no Topic is raised, and no +Focus feature assigned.

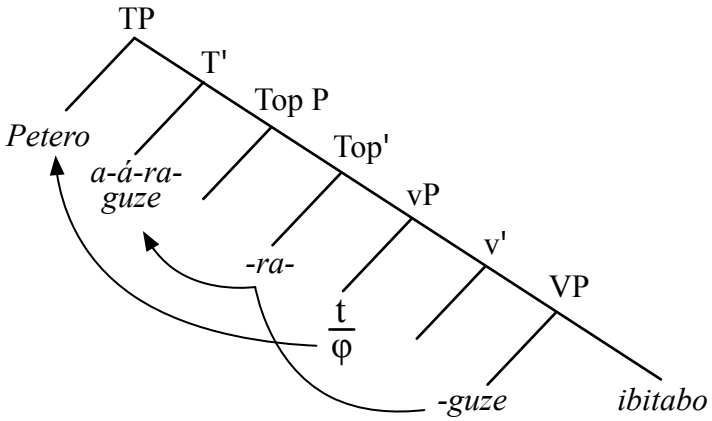

Figure 3.6

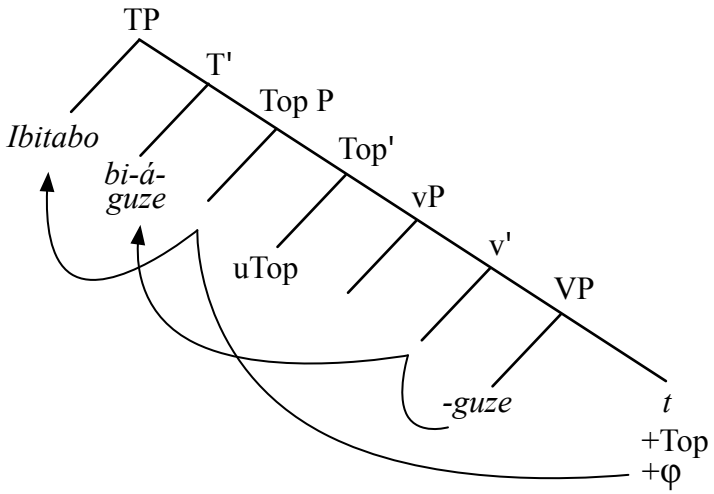

Figure 3.7

-*Ra*- serves as a default topic in Figure 3.6, while in Figure 3.7 the object bears a +Topic feature, and raises into the specTopicP, usurping the role of closest goal from the subject.

This structure also accounts for the inability of adverbs to intervene between the subject and the verb in the case of the antifocus particle. If the adverb must either be adjoined to the VP or raise into the Topic position, this explains the fact that it must remain low if -*ra*- is present, as -*ra*- is blocking its landing site. In sentences without -*ra*- the adverb may raise past the object, leading to a difference in focus interpretation.

(28) a. Yohani a-á-oógeje néezá imiduga. (Focus = Obj.)
John 3S-PST-wash:PERF well cars
'John washed cars well (not trucks).'
b. Yohani a-á-oógeje imiduga néezá. (Focus = Adverb)
John 3S-PST-wash:PERF cars well
'John washed cars well (not badly).' (Kirundi, Ndayiragije, 1999)

Since these are adverbial topics, the subject—and not the Topic—raises into specTP and is the goal of agreement. This is due to the lack of φ-features on the adverb in TopP in (28), making the subject the closest relevant goal. In (28) this can be attributed to the subject in fact bearing the +Topic feature, and the +Focus feature being assigned to the adverb in its

base position as the farthest right element. This supports the view that +Focus is assigned post-syntactically by default.

The structure for locatives that trigger verbal agreement can be treated in much the same way. Buell (2007), for instance, treats Bantu "locative inversion" structures in which a locative occurs in preverbal position as cases where the locative is in a Topic position. However, Buell is not specific as to whether the Topic phrase referred to is low or high, and entertains the possibility that the Topic position where locatives land is in fact the canonical subject position of Bantu. I will attempt to take the suggestion of a Topic landing site for locative inversion as a base and develop a more exact position for this TopicP.[6]

To this end, I will turn back to the cases of locative inversion in Lubukusu, which unlike Kilega may take verbal agreement either with the fronted locative or with the postverbal subject.

(29) a. Kú-mú-saala kw-á- kwá mu-mu-siiru
3- 3- tree 3S-PST-fall 18- 3- forest
'A tree fell in the forest.' (Declarative)
b. Mú-mú-siirú kw-á- kwá-mó kú-mú-saala
18- 3- forest 3S-PST-fall-18L 3- 3- tree
'In the forest fell a tree.' (Disjoint Agreement)
c. Mú-mú-siirú mw-á- kwá-mó kú-mú-saala
18- 3- forest 18S-PST-fall-18L 3- 3- tree
'In the forest fell a tree.' (Repeated Agreement) (Lubukusu, Diercks, 2011)

Diercks (2011) treats this difference as one of locative placement in CP vs. in TP. The locative occupies specTP in the repeated agreement, but specCP in disjoint agreement cases.

[6] Buell (2007) also draws several distinctions between types of locative inversions that I will not dwell on here. For instance, locative agreement where the verb shows the noun class of the locative marker is treated as a different type of agreement to those where the agreement on the verb is with the noun class of the location itself. However, this type of agreement appears to occur in languages that also allow the OVS orders and agreements treated in this section, and the difference could easily be one of which noun class features are available on the DP target locative rather than a feature of TP's uφ-probe. I do not address this distinction but refer the reader to Buell (2007).

Diercks (2011) backs up this assessment by showing that the two structures behave differently when the locative is relativized. Relativized subjects in Lubukusu show agreement with a C-agreement morpheme on the verb, while relativized objects take an overt agreeing complementizer.

(30) bá-bá-andú (*ni-bo) bá-bá-a-kula ká-má-tunda
2-2-people (*COMP-2) 2C-2S-buy 6-6-fruit
'the people who bought the fruit' (Subject Relative Clause)

(31) ká-má-tunda *(ni-kó) bá-bá-andú bá-a-kula
6-6-fruit *(COMP-6) 2-2-people 2S-PST-buy
'the fruit which the people bought' (Object Relative Clause)
(Lubukusu, Diercks, 2011)

(29b and c) above have separate relativization structures with the disjoint agreement sentence (29b) taking an object-like relative structure (32) and the repeated agreement corresponding to a subject-like relative (33).

(32) mú-mú-siiru ni-mwó kw-a-kwa-mo kú-mú-saala
18-3-forest COMP-18 3S-PST-fall-18L 3-3-tree
'the forest in which fell a tree' (Disjoint Agreement)

(33) mú-mú-siiru mú-mw-á-kwá-mó kú-mú-saala
18-3-forest 18C-18S-pst-fall-18L 3-3-tree
'the forest in which fell a tree' (Repeated Agreement) (Lubukusu, Diercks, 2011)

When the locative usurps the agreement of the verb, it takes on the behavior, and the position, of the subject.

What, then, triggers the movement of a locative into specTP or specCP, and what does this mean for our TP-internal TopicP? I argue that the two structures proposed by Diercks (2011)—locative in CP vs. locative in TP—are in fact the realization of high[7] (above TP) and low (TP-internal) Topic probes.

[7] This TopicP is only "high" relative to our TP-internal TopicP. It is actually in the position of Rizzi's (1997) *low* Topic.

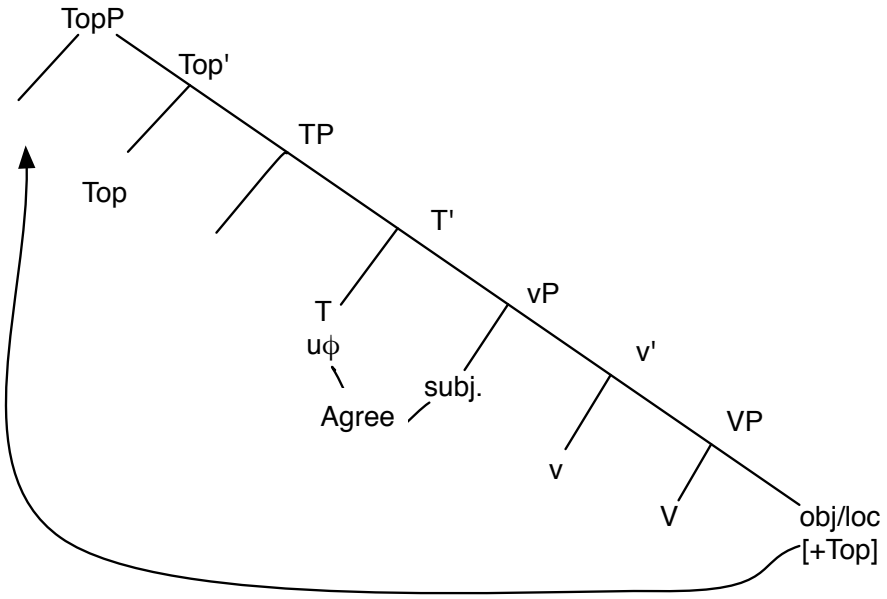

Figure 3.8

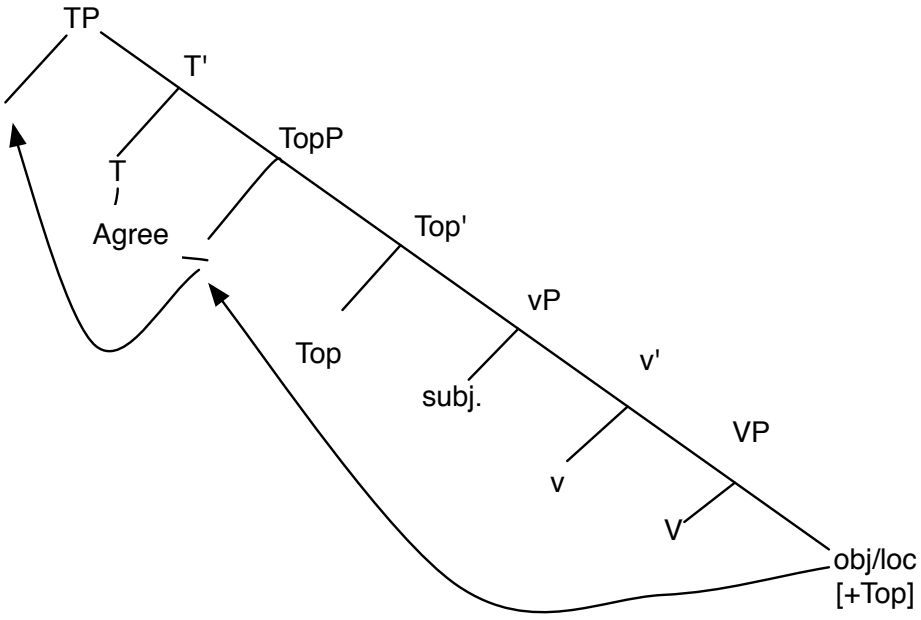

Figure 3.9

Lubukusu disjoint agreement takes the structure in Figure 3.8, with the locative raising into a high (outside of TP) Topic position that does not feed T-agreement. This topic phrase is indeed in the CP layer—one of the levels of a split CP as suggested by Rizzi (1997). Note

that this structure is similar to the ones proposed for Germanic non-agreeing OVS. The object or locative is moved by its IS features and does not participate in φ-feature valuing. Repeated agreement, however (Figure 3.9), takes the structure seen in other Bantu languages reviewed in this section.[8] The differences between languages in which only subjects agree with verbs and those in which verbal agreement can be usurped then comes down to the ability of information structure to feed agreement. If—as in the Indo-European languages that have historically received the most syntactic attention—all A-movement takes place before all A-bar movement, and A-bar movement cannot feed agreement relationships, then the subject will always be the only target for uφ-probes that are not bundled (e.g., with wh- or Focus probes). However, if a language has information structural A-bar positions *below* TP, these positions may in fact feed agreement both at T and at C.

3.3 Low IS positions and the Algonquian direct-inverse system

In the previous section I argue, based on the ability of non-subjects to usurp verbal agreement and inhabit the subject position in some Bantu languages, that A-bar movements can feed agreement in Bantu. In this section I will look at another pattern that allows information structural movements below TP to determine the agreement of φ at T^0. Algonquian languages show agreement with both subjects and objects in matrix clauses (agreement may be diminished in some languages in non-matrix clauses, a fact I will return to below).

[8] It is still unclear what might condition the variation between the two structures in Lubukusu, since most related languages do not maintain both options; further data from speakers would be beneficial. In light of the focus facts noted in Kirundi by Ndayiragije (1999) I would not be surprised to find that the subject (which remains low in right-most position) in repeated agreement sentences bears a contrastive focus, while in disjoint agreement cases it does not, but I have no data currently to back up this hunch.

While both subject and object φ-features are marked on the verb, they are not differentiated by role but by a "direct-inverse" marker. In most Algonquian languages[9] the argument that is more highly ranked on the animacy hierarchy is marked by prefixal agreement while the lower animacy argument is marked as a suffix. The animacy hierarchy ranks arguments as follows:

2 > 1 > 3 (proximate) > 3 (obviative)

When the higher ranked argument is the subject, the verb is marked as "direct." If a lower ranked argument is the subject acting on a higher ranked object, the verb takes the "inverse" marker.

(34) a. Pesq muwin '-toli- nuhsuphoqal-a mahtoqehsu.
one bear 3-Prog-chase- Dir.ObvPl rabbit.Obv.Pl
'One bear (Prox) was chasing some rabbits (Obv).'
b. Mahtoqehs '-toli- nuhsuphoqal-ku- l muwinuw-ol.
rabbit 3-Prog-chase Inv-Obv bear- Obv
'A rabbit (Prox) was being chased by a bear (Obv).'
(Passamaquoddy, Bruening, 2005)

Bruening (2005) has attributed the direct-inverse distinction to a functional morpheme in VoiceP, a voice phrase that occurs between VP and TP. The content of Voi^0 is responsible for targeting either the subject or object to raise into its spec, positioning it as the closest goal for the probe in T^0.

[9] Due to historical reanalysis, some Algonquian and Algic languages do not have this morphological pattern. Mi'kmaq (Algonquian) and Wiyot and Yurok (Algic) realize both arguments as suffixes. While they retain the direct-inverse pattern, there is a high degree of syncretism and many of the agreement morphemes are portmanteaux. The syntax developed here will likely apply to those languages as well, but the examples will be drawn from languages with prefixal agreement for clarity.

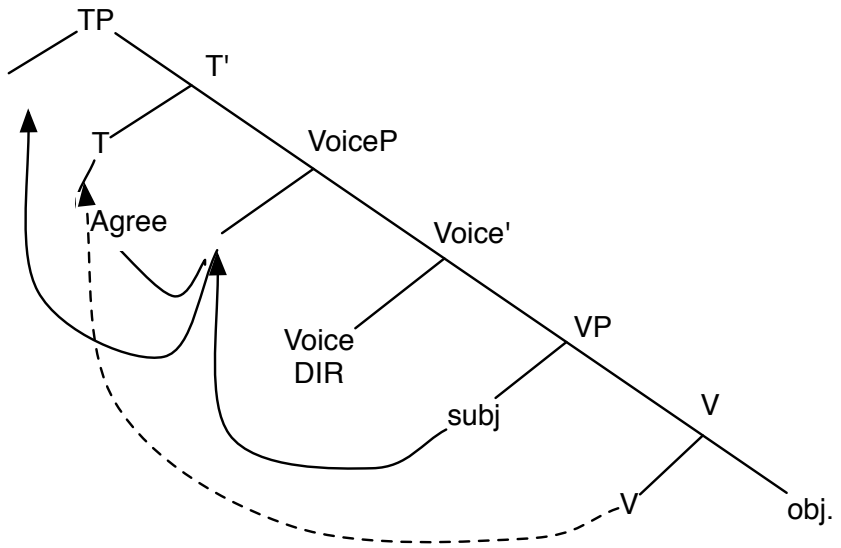

Figure 3.10

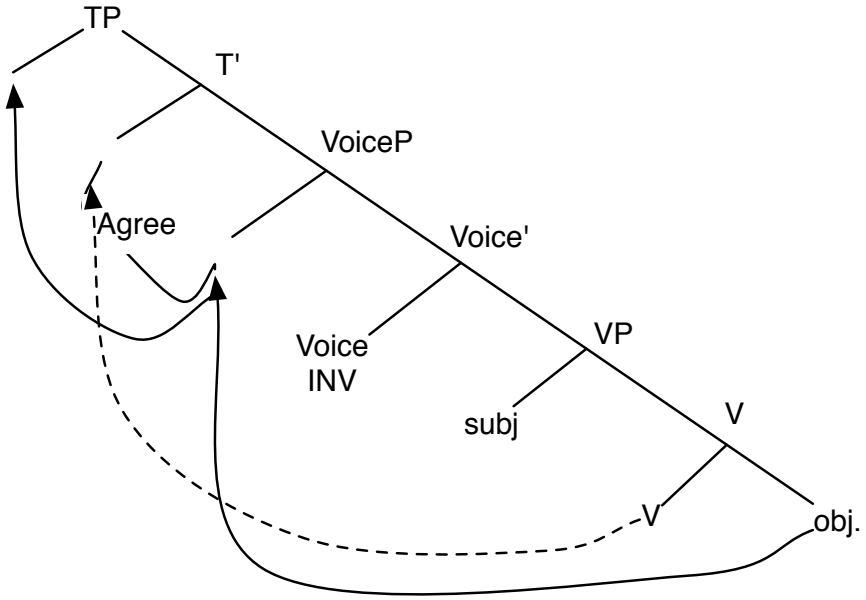

Figure 3.11

Thus a DIR morpheme in Voi^0 targets the subject and prefixal agreement is with the higher animacy argument, and a INV morpheme at Voi^0 targets the object; the prefixal agreement will still be with the higher animacy argument.

The distinction between proximate and obviative third person arguments is somewhat tricky from a traditional argument-structure perspective. Both arguments are equally animate, but one is more likely to be the subject. This maps well onto what we know about Topics and Focused elements. Topics—i.e., old information already relevant in the discourse—are more likely to be subjects. New information—focused and/or contrastive—is more likely to occur post verbally. So our hypothesis is that proximate arguments are old information, already in the discourse (Topics), while obviative arguments are new to the discourse.

Examining the evidence of "The Bear, the Coyote, and the Skunk" by Jeanette Howlingcrane[10] in Cheyenne, it appears that this is accurate.[11] In this story, a bear, coyote, and skunk enter the narrative in succession each going from "new" to "old" in the discourse. Each time a new animal is introduced it is initially an obviative argument. The animal just mentioned is proximate—i.e., already relevant to the discourse, a topic. Note that intransitive verbs have a proximate marker. I take this to be by default. So while the intransitive verb "appears" in (36) has proximate morphology, it introduces the skunk, who is new to the discourse. The skunk remains proximate once he is old news—a topic—in the next sentence.

(35) Nêhe'še éstóo'e'óvâhtsé-hoono. Náhkohe éstatsêhet-ó-hoono
Then they met—PL-OBV. The bear-PROX 3-PST-said to-DIR-OBV
ó'kôhome-ho
the coyote-OBV

[10] The full text of this story can be found at www.cheyennelanguage.org/bear.htm.
[11] I am extremely grateful to Sarah Murray who helped extensively with examining this text and provided glosses for the full story and for the examples in (35) and (36).

(36) Tséxhe'éšeóo'evotâhtsévôse éxhe'kemé'êhné-hoo'o xao'o. "Háhtome!
While they were arguing slowly appeared-SG(PROX) a skunk. "Scram!
Hé'tóhe nameo'o," é-xhet-ó-hoono. Éxhe'kenéma'evonêhné-hoo'o.
This (is) my path," 3-told-DIR-OBV. He slowly turned around-SG. (Cheyenne)

This makes the Algonquian voice phrase look very similar to the Bantu TP internal TopicP, even to the extent that it attracts old information Topics. However, the Algonquian VoiceP/TopicP has a lexical expression whether it attracts a subject or an object. DIR—i.e., a subject attracting morpheme—may simply find its closest goal, but an INV (object attracting) morpheme must have a uTopic feature and must raise a +Topic marked object. This INV morpheme would correspond to the lexically null Topic^0 (which is in complementary distribution with the morpheme -*ra*-).

However, it is also possible that the Voice phrase instead feeds a higher position which hosts the preverbal agreement marker. This would explain the behavior of subordinate clauses in which the prefixal agreement marker is blocked.

(37) a. ku-nâw-uk—uwô—pan—eek [Independent]
2 see INV non1.PL PRET PL
'They saw you (PL)'
b. nâw-uquy-âk—up [Conjunct]
see INV 2PL PRET
'They saw you (PL)' (Wampanoag, Richards, 2004)

In subordinate clauses both arguments are realized in post verbal position. The direct-inverse distinction is maintained. We can assume that the verb raises in both constructions, but there is no higher Topic position into which the Topic can raise. This would mean that Passamaquoddy has both a high and a low Topic position, with the lower Topic (Voice P) feeding the higher one.[12]

[12] Mi'kmaq, then, would have only the low position. This distinction is similar to that between V2 languages which show a matrix/subordinate clause asymmetry and those that do not. Languages which show the prefixal agreement pattern have an additional C position

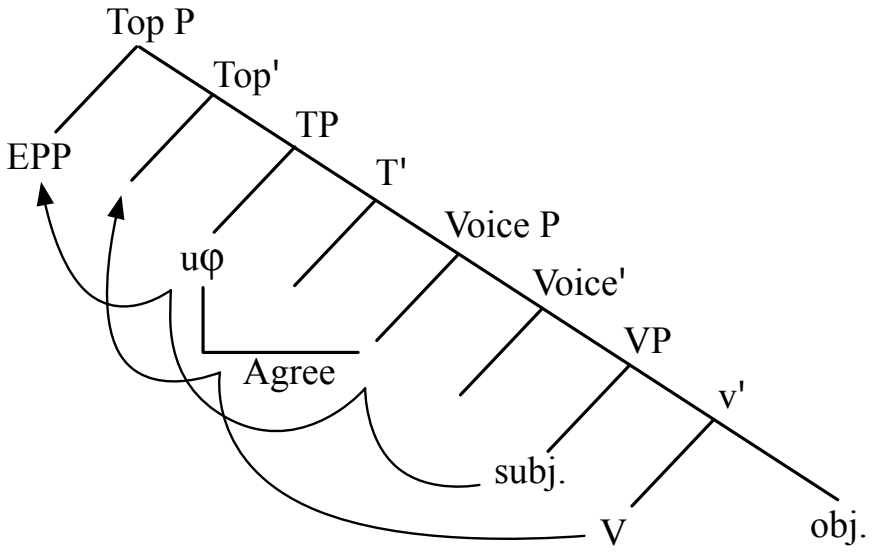

Figure 3.12

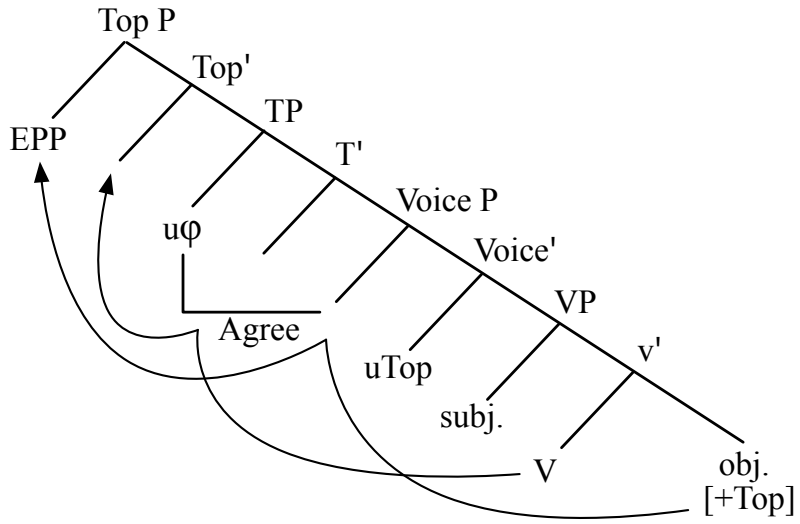

Figure 3.13

available in matrix clauses. This C layer is used instead by a subordinating complementizer in subordinate clauses.

Conclusion

This chapter has argued that information structural movements can feed uφ Agreement; that under specific circumstances and in some languages A-bar movement can feed A movement or Agree relations. Although TP-internal IS positions have been proposed before by Ndayiragije (1999), discourse evidence supports the conclusion that the TP internal IS position is a TopicP and not a FocusP. TP internal Topic positions serve the same discourse purpose as high Topic positions in CP. They attract arguments marked +Top. Low Topic positions may feed verbal agreement by positioning an argument other than the subject as the closest goal for a uφ-probe in T^0. The apparent cross-linguistic link between TP and subjects is not in fact due to a tense feature on the subject—if subjects do bear such a feature, they must not bear it in either Bantu or Algonquian languages or it would not be checked when the subject does not raise to specT. Instead, the prevalence of subjects in specT is due to the subject's position as default closest goal. If no TP internal IS position exists, then the subject will always be the goal found by the uφ-probe on T^0.

The behavior of T^0 here is the same as that argued for C^0 in this and the previous chapter. Both positions potentially contain uφ-probes which operate naively, finding the closest φ-bearing goal, and both are at the mercy of lower structure to feed them their goal. TP structure feeds CA, like TP internal structure feeds verbal agreement. Like verbal agreement, CA is most common with subjects, as seen in the previous chapter, but this is an artifact of the subject's role as the default closest goal for both T and C.

In the next two chapters I will focus on subject CA and how it develops in different languages.

CHAPTER 4[1]

RECONCILING SYNTACTIC AND POST-SYNTACTIC COMPLEMENTIZER AGREEMENT

This chapter focuses on CA in the Germanic languages and examines the microvariation of CA patterns within Dutch and Bavarian dialects. I will return here to the treatments of CA which rely on extra-syntactic processes, although these accounts were rejected in Chapter 2, and will argue that such accounts may be useful for specific subtypes of Germanic CA. This chapter develops a diachronic analysis of CA in Germanic that seeks to unify syntactic and extra-syntactic CA grammars as stages of grammaticalization that may lead to the development of a pure syntax CA grammar.

Due to both the typological rarity of the phenomenon, and the theoretical interest generated by extra agreement relationships within CP and the role such agreement may play in clarifying or complicating the relationship between CP and TP, CA has attracted attention from multiple branches of linguistics. Two primary accounts exist for CA: the pure syntax account, which I have followed so far in this dissertation (and which is pursued by e.g., Carstens 2003, van Koppen 2006, Haegeman and van Koppen 2012), and the post-syntactic accounts (e.g., Ackema and Neeleman 2004, Fuß 2007, Miyagawa 2009, Zwart 2012), in which CA is not the output of a syntactic Agree relation, but instead of a feature-copying process licensed under adjacency or membership within the same phonological phrase that allows uφ features at C^0 to be valued outside the narrow syntax.

[1] A version of this chapter has previously been published in Mathieu, Eric and Robert Truswell. 2017. *Micro-change and Macro-change in Diachronic Syntax.* Oxford University Press. It may not be reproduced outside of this dissertation without the permission of OUP. The references here have been updated to reflect the dates of published material that came out subsequent to the submission of this manuscript. Where prepublication versions were cited in the OUP chapter, the references have been updated in this version.

Both of these accounts have attempted to present a single, unified explanation of CA cross-linguistically—or at least throughout Germanic. This chapter reconciles these two seemingly contradictory analyses, arguing that they are not competing models of the same cross-linguistic structure, but instead analyses of related but distinct CA structures that exist in microvariation within the Germanic CA dialect areas. I also argue that the variation within CA grammars should be placed within an overall diachronic analysis of CA as a process of grammaticalization, with each CA-generating grammar existing as a stable point on the cline of grammaticalization between analogy, cliticization, reanalysis, and a new Agree relation between C^0 and the embedded subject (pure syntactic CA).

In the remainder of this chapter, I will review the competing theories of CA and present the data that support each, showing the contradictions generated with data that is not well-matched to the given theory. In section 4.3 I show that Germanic CA is not a unitary phenomenon, but a situation of microvariation and examine the type of inter- and intra-speaker variation that can give rise to the CA data available in the literature. Section 4.4 positions the CA grammars identified in section 4.3 within the cline of grammaticalization.

4.1 CA as a PF interface phenomenon

The core cases of Germanic CA are those that occur in all dialects where CA is present. These are the most straightforward to analyze under either a syntactic or post-syntactic framework. These are standard cases of declarative embedding where the complementizer appears immediately adjacent to the embedded subject. I will address these universal CA patterns before turning to specific types and their variation. The cases of CA treated in section 1.1 are the core cases, although the pattern varies from language to language with re-

spect to how complete a paradigm is present. Examples (1) and (3) from Chapter 1 are repeated here as (1) and (2) to show the pattern with both pronominal and full DP subjects in West Flemish.

(1) a. Kpeinze *dan-k* (ik) morgen goan.
I-think that-I (I) tomorrow go
'I think that I'll go tomorrow.'
b. Kpeinzen *da-j* (gie) morgen goat.
I-think that-you (you) tomorrow go
'I think that you'll go tomorrow.'
c. Kvinden *dan* die boeken te diere zyn.
I-find that-PL the books too expensive are
'I find those books too expensive.'

(2) a. Kpeinzen *da* Valère morgen goat
I-think that Valère tomorrow go
"I think that Valère will go tomorrow"
b. Kpeinzen *da-n* Valère en Pol morgen goan
I-think that-PL Valère and Pol tomorrow go
'I think that Valère and Pol will go tomorrow' (West Flemish, Haegeman, 1992)

In the most basic cases, the subject directly follows the agreeing complementizer. When the pattern gets more complicated, there is cross-linguistic variation in the pattern.

In some CA dialects, CA is blocked when a non-subject intervenes between the subject and the complementizer.[2]

(3) a. da /dan zunder op den warmste dag van 't jaar
that /that-3PL they on the hottest day of the year
tegen under wil gewerkt en
against their will worked have
'that they have worked against their will on the hottest day of the year'

[2] Van Koppen (2006) refers to the data here—and other data from Peter Vermeulen, who gave this example—as being from De Panne Dutch, a dialect of West Flemish. Ackema and Neeleman characterize it as an example of "Flemish". I will use van Koppen's more specific description.

b. da / *dan op den warmste dag van 't jaar zunder
that / that-3PL on the hottest day of the year they
tegen under wil gewerkt en
against their will worked have
'that on the hottest day of the year they have worked against their will'
(Flemish, Peter Vermeulen (p.c, no date) in Ackema and Neeleman, 2004)

Since such phrases do not serve as barriers for verbal agreement, examples like those in (3) bolster the argument that CA is triggered by adjacency and not by a traditional Agree relationship. Extra-syntactic accounts of CA are based on phonological copying of features licensed through adjacency (Ackema and Neeleman 2004, Fuß 2005, Miyagawa 2009) which is more easily interrupted by phonological additions, or scrambling of the lower clause. PF accounts rely heavily on data such as (3), and are thus specifically tailored for dialects where intervention effects occur.

Ackema and Neeleman (2004) include West Flemish CA in the set of constructions that they believe are best explained by feature checking at PF. According to this account, uφ-features at C find and take on valued φ-features within the same prosodic domain. Miyagawa (2009) makes a similar proposal, allowing CA to occur at PF as a type of concord based on string adjacency. In Miyagawa (2009) this suggestion is motivated by a desire to defend a central assumption that C and T share a single φ-probe between them, generated at C and valued upon its inheritance by T. For Ackema and Neeleman (2004) a PF analysis is designed to account for data from dialects of Flemish where CA is optional but obligatorily absent when adverbial material intervenes between C and the subject, as in the dialect of (3).

For Ackema and Neeleman's model to predict a dialect where CA was obligatory—i.e., one in which a complementizer taking a default form and not agreeing with the subject (as in [4b]) is ungrammatical—such a dialect would have to have a restriction on material oc-

curring between C and the subject. In fact, they report that such speakers who have an absolute restriction on such intervention do exist (Ackema and Neeleman 2004, 240). However, there also exist speakers for whom CA is obligatory and no restriction or intervention occurs. For example, the West Flemish speakers described by Haegeman and van Koppen (2012) do not allow the non-agreeing complementizer even in cases of intervention.

(4) a. ...da-n/?*dat *toen juste* men twee broers *kwamen.*
that-PL/that then just my two brothers came
'...that my two brothers came just then.'
b. ...da-n/?*dat *juste ip dienen moment* men twee broers *kwamen*.
that-PL/that just at that moment my two brothers came
'...that my two brothers came just at that moment.'
(West Flemish, Haegeman and van Koppen, 2012)

For these speakers, CA is obligatory and not subject to intervention effects, which undermines an adjacency-based analysis. More will be said about the grammar of such speakers in section 4.2.

The extra-syntactic CA account from Fuß (2005) is based on a dissociated morpheme at C that has uφ-features. Fuß treats the valuation of Agr on the dissociated morpheme as "parasitic on the presence of an Agr-morpheme that has been valued in the syntax." (109) This morpheme would take its features directly from the Agr-morpheme of the verbal agreement on which it was parasitic. Fuß specifically addresses the issue of adjacency effects—drawing data from Bavarian and East Netherlandic dialects that exhibit a blocking effect on CA when an adverb intervenes between C and the subject—and argues that his account provides a simpler model of such cases than do the syntactic accounts.

One further issue encountered by a PF account is that it is more difficult to rule out object agreement at C. Objects, even when scrambled into a position between C and the subject, do not trigger agreement.

(5) a. Kpeinzen *da-n/*dat zelfs men broers* zuknen boek niet lezen.
I.think that-PL/*that even my brothers such.a book not read
b. ??Kpeinzen *da-n* zuknen boek *zelfs men broers* niet lezen.
I.think that-PL such.a book even my brothers not read
c. *Kpeinzen *dat* zuknen boek *zelfs men broers* niet lezen.
I.think that such.a book even my brothers not read
'I think that even my brothers do not read such a book.'
(West Flemish, Haegeman and van Koppen, 2012)

This remains true even in dialects in which CA is obligatory. Examples (4) and (5) are from the same dialect of West Flemish, in which CA is obligatory and not subject to intervention effects when the intervenor is non-φ-bearing as in (4). However, a scrambled object presents a problem for such a dialect. The closest φ goal is the object, but agreement between C and the object is completely ungrammatical as in (5c)—worse in fact than (5b) where the agreement skips the closest goal and agrees with the subject.

When such post-syntactic accounts are extended to account for data where CA occurs outside of direct adjacency, or across prosodic domains, the account results in an overpowered phonological interface. In order for a fully post-syntactic version of CA to account for the data in (4) and to rule out the agreement between the complementizer and a scrambled object in (5), the post-syntactic agreement process needs to contain some level of syntactic sensitivity to subjecthood and φ-features, and an A vs. A-bar distinction. Otherwise, the φ-features of an object should serve as an appropriate goal for CA. It is unclear how such notions could be included in the phonology.[3]

[3] One account that I have not addressed here is that of Zwart (2012), who proposes that CA is not part of the narrow syntax because it is part of a process of synchronic analogy, based on the process of analogy that gave rise to the modern pattern of CA. De Vogelaer and van der Auwera (2010) document the changes that allowed the agreement morphemes once associated with verbs to appear on complementizers. Zwart (2012) imports the diachronic account wholesale into the synchronic domain, arguing essentially that the analogical change has given rise to no real changes in the narrow syntax. While the analogy account is diachronically well-motivated, once the analogical change has occurred, speakers are no

4.2 CA in the narrow syntax

Analyses that place CA within the narrow syntax have an advantage for accounting for cases in which CA is obligatory and scrambling is not ruled out. While PF accounts would need to incorporate a mechanism by which PF can access information from the syntax module (e.g., φ-features, an A vs. A-bar distinction), a syntactic account has a built-in mechanism for ruling out object CA (as in [5c] above) and for accounting for the non-intervention of PP (as in [4b] above). If CA is treated as the output of a syntactic Agree relation, as it is in Chapters 2 and 3, and is thus the product of a uφ-probe finding the closest available φ-bearing goal, such a probe will naturally ignore a PP or Adverb that is not φ-bearing. Agreement with an object will also be ruled out. Object scrambling is standardly accepted to be due to A-bar movement, which in Indo-European languages occurs after the φ-features of the object have been checked and been "used up" in the previous phase and thus should not be available to trigger CA.[4]

Analyses that treat CA as a part of the narrow syntax fall into two categories: those treating CA as the result of a C to T inheritance or similar linkage allowing the φ-features properly linked to T (or C) to be shared with the other (probe-less) head, and those that propose that each head has its own φ-probe. An argument in favor of the second type, in which T and C host independent φ-probes, was presented in section 3.1. I will review some

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longer beholden to the source construction. It is unclear what sort of analogical process can exist in the synchronic grammar to mimic the type of analogy that occurs in language change. This issue will be returned to briefly in section 4.4

[4] As seen in the previous chapter and as argued by Carstens (2003) the reusability of φ-features varies cross-linguistically resulting in differences in object agreement at C. Indo-European languages do not have reusable φ-features, while Bantu languages may reuse the Gender feature, leading to object CA in several Bantu languages.

of the cases where C and T agreement may be mismatched here, as these cases provide relevant data for describing dialectal differences between CA patterns.

When the embedded subject is coordinated, some dialects allow complementizer agreement to be with the first conjunct only rather than with the entire coordinated subject. Others show CA with the features of the entire coordinated subject. Van Koppen (2007) found two different patterns represented in Dutch dialects.

(6) Ich dink de-s doow en ich os kenne treffe
I think that-2SG [youSG and I] each.other-1PL can-PL meet
'I think that we (you and I) can meet each other.'
(Tegelen Dutch, van Koppen, 2007)

(7) Oa-n Bart en Liesje nie ipletn...
If-3pl Bart and Lisa not watch.out...
'If Bart and Lisa don't watch out...' (Tielt Dutch, van Koppen, 2007)

This variation does not appear to be parametric, and the two types may co-occur in the same speech community. Bavarian German allows both patterns of agreement.

(8) a. daß-sd du und d'Maria an Hauptpreis gwunna hab-ds
that-2sg [you$_{sg}$ and the Maria]$_{2pl}$ the first.prize won have-2pl
'that you and Maria have won the first prize'
b. daß-ds du und d'Maria an Hauptpreis gwunna hab-ds
that-2pl [you$_{sg}$ and the Maria]$_{2pl}$ the first.prize won have-2pl
'that you and Maria have won the first prize' (Bavarian, van Koppen, 2007)

Flemish dialects which allow the external possessor construction (discussed previously in section 2.1.1) can also show CA with the extracted possessor.

(9) … omda-n *die venten toen juste gebeld* een.
because-PL those guys then just phoned have.PL
'… because those guys called just then.'

(10) … omda-n die venten *toen juste* underen computer *kapot* was.
because-PL those guys then just their computer broken was
'… because those guys' computer broke just then.'
(West Flemish, Haegeman and van Koppen, 2012)

The external possessor construction itself is a rare construction, and subject to constraints on animacy and an unclear distribution across dialects. Haegeman and Danckaert (2013) found the construction to be accepted by some—not all—Flemish speakers, and did not find the construction to be limited to a specific region (although Flemish speakers rejecting the construction reported that it sounded like a West Flemish construction to them). The construction is also limited to cases where the possessor is animate and alive at the time the utterance refers to (Haegeman & Danckaert 2013). Buelens and D'Hulster (2014) found the construction to be more common in West Flemish, but neither unheard of outside that region nor universally accepted within it.

The mismatches seen in (8) and (10) above are unexpected under a framework where φ-features are shared between T and C—or under a theory of post-syntactic feature copying in which φ-features are copied from T^0 onto C^0. These mismatches can be accounted for syntactically, however. Van Koppen (2007) accounts for first conjunct CA by proposing that T's uφ-probe finds is a "reduced copy", lacking internal structure, while C's uφ probe encounters a fully realized coordination structure and takes the closest goal within that structure—the first conjunct. Haegeman and van Koppen (2012) account for external possessor CA by proposing that the extracted possessor occupies a position higher than the subject where it serves as closest goal for C^0's φ-probe. A more thorough account of both of these constructions is given in Chapter 2.

The various accounts reviewed in the first two sections explain a wide variety of CA patterns, but no single model provides a simple explanation for all the data at once. In some cases a post-syntactic account it better suited, and in other cases a syntactic one fits best.

However, rather than a theoretical deficiency this situation may be indicative of dialect variation.

4.3 CA and microvariation

CA is most common in regional, "non-standard" linguistic varieties, and its expression varies greatly within and across speech communities. This has made a single theoretical account elusive. This variation appears even across closely related dialects, and speakers in neighboring towns or regions may exhibit slightly different grammars with respect to CA (e.g., variation can be found between speakers of highly localized varieties of both Flemish and Bavarian).

This section will argue that rather than choosing between the previous syntactic and extra-syntactic accounts given for CA, multiple accounts should be seen as non-mutually exclusive. In fact, different grammars underlie the different CA patterns, and attempts to unify the theoretical accounts have led to an assumption of synchronic and diachronic uniformity—a universal CA structure that accounts for the phenomenon cross-linguistically—that has eclipsed the variation present in the phenomenon and the existence of multiple stable stages of a diachronic cline between extra-syntactic and narrow syntactic CA grammars.

The fact that CA is most often found in regional spoken varieties can mean both that subtle local differences are preserved—a factor that can be of great interest to linguists—and can simultaneously make the construction difficult to study. Some of the variation in CA between speakers may in fact be due to code switching between dialects with a CA pattern and those without—or between two different CA dialects. This may account for some

of the constructions rated "marginal" by speakers, or where speakers appear able to accept conflicting patterns. As pointed out by an anonymous reviewer, the marginality of the constructions with a non-agreeing complementizer in (4) and the acceptability of them in (3) could be the product of code switching. Speakers who would not otherwise allow material to occur between C and the subject may accept the construction as an output of the standard Dutch grammar, where it is grammatical. Thus, this intra-speaker variation may be the product of a single speaker having multiple grammars, including one that does not contain CA at all in this context.

Some patterns related to CA are highly restricted even within the relatively small dialect area in which they are found. Buelens and D'Hulster (2014) look specifically at external possessor agreement, the pattern seen in (14)—(15). They find that this pattern is more accepted by West and East Flemish speakers than by Brabants and Antwerp Flemish speakers. However, they find that the construction is somewhat marginal even in dialects where it does occur.[5]

Not all dialectal or idiolectal variation can lead us to a definitive choice between a syntactic and an extra-syntactic account for CA in a given grammar. The aforementioned variations in external possessor agreement, for instance, do not provide a sufficient clue. Buelens and D'Hulster provide a syntactic account in which the possessor is raised into a higher position on the clausal spine than the possessee, in order to satisfy case assignment.[6] However, since the external possessor in its raised position is the closest φ-bearing

[5] In fact, some degree of intra-speaker variability may also be at play here. The speakers who accept the external possessor pattern appear to find it somewhat acceptable rather than wholly acceptable, so it remains unknown what patterns such speakers may be able to produce and use in conversation.
[6] See Buelens and D'Hulster (2014) for a thorough account.

goal to the complementizer, an account based on linear adjacency or membership within a limited prosodic domain cannot be ruled out, and the data are not diagnostic.

Likewise, the core cases in (1) and (2) are easily accounted for by all of the analyses above. Only a handful of rare sentence types distinguish between the grammars. That is to say, a post-syntactic, PF-feature-copying account and a uφ-probe-based account handle the majority of CA cases equivalently well, but they do not handle the outlier cases—coordinated subjects, intervention effects, and external possessor agreement—with equal success. These cases have been leveraged as diagnostic, to support either syntactic or PF accounts of CA as a whole. However, they can instead be viewed as indicative of grammatical variation showing the range of variability of CA and the different analyses needed to account for these variations.

For example, the dialects of Flemish reported in Ackema and Neeleman (2004)—including data from inside the West Flemish dialect area—would be candidates for an extra-syntactic analysis, while the West Flemish dialect reported in Haegeman and van Koppen (2012) would not. The ability and in fact necessity of agreement in Haegeman and van Koppen's data regardless of phonological adjacency between C and the subject suggests a strictly syntactic grammar. The data in (3), however, suggest that phonological adjacency is key in triggering agreement for De Panne speakers, and that non-agreeing complementizers are much more acceptable to them than to other West Flemish speakers. In the examples in (4) and (5), non-agreeing complementizers are ungrammatical. Such data contrast with those in (3) and demonstrate a clear dialect distinction. While the data in (3) could be generated by PF feature checking—with a default non-agreeing complementizer used when no subject φ-features are available in a string adjacent position—the data in (4) and (5) re-

quire a syntactic explanation. In these dialects, a derivation in which C's φ-features are not valued crashes.

First conjunct agreement and external possessor agreement provide less straightforward contrasts. For instance, the dialect contrast drawn by Haegeman and van Koppen (2012), shown in (6) and (7), repeated below, provides a good example of the type of microvariation possible in CA constructions.

(6) Ich dink de-s doow en ich os kenne treffe
I think that-2SG [youSG and I] each.other-1PL can-PL meet
'I think that we (you and I) can meet each other.'
(Tegelen Dutch, van Koppen, 2007)

(7) Oa-n Bart en Liesje nie ipletn...
If-3pl Bart and Lisa not watch.out...
'If Bart and Lisa don't watch out...' (Tielt Dutch, van Koppen, 2007)

Although geographically close, the two groups of speakers show a distinction that may be indicative of significant underlying grammatical differences. It is tempting to apply a syntactic account to the data in (7) and a PF account to that in (6). However, a PF account cannot be ruled out in any case, and van Koppen (2007) accounts neatly for first conjunct agreement within the narrow syntax by proposing that once the coordinated subject has raised into the lower clause's periphery, the first conjunct and its parent node (the full conjoined subject) are equally close goals for C's φ-probe.

However, whether the difference between the two dialects runs as deep as a PF versus narrow syntax distinction, or whether it is merely a distinction between two related syntactic processes, a grammatical divergence exists between the two neighboring dialects. External possessor agreement provides a similar example of microvariation. The construction itself is extremely limited, even within the West Flemish dialect area, with not all speakers allowing CA to occur with a non-subject at all. These cases are important for their

very inconsistency. As seen in (8) for Bavarian, it is not necessary for each dialect to have a single grammar associated with CA.

In addition to the variation found within Flemish dialects, Bavarian also shows some small but crucial differences in its CA pattern. Gruber (2008) shows that, unlike the Bavarian dialects detailed in Bayer (1984) and Fuß (2005), the Gmunden dialect spoken in upper Austria shows a CA pattern that is not sensitive to adjacency. Contrast (11) from Gmunden, in which an entire adverbial phrase intervenes between C and the subject, with (12), in which an adverb occurring between C and the subject in another Bavarian dialect blocks CA.[7]

(11) *Waun-st* beim ärgstn Regn in Gmunden *du* oiwei ausse geh *mua-st,*
If-2.SG at worst rain in Gmunden you always out go must-2.SG,
daun kaun I da a net höfn.
then can I you also not help
'If you always have to go to Gmunden during the worst rain,
then I cannot help you either.' (Gmunden, Gruber, 2008)

(12) **obwoi-st* woartscheints *du* ins Kino ganga *bist*
although-2SG probably you to-the movies gone are
'although you probably went to the movies'
(Bavarian, Günther Grewendorf, from Fuß 2005)

The distinction between Gmunden Upper Austrian and the Bavarian of Fuß (2005) is the same as that discussed above between the West Flemish dialects studied by Haegeman and van Koppen (2012) and the De Panne Dutch reported in Ackema and Neeleman (2004). The Gmunden dialect, along with several West Flemish dialects, shows a pattern best cap-

[7] Van Koppen (in preparation) notes a similar dialect split in both Flemish and Bavarian and links it with the presence of double agreement (DA)—a pattern in which verbal agreement is expressed with a different ending in subject-verb inversion contexts. I have not addressed double agreement at all in this paper, and direct interested readers to van Koppen's work. However, the possible connection between DA and CA—especially as they relate to the diachronic relationships between CA grammars and the potential for the extension of CA patterns—is something that certainly deserves further attention.

tured with a syntactic approach, as a uφ probe will be able to look past non-φ bearing adjunct phrases to the next appropriate goal. The Bavarian and De Panne data, however, suggest a post-syntactic CA grammar in which the separation of the complementizer and the subject blocks CA.

4.4 CA and grammaticalization

The desire for theoretical unity in CA accounts has impeded study of the diachronic relationships between the extra-syntactic and syntactic analyses presented in sections 4.1 and 4.2, respectively. As argued in section 4.3, rather than competing explanations for a single universal CA pattern, these analyses describe distinct grammars that yield distinct versions of CA. In fact, the grammars, far from being incompatible, can be viewed as stages on a cline of grammaticalization, with the extra-syntactic CA grammars representing independently stable intermediate stages and the narrow syntax CA grammars representing a fully grammaticalized CA. The creation of a new independent φ-probe at a previously φ-less head is a natural outcome of such a process of grammaticalization—a natural "simplest assumption" for a speaker confronted with agreement morphology.

The rise of CA is generally accepted to have been a process of analogical change in which the pattern of agreement found on verbs was extended to apply to complementizers. De Vogelaer and van der Auwera (2010) provide an explanation of the development of CA in Dutch dialects, from the prior existing pattern of agreement between a verb and a subject enclitic in sentences with post-verbal subjects.

(13) Gaa-n =ze morgen naar Gent?
Go-3PL=they tomorrow to Ghent?
'Are they going to Ghent tomorrow?'

(14) Naar Brussels ga=me
To Brussels go=we
'We go to Brussels' (Dutch, DeVogelaer and van der Auwera, 2010)

The similarity between the sequence verb-weak pronoun and comp-weak pronoun as in (15) and (16) below resulted in speakers assuming a similar structure for CP and TP and extending the pattern of agreement from verbs to complementizers.

(15) Morgen zal hij het boek lezen
Tomorrow will he that book read
'Tomorrow he will read that book'

(16) Ik geloof dat hij het boek morgen zal lezen
I believe that he that book tomorrow will read
'I believe that he will read that book tomorrow'
(Dutch, DeVogelaer and van der Auwera, 2010)

While de Vogelaer and van der Auwera (2010) draw a contrast between an analogically derived C and one that contains its own probe, I contend that these two states of affairs are in fact two different stages in the development of syntactic CA.

De Vogelaer and van der Auwera (2010), much like Zwart (2012), argue for a synchronic distinction between an account based on analogy—extending the verbal pattern to the complementizer—and one in which C^0 has its own φ-features. They predict that the analogical pattern will be less regular and more dependent on the similarity in context between the source environment and the CA environment. Although there are dialects where CA is limited to those contexts most closely resembling the original analogical extension (e.g., dialects in which CA is limited to contexts with strict C-subject adjacency, or those where CA is only with pronominal subjects), there are also those where the pattern appears more regular, and is obligatory even in non-adjacency contexts and with DP subjects.

Therefore, it seems that de Vogelaer and van der Auwera's analogical account needs to be extended one more step to encompass the pure syntax grammars of CA.[8]

The full reanalysis should proceed as follows. Prior to the analogical change, the complementizer itself bears no φ-features. The complementizer is merely adjacent to the embedded clause subject, which bears inherent φ-features. When this subject is reanalyzed as an enclitic on the complementizer—a rather standard progression from weak pronoun to clitic predicted by Fuß (2005), among others—the path toward syntactic change begins. This first step is a phonological reduction, and no deep syntactic change needs to have occurred to generate the sentence in (17).

(17) Ze zegg-en da-n=ze naar Brussel gaa-n
They say-3PL that-3PL=they to Brussels go-3PL
'They say that they are going to Brussels'
(Dutch, DeVogelaer and van der Auwera, 2010)

The analysis in Figure 4.2 is a possible underlying structure for (17), with the clitic occupying the embedded subject position.

[8] There are additional, theoretical reasons to be wary of an account of CA as analogy that does not allow for the development of new uφ probes and new syntactic relationships. Morphosyntactic changes are often—if not always—fed by ambiguous surface strings that the learner may reinterpret as having a different underlying structure. Putting a limit on the endpoint of such reanalysis would rule out a crucial and well known avenue of syntactic change. There also remains the problem of defining analogy as a synchronic process (see footnote 5).

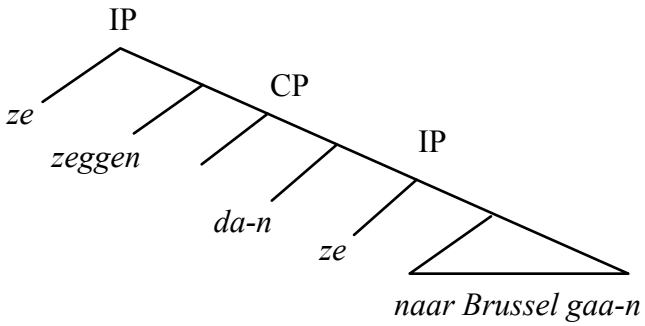


Figure 4.1

While the presence of agreement morphology on the complementizer shows that some form of Agree is taking place, this could be a PF phenomenon based on copying the features of the weak pronoun. However, the ambiguous surface structure necessary to generate a syntactic reanalysis now exists.

Following Roberts' (2010) analysis of clitics as bundles of φ-features attracted to the cliticization site by a requirement to value a φ-probe, the following structure can be proposed as an alternative underlying structure for (17).

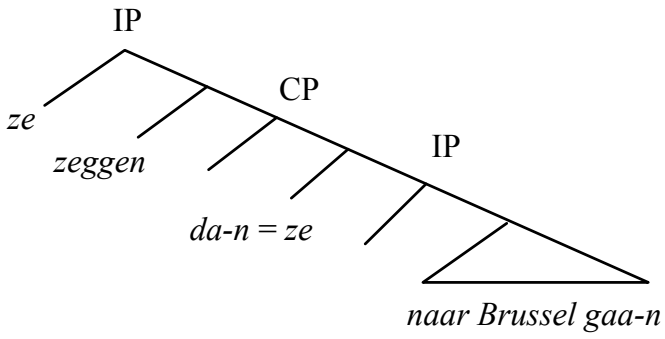


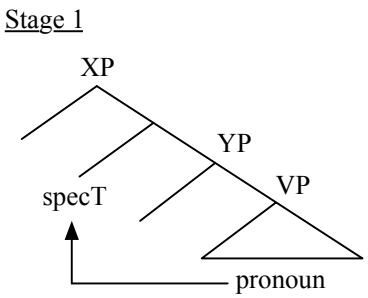
Figure 4.2

Under Roberts' framework, the same type of uφ probe that would find the agreement features of the subject would also serve as a trigger for movement of the subject. The subject is in this case a clitic pronoun which would undergo head movement to C^0. So, as the pronoun in specIP is reanalyzed as a clitic phonologically, its syntactic role also undergoes change. A

full pronoun moved to specIP by phrasal movement is reanalyzed as a cliticized pronoun. Due to its linear position following C and preceding T, it becomes an enclitic on C, bolstering the learner's assumption of uφ at C^0 as the explanation for the Agreement features on the complementizer, since both agreement and head movement can be triggered by such a probe.

With the structure in Figure 4.3, C^0 hosts an unvalued φ-probe, which must search for a goal, finds the embedded subject and raises its φ-features to C resulting in both Agreement and cliticization. The existence of this uφ-probe at C frees the phenomenon of CA from the strict adjacency of a complementizer with a weak pronoun. A uφ-probe at C may locate φ-features on any available embedded subject, not just a pronominal one. This last stage of the change has taken place where CA is the most widespread and obligatory, such as in the grammars of speakers who require CA with full DP subjects and across intervening phonological material.

This brings us to the present situation in dialects that have been proposed to have CA in the narrow syntax. However, rather than just steps along the way to a syntactic, teleological endpoint, other patterns of CA form stable grammars in and of themselves. Fuß (2005) also proposes a specific pattern for the rise of CA at PF. Fuß's proposal for the rise of CA looks similar to that for the rise of verbal agreement up until the point of the syntactic reanalysis itself. First, movement of a pronoun to spec TP (Figure 4.3) is reanalyzed as movement of a clitic, and cliticization to C (Figure 4.4).



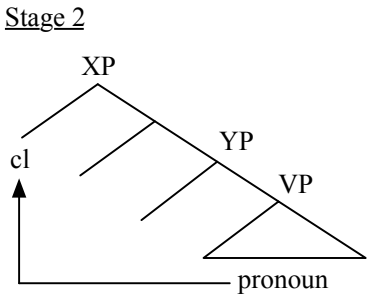


Figure 4.3 Figure 4.4

Next, the clitic pronoun is analyzed as the output of an agreement relation (Figure 4.5). However, here the pattern for CP and TP are supposed to behave differently. A clitic at TP will be reanalyzed as agreement realized through a probe-goal relation, i.e., a probe will be assumed to exist at T^0. A clitic at CP, however, will be reanalyzed as a dissociated agreement morpheme "licensed under structural adjacency with Agr-on-T" (Fuß, 2005, 170).

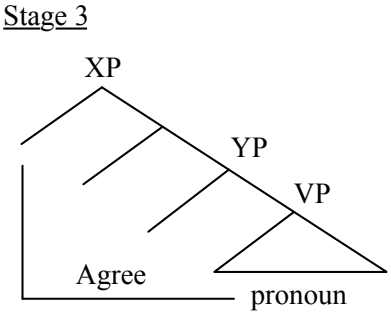


Figure 4.5

Fuß gives an analysis that terminates at the modern post-syntactic structure but which is largely parallel to the early stages of the syntactic reanalysis account—founded in de Vogelaer and van der Auwera (2010) and extended in the present paper—for the pure syntax pattern. The parallel stages are completed in all CA dialects. It is the final stage of reanalysis that distinguishes those dialects that have a pure syntax-based CA from those that have a post-syntactic (more restricted) CA pattern.

The remainder of this section will look at the role that ambiguous surface strings and rare sentence types may play in the development of different CA grammars. The grammars laid out in sections 4.1 and 4.2 are hard to distinguish and the majority of cases of CA found in all relevant dialects could be generated by either a post-syntactic or narrow syntactic account. Although cases of non-identity between the φ-features of C and T could serve as cues for a learner to assign an independent φ-probe in C^0, and examples where non-agreeing complementizers replace agreeing ones in non-adjacent contexts (e.g., the data in example [3]) could bias a learner towards a PF approach, both of these cases are uncommon and some learners may never encounter them during acquisition. So how do the two dialect types remain distinct? The data available is rife with idiolectal variation, patterns judged by speakers to be marginal—not fully grammatical nor fully unacceptable—and apparently unconstrained optionality, all of which suggest that perhaps the multiple CA-generating grammars that exist are not remaining distinct at all, but are in fact co-existing as microvariation or even multiple grammars within individual speakers.

In the absence of specific and rare data, a learner could either assume that CA happens through a normal Agree relation, or through a PF process. The Agree relation, however, is already a part of the learner's grammar, and is used to generate T-agreement. The reuse of an already-learned grammatical operation seems more likely than the assumption of a new one, absent empirical reasons to rule it out. In fact, the extra-syntactic, intervention-effect grammar could easily give way to a pure-syntax, intervention-effect-free grammar through straightforward syntactic change. Only very specific data—sentences that contain an intervener and do not exhibit CA—can force speakers towards an extra-syntactic analy-

sis. A pure syntax approach, in which C is assumed to contain a uφ probe, is simpler from a learner's perspective.

It is possible that the variation that we see in CA is in fact change in progress for some speakers or speech communities. The PF, adjacency-dependent version of CA could undergo reanalysis yielding a more regular, pure syntax CA. Similarly, highly restricted patterns of CA (such as those limited to pronominals or to certain persons), could also be generalized into a fuller pattern that looks more like a typical realization of Agree. However, highly limited Agreement patterns could also cease to be realized if insufficient data is available to learners to include them in the grammar: CA patterns realized on only one or two persons could as easily disappear entirely as expand to a regularized pattern. Language change will always be in the direction of regularity, and an irregularly expressed pattern will tend to expand or die out (i.e., the *lack* of agreement will be the pattern that expands). The circumstances that may bias a language towards the development of CA will be revisited in the next chapter.

The situation in many (if not most or all) dialects described in the existing literature is one of stable variation. A sufficient number of learners are successfully acquiring the variety of CA phenomena that several patterns are attested. Some learners may be acquiring more than one CA grammar, yielding optionality in the surface structure and competition between grammars within a speaker's I-language. The development of a pure syntactic grammar for CA is by no means the teleological endpoint of a necessary series of changes. However, it is certainly not an unexpected type of development from the data available to learners of many CA dialects, and it is a change that falls nicely into line with recent work on grammaticalization and directionality in syntactic change.

The reanalysis of a φ-feature bundle—first an inherently valued one (pronoun), then a clitic, then an unvalued φ-feature that takes its value from an adjacent valued φ-feature, and finally a full φ-probe—is an expected pattern, following both Roberts and Roussou's (2003) and van Gelderen's (2009) expectations of syntactic change. According to Roberts and Roussou, reanalysis happens "up" the cline of functionality, and morphemes are reanalyzed into higher positions in the tree. This is certainly the case of all CA reanalyses, including those that do not occur in the narrow syntax. The PF φ-features proposed by Fuß (2005), Ackema and Neeleman (2004), and Miyagawa (2009) exist at C, and have been reanalyzed into that position from origins at T (Fuß 2005). Furthermore, van Gelderen's (2009) account of reanalysis is that the standard direction of change is one in which interpretable features will be minimized in favor of uninterpretable features: goals tend to be reanalyzed as probes, as seen in the final stage of the syntactic reanalysis above.

One of the primary objections to generating a new uφ probe at C^0 is that the existence of such a probe is problematic for theories that seek to limit the occurrence of φ checking to TP, although it is accepted by many syntacticians working on CA (see Chapter 3). Among those who claim that C cannot be a φ position in its own right, Zwart (2012) in particular argues that learners ought not to be able to acquire a grammar that includes uφ at C^0, but this makes predictions that are not borne out in the data—i.e., the existence of grammars that cannot be captured by post-syntactic accounts—and artificially constrains the type of language change that can occur.

If we are to rule out the innovation of φ-features at C^0, we must assume either that learners are never faced with a data set that would cause them to attribute a φ-probe to that position, or that learners somehow "know" that C^0 is an inappropriate place for such

structure. As the first assumption is clearly incorrect in the face of the CA data, the second assumption remains as the last defense against φ-probes being generated by language change for those who wish to avoid it for theoretical reasons. What would such a restriction mean for language change? Diachronically, a grammar that contains knowledge of what kind of probes can occur where should be resistant to the type of changes that van Gelderen (2009) finds to be widespread and basic to the nature of language change. This would preclude grammaticalization and van Gelderen's linguistic cycle almost entirely.

Conclusion

In this chapter I have argued that the patterns of CA found in Germanic dialects are not the output of one cross-linguistic underlying structure, but are in fact several related patterns generated by different grammars in microvariation. The variants of CA range from post-syntactic patterns which are highly restricted in their occurrence, to obligatory agreements generated by purely syntactic processes. I argue that these patterns exist at several points on the cline of grammaticalization, and represent different stages of diachronic development. The pure syntax pattern found in dialects where CA is the most obligatory and least restricted is the pattern predicted to arise over time as the terminus of grammaticalization. However, several different CA grammars remain stable at earlier stages of the grammaticalization process. The fact that the pattern varies even within a small dialect region and may be subject to significant idiolectal variation makes the pattern a rich field to further study microvariation and the role of rare sentence types on syntactic acquisition.

CHAPTER 5

DIACHRONIC SOURCES OF COMPLEMENTIZER AGREEMENT

This chapter examines the link between the synchronic syntax of agreeing complementizers and the diachronic development of complementizer phrases from other constructions. Case studies of two language families that exhibit disparate types of declarative clause complementizer agreement are used to show two pathways towards complementizer development and the resulting agreement structures available in modern complementizer constructions within the language families, with particular attention to West Flemish (Germanic) and Lubukusu (Bantu). Building on these examples, the chapter suggests that the historical source of a complementizer affects the expression of agreement features on the complementizer.

Following the synchronic analyses in the foregoing chapters, both of these constructions are analyzed here as instances of Agree in which uφ-features of C^0 are valued by their closest goal, either directly or through the mediation of a null anaphor (see Diercks 2013 and Chapter 2 of this work, but a brief summary is given in section 5.2.2). Furthermore, the development of CA is also in line with expected morphosyntactic changes. The uφ-probes argued for in the synchronic analysis in the previous chapters (and summarized here in section 5.2) are the output of a cycle of change predicted by van Gelderen (2009) in which interpretable features are reanalyzed as uninterpretable ones, giving rise to new Agree relationships. Although both upward and downward agreeing CA are analyzed as Agree relations arising through reanalysis, the historical source and the φ-features available for this

reanalysis influence the type of construction that develops, and explain the very different surface structures seen in CA cross-linguistically.

5.1 Complementizer agreement synchronically

The largest language families that contain examples of CA are the Germanic family of Indo-European and the Bantu family of Niger-Congo languages. A more thorough comparison of these patterns can be found in Chapters 1, 2, and 3 of this work. However, a brief summary of the data is presented in this section to provide clarity to the diachronic analysis that follows. In both cases, the modern CP contains a φ-probe and the complementizer expresses φ-features checked through an Agree relation between the C^0 φ-probe and an argument. However, the modern Bantu cases involve agreement between C^0 and the higher, matrix clause subject, while modern Germanic CA holds between C^0 and the lower clause subject.

5.1.1 Agreement with a subordinate subject

As the date in section 1.1 shows, several Germanic languages show agreement between a declarative complementizer, marking the subordination of a standard, affirmative, declarative clause, and the subject of the embedded clause. The following data from Haegeman (1992) repeated from Chapter 1 shows complementizer agreement on the complementizer *da* with full DP embedded subjects and person agreement and cliticization with pronominal subjects.

(1) a. Kpeinzen *da* Valère morgen goat
I-think that Valère tomorrow go
"I think that Valère will go tomorrow"
b. Kpeinzen *da-n* Valère en Pol morgen goan
I-think that-PL Valère and Pol tomorrow go
'I think that Valère and Pol will go tomorrow'

(2) a. Kpeinze *dan-k* (ik) morgen goan.
I-think that-I (I) tomorrow go
'I think that I'll go tomorrow.'
b. Kpeinzen *da-j* (gie) morgen goat.
I-think that-you (you) tomorrow go
'I think that you'll go tomorrow.'
c. Kvinden *dan* die boeken te diere zyn.
I-find that-PL the books too expensive are
'I find those books too expensive.' (West Flemish, Haegeman, 1992)

More limited CA with embedded pronominal subjects is also found in other Germanic languages (e.g., South Hollandic, Groningen, Frisian, Munich Bavarian, and Luxemburgish. See Zwart, 1993, for a detailed account).

In some Germanic languages, the morphology of agreement expressed on the complementizer is the same as that expressed on the verb. When the morphology of CA differs from that of verbal agreement, there are two morphological forms available for verbal agreement. When the subject precedes the verb, the verb takes standard verbal agreement morphology. When the subject follows the verb, the verb takes the "complementizer" form:

(3) a. Wij speul-t/*-e.
we play-1PL
b. Waar speul-e/*-t
Where play-1PL
'Where do we play?' (Eastern Netherlands, Fuß, 2008)

(4) a. datte wiej noar 't park loopt
that-PL we to the park walk
'that we are walking to the park'
b. Volgens miej lope wiej noar 't park.
according-to me walk-PL we to the park
'According to me we are walking to the park.'
c. Wiej loopt noar 't park.
we walk-PL to the park
'We are walking to the park.' (Hellendoorn, Carstens, 2003)

There is some variation between Germanic CA types with respect to coordinated subjects. Van Koppen (2007) examines the coordination of subjects in languages with embedded-

subject-oriented CA, showing that some languages allow CA with the first conjunct only, while others show CA with the features of the entire coordinated subject.

(5) Ich dink de-s doow en ich os kenne treffe
I think that-2SG [youSG and I] each.other-1PL can-PL meet
'I think that we (you and I) can meet each other.'
(Tegelen Dutch, van Koppen, 2007)

(6) Oa-n Bart en Liesje nie ipletn...
If-3pl Bart and Lisa not watch.out...
'If Bart and Lisa don't watch out...' (Tielt Dutch, van Koppen, 2007)

Bavarian in fact allows both types.

(7) a. daß-sd du und d'Maria an Hauptpreis gwunna hab-ds
that-2sg [you$_{sg}$ and the Maria]$_{2pl}$ the first.prize won have-2pl
'that you and Maria have won the first prize'
b. daß-ds du und d'Maria an Hauptpreis gwunna hab-ds
that-2pl [you$_{sg}$ and the Maria]$_{2pl}$ the first.prize won have-2pl
'that you and Maria have won the first prize' (Bavarian, van Koppen, 2007)

Languages also vary with respect to the behavior of CA when the complementizer is not string-adjacent to the embedded subject. In standard Flemish, if there is an intervening Adverb or PP, or a scrambled object between the subject and the C-position, agreement cannot occur:

(8) a. da /dan zunder op den warmste dag van 't jaar
that /that-3PL they on the hottest day of the year
tegen under wil gewerkt en
against their will worked have
'that they have worked against their will on the hottest day of the year'
b. da / *dan op den warmste dag van 't jaar zunder
that / that-3PL on the hottest day of the year they
tegen under wil gewerkt en
against their will worked have
'that on the hottest day of the year they have worked against their will'
(Flemish, Peter Vermeulen (p.c, no date) in Ackema and Neeleman, 2004)

In other dialects, agreement is obligatory even when the subject and complementizer are non-adjacent. Haegeman and van Koppen (2012) show that agreement in West Flemish cannot be omitted, even when an adverbial phrase intervenes:

(9) a. ...da-n/?*dat *toen juste* men twee broers *kwamen.*
that-PL/that then just my two brothers came
'...that my two brothers came just then.'
b. ...da-n/?*dat *juste ip dienen moment* men twee broers *kwamen*.
that-PL/that just at that moment my two brothers came
'...that my two brothers came just at that moment.'
(West Flemish, Haegeman and van Koppen, 2012)

They also show that declarative complementizers cannot agree with adjacent non-subjects, as in cases where the object is scrambled to the position immediately following C:

(10) a. Kpeinzen *da-n/*dat zelfs men broers* zuknen boek niet lezen.
I.think that-PL/*that even my brothers such.a book not read
b. ??Kpeinzen *da-n* zuknen boek *zelfs men broers* niet lezen.
I.think that-PL such.a book even my brothers not read
c. *Kpeinzen *dat* zuknen boek *zelfs men broers* niet lezen.
I.think that such.a book even my brothers not read
'I think that even my brothers do not read such a book.'
(West Flemish, Haegeman and van Koppen, 2012)

This also holds for dialects that do exhibit adjacency effects. While agreement can be disrupted by non-subjects, it cannot be usurped.

5.1.2 Agreement with a matrix clause subject

Lubukusu, a Bantu language, also has complementizer agreement where noun class is marked at the CP level. However, in these cases the agreement is with the matrix clause subject and appears to be "upward" agreement.

(11) a. baba-ndu ba-bol-el-a Alfredi ba-li a-kha-khil-e
2-people 2S-said-AP-FV 1Alfred 2-that 1S-FUT-conquer
'...The people told Alfred that he will win.'

b. Alfredi ka-bol-el-a baba-ndu a-li ba-kha-khil-e
1Alfred 1S-said-AP-FV 2-person 1-that 2S-FUT-conquer
'Alfred told the people that they will win.' (Lubukusu, Diercks, 2013)

"Upward agreeing" complementizers are also found in Kinande (Bantu), where they behave similarly to the Lubukusu examples above.

(12) a. Mo-ba-nyi-bw-ire ba-ti Kambale mo-a-gul-ire eritunda.
AFF-2S-1sO-tell-EXT 2S-that Kambale AFF-1S-buy-EXT fruit
'They told me that Kambale bought fruit.'
b. Mo-n-a-layir-ire Kambale in-di a-gul-e amatunda.
AFF-1sS-T-convince-EXT Kambale.1 1sS-that 1S-buy-SBJN fruits.6
'I convinced Kambale that he should buy fruits.' (Kinande, Baker, 2008)

Agreement on quotative markers is also found elsewhere in Bantu (13), and in several Mande languages (14–16).[1] This agreement appears similar to CA, however agreement is marked with the speaker of the utterance rather than with an event-internal subject.

(13) a. Mu-kwenzi w-e-eluk-ili níndi mpata
G1-youth SBJ.AG1-TAM-know-REMOTE.PST COMP.AG1 (G8)country
y-a-telela ku-himp-ew-a
SBJ.AG8-TAM-ought INF-change-PASSIVE-TAM
'The young person knew that the country ought to be changed.'
b. A-kwenzi a-a-toñozhok-eli náwu Nswana
G2-youth SBJ.AG2-TAM-think-REMOTE.PST COMP.AG2 PROP(G1)
ne-enzh-i na-ku-mw-ot-a
[SBJ.AG1]TAM-come-TAM with-INF-OBJ.AG1-ask.for.marriage-TAM
'The young people thought that Nswana had come to ask her for marriage.'
(Lunda, Kawasha 2007: 182, 185, cited in Idiatov, 2010)

(14) a. Ń / Ăn náà á fɔ́-rà n-kò Sěkù tɛ̀ shɔ̀n
1SG / 1PL PFV 3SG say-PFV 1-CLM PROP IPFV.NEG agree
'I/We said (it) that Seku will not agree'
b. Mùsà / Ì náà á fɔ́-rà kò Sěkù tɛ̀ shɔ̀n
PROP / 2SG PFV 3SG say-PFV [NON‹1›]CLM PROP IPFV.NEG agree
'Musa/You said (it) that Seku will not agree'
(Jula of Samatiguila, Braconnier 1987–88:49, 51 and 50, cited in Idiatov, 2010)

[1] The classification of Mande as a subfamily of Niger-Congo is controversial. However, for the purposes of this paper, both Mande and Bantu languages exhibit the same syntactic phenomenon and share the same historical development of the complementizers (as will be shown in section 5.3). The genetic relationship is irrelevant to grouping this type of CA as a typological class.

(15)

Mi̋	m̏ì-̋ȉ	n-tú	ŋáá	ti̋ri̋
1SG	3SG.NON‹HUM›.say-PRF	NON‹3›-CLM	1SG.LOG.FUT	go\FUT

‘I said that I will go.’ (Jowulu, Carlson 1993:72, cited in Idiatov, 2010)

(16)

Ú	m̏ì-̋ȉ	tú	ȁ	tȉrȉ
3SG.HUM.M	3SG.NON‹HUM›.say-PFV	[3]CLM	3SG.LOG	go[PRF]

‘He$_i$ said that he$_i$ went.’ (Jowulu, Carlson 1993:72, cited in Idiatov, 2010)

In addition to the data from Jula and Jowulu given above, Idiatov (2010) gives examples from dialects of Southern San, Tura, Mende, and Mandinka that exhibit person and/or number marking on quotative complementizers.

Crucial differences exist between the Lubukusu and Mande cases in terms of the restrictions placed on CA by the matrix verb and the presence of agreement when the subject and information source are not one and the same. Mande quotative clause linkers agree with the source of information in the quotative even when the information source is not the syntactic subject.

(17)

Wô	lé	tén	fɔ̀-nìn	ǎn	bòrò	n-kò	byɛ̀	yè	ná	bí
DEM	FOC	PST	say-PTCP.PFV	1PL	by	1-CLM	all	IPFV	come	today

‘It was asked by us that everybody comes today’
(Jula of Samatiguila, Braconnier 1987–88:49, 55, cited in Idiatov, 2010)

These Mande complementizers also only appear with quotative matrix verbs.

The Lubukusu pattern is less semantically constrained and the agreement is strictly between complementizer and matrix subject, not complementizer and information source. Matrix verbs that are not verbs of “saying,” “declaring,” or “believing”—the logophoric verbs to which Mande CA is limited—may take an agreeing complement in Lubukusu.[2]

(18)

Sammy	a-li	nende	li-manya	**a-li**	li-sna	li-ewe	bali	“mzungu”
1Sammy	1S-be	with	5-belief	1-that	5-name	5-your	be	mzungu

‘Sammy has the belief that your name is “mzungu”.’ (Lubukusu, Diercks, 2013)

[2] Not all verbs in Lubukusu may take agreeing complementizers, however. I return to this in section 5.2.2.

Non-subject information sources do not trigger CA in Lubukusu.

(19) khw-a-ulila khukhwama khu Sammy khu-li (*ali) ba-limi
1pls-PST-hear from LOC 1Sammy 1pl-that 2-farmers
ba-a-funa ka-ma-indi
2S-PST-harvest 6-6-maize
'We heard from Sammy that the farmers harvested the maize.'
(Lubukusu, Diercks, 2013)

Here Sammy is the source of information, but does not trigger agreement, which is still with the first person subject (the hearers). However, derived subjects may trigger CA:

(20) Sammy ka-bol-el-wa a-li ba-keni b-ola
1Sammy 1S-say-AP-PASS 1-that 2-guests 2S-arrived
'Sammy was told that the guests arrived.' (Lubukusu, Diercks, 2013)

This suggests that CA in Lubukusu is strictly syntactic and based on structural factors rather than semantic ones. The Mande quotative marker agreement is similar in most ways, but appears to be more influenced by semantic factors, since the target of agreement is the source of information regardless of structural position within the clause.

5.2 The synchronic syntax of CA

In this section, the synchronic analysis from Chapters 2 and 3 will be briefly reviewed. Analyses of both upward and downward CA will lead to the conclusion that C^0 possesses a uφ-probe. For a more thorough synchronic account, see Chapters 2 and 3.

5.2.1 Germanic CA and closest-goal agreement

Declarative CA with the lower clause subject may be analyzed as a straightforward probe-goal relationship. An unvalued φ-feature at C^0 is valued through Agreement with the absolute closest goal: the embedded clause subject.[3]

I will follow an analysis in which C^0 does in fact contain its own uφ-probe, which is not valued through C-to-T inheritance or a post-syntactic process of feature copying based on adjacency. While an inheritance-based or post-syntactic explanation may appear desirable for limiting the proliferation of φ-probes and making the distribution of φ appear more cross-linguistically uniform, this analysis does not provide an adequate account of all the data (see Chapter 4).

The data presented in examples (9–10) above provide a problem for analyses that rely on feature copying or sharing based on adjacency rather than structure. A C-to-T inheritance model as suggested by Zwart (1993), Chomsky (2008), and Obata and Epstein (2011) would involve the copying and sharing of features between C and T directly. This maintains a cross-linguistic assumption of the relationship between C and T, but does little to add to an effective model of CA itself. In fact, it fails to account for the cases in which T

[3] Based on the framework for clitic pronouns developed in Roberts (2010) and DiGirolamo (forthcoming) it is possible for a φ-based, probe-goal analysis to also account for the clitic pronouns present in West Flemish (i.e., (2) and (3) above). Although these are not "agreeing complementizers" per se, the appearance of these clitic pro-forms at C^0—especially as they double full pro-forms and are not, in most persons, optional—suggests that they are there to satisfy a requirement of C^0. This analysis supposes the clitics bring φ-bundles to C^0 to satisfy the unvalued φ-features of C^0.

and C's φ-features do not match—e.g., in coordinated subject cases where CA is with the first conjunct.[4]

An alternative, extra-syntactic analysis of CA is put forward by Ackema and Neeleman (2004), Fuß (2007), and Miyagawa (2009). Here, φ-features are copied from an adjacent noun to fulfill agreement extra-syntactically. However, this account works only for speakers and dialects where adjacency is a necessary condition for CA. As argued in Chapter 4, post-syntactic CA clearly exists in some dialects and may also be a mid-point along the cline of development of syntactic CA. Here we will focus on syntactic CA as the "most advanced" form of the reanalyses and changes that give rise to Germanic-type CA (see Chapter 4 for a more thorough exploration of this).

5.2.2 Lubukusu-type CA and indirect agreement

For a synchronic account of Lubukusu CA, I adopt the proposal of Diercks (2013) that an Agree relation obtains between the complementizer and a null subject-oriented anaphor that is bound by the matrix clause subject. This type of CA appears at first glance to be both "long-distance" and "upwards."[5] The source of the φ-features on C is not in the C-command domain of C^0 and no element is raised into specC to establish a spec-head relationship. The Agree relation here is thus fairly non-canonical. However, examples such as (20) show that agreement is structurally based and can be triggered by syntactic movement of a subject.

[4] The C-to-T inheritance analysis runs into further problems with regards to CA when relative clauses are taken into account, particularly when applied to Niger-Congo languages. Relative CA is treated more extensively in Chapter 2.

[5] Although Lubukusu and a variety of other Bantu languages have CA in relative clauses that agrees with the relativized element from the lower clause, this type is not discussed here.

Lubukusu CA is strictly subject-oriented, agreeing with derived subjects but not with agents or information sources that surface outside of the syntactic subject position. According to Diercks (2013) the lower clause contains a null subject anaphor which contains the φ-features of the matrix clause subject. This null operator is bound as a reflexive anaphor by the matrix subject, but the anaphor itself is C-commanded by the complementizer, and the anaphor's φ-features—valued through government from above—are available as a goal for the φ-probe in C. The anaphor would receive its φ-features from the nearest available argument in its C-commanding domain—i.e., from the matrix clause subject.

(21) $[_{TP}$ Subject$_1$ ... $[_{CP}$ OP$_1$[... C ...] ...]...]
Binding Agree Reproduced from Diercks (2013)

The null operator is presumably base-generated in specC to satisfy some requirement of C^0 similar to an expletive subject. However, not all complementizers in Lubukusu agree, and the selection of a C^0 that requires a null anaphor in its spec depends on the matrix verb. The operator enters into the Agree relationship in just such circumstances where it is needed to satisfy C's uφ-features. Since Diercks (2013) specifies that the matrix clause verb determines the complementizer that is used and whether or not agreement is triggered, we can assume that the complementizer is selected by the matrix verb above it. Diercks (2013) does suggest that the operator may be in "some sort of CP-level functional projection related to speaker-orientation, evidentiality, or logophoricity" (p. 16).

This analysis is similar to that given by Baker (2008) for Kinande, although Baker specifies that the element in specC is a "logophoric operator." An operator in a CP-level logophoricity head need not be controlled by a subject in matrix T; the operator mediating CA agreement in Lubukusu, however, is controlled by such a subject. The Mande languages that allow agreement with non-subject information sources may have a more independent

operator that seeks out φ-features associated with information source. The Bantu examples, however, appear to be of subject-oriented bound anaphors, even if their position is in a logophoric CP-level phrase. This may explain the limited distribution of the agreement. The anaphor, although subject-oriented and bound by the matrix subject independent of information source role, is dependent on the selection of a logophoric projection in the CP layer of the lower clause. The matrix verb must select a complement with such a projection for the complementizer agreement to be realized. This accounts for the oddity of an agreement feature that appears to be entirely structural—i.e., based on structural subjecthood—being dependent for its realization on the semantic properties of the matrix verb. Figures 1 and 2 show the structure for matrix verbs that do and do not trigger CA.

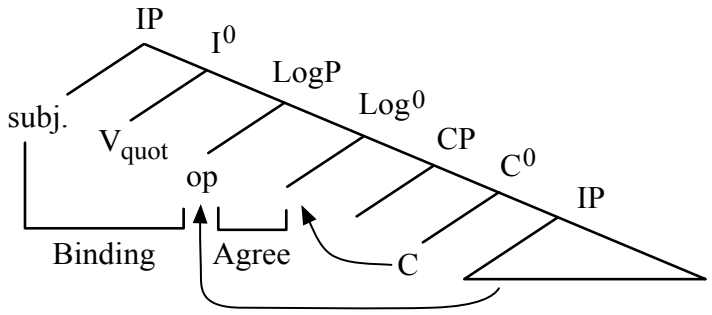


Figure 5.1

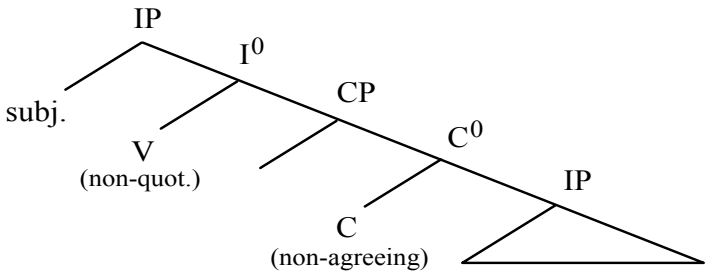


Figure 5.2

In Figure 1, LogP houses the null-subject anaphor. In Figure 2, no such position exists and no anaphor is present to mediate agreement. Although the verbs are labeled as quotative, many non-quotative verbs also have this pattern.

5.3 The development of complementizer agreement

I have argued that both "upward" and "downward" agreeing CA are in fact the output of an Agree relation between a uφ-probe at C^0 and the closest goal within the subordinate clause. The features that are expressed on the complementizer are those of the subordinate subject in Germanic and those of the matrix subject in Lubukusu. The φ-features of the Lubukusu matrix subject are shared with a subject-oriented anaphor in the lower clause, which is the direct goal of the uφ-probe at C, while the φ-features of a Germanic subordinate subject enter the derivation as inherent features of a noun or pronoun.

The syntactic structure that underlies CA and which makes the development of CA diachronically possible is a structure within the subordinate clause that allows a φ-bearing element—usually a subject—to be an available goal for a probe at C^0. For CA to develop, the structure must exist to place a φ-bearing element in a position where it can be reanalyzed as a source for φ-features at C^0. The φ-features at C^0 originally came from a different source and this source determines the synchronic expression of the CA. Both a φ-feature at C^0 and a plausible goal in an available position are necessary for the development of a CA Agree relation.

The following sections examine, to the extent possible, the historical states of these languages' pre-complementizer agreement and suggest that reanalysis of a non-complementizer element as a C^0 and of a φ-bearing pronominal element as φ-features in C^0 lead in

both cases to a new uφ-probe. Several of the CA patterns treated here are the result of the fusion of pronominal elements with the etymological source of the complementizer. Enclitic pronouns are responsible for the development of the IE system, while the Bantu/Mande-type prefixal agreement pattern develops from pronominals that precede the verbal source of the complementizer. The syntactic category and structure of one element changes from a nominal or verbal element into a functional CP head, and the source of pronominal φ-features is reanalyzed as the result of an agreement relationship between C and either the higher or lower subject. (As seen in Chapter 3, a non-subject may also serve as a goal for CA if the structure of the TP feeds a non-subject into closest goal position.)

5.3.1 Complementizer agreement from clitic pronouns

The development of the Germanic complementizers exhibiting CA has been well explicated by DeVogelaer and van der Auwera (2010) and Goeman (1997). I will adopt DeVogelaer and van der Auwera's (2010) explanation of the development of the agreement on the complementizer as an analogical extension of the agreement on Dutch verbs.

Prior to the development of complementizer agreement, agreement between a verb and an enclitic already occurred, both in questions and non-subject initial clauses, in Dutch and several other Germanic languages.[6]

(22) Gaa-n =ze morgen naar Gent?
Go-3PL=they tomorrow to Ghent?
'Are they going to Ghent tomorrow?'

(23) Naar Brussels ga=me
To Brussels go=we
'We go to Brussels' (Dutch, DeVogelaer and van der Auwera, 2010)

[6] For a more detailed account of this development see DeVogelaer and van der Auwera (2010) and Goeman (1997).

The word order of embedded clauses and those of non-subject initial clauses with an auxiliary verb created a situation for Dutch learners where the complementizer has the same position relative to the subject clitic as a verb, and can take on aspects of verbal syntax through analogy.

(24) Morgen zal hij het boek lezen
Tomorrow will he that book read
'Tomorrow he will read that book'

(25) Ik geloof dat hij het boek morgen zal lezen
I believe that he that book tomorrow will read
'I believe that he will read that book tomorrow'
(Dutch, DeVogelaer and van der Auwera, 2010)

The position of the post-verbal subject in (24) resembles the position of a clitic subject in a non-subject initial matrix clause. Since the verb in this context would agree with the post-verbal subject, language learners may assume that the complementizer should also agree with the φ-features of the following subject. Morphosyntactic changes are often, if not always, fed by ambiguous surface strings that the learner may reinterpret as having a different underlying structure.

DeVogelaer and van der Auwera (2010) contrast the analysis where the C-position contains an agreement probe and the one in which the agreement is the result of analogy. But these two stories are not, and cannot be, mutually exclusive. The diachronic explanation that the agreement features of complementizers have changed as a result of analogy is not in conflict with a synchronic story in which C contains unvalued φ-features which must be valued through Agree. In fact, this is the terminus of the analogical change.

The etymological source of these complementizers is a demonstrative which—as it is not modifying the subject NP—should not bear any agreement features of the embedded

subject.[7] It is reanalysis of the embedded clause subject as an enclitic to the complementizer that ultimately gives the complementizer its unvalued φ-features. At this point in the grammaticalization, the pronominal clitics are still independent elements. Although under the analysis of clitics described in Roberts (2010), they may be analyzed as having moved into C to value the φ-features of C, the surface structure here is still ambiguous between an interpretation where the pronoun is in the lower specT and one where it has incorporated into C.

(26) Ze zegg-en da-n=ze naar Brussel gaa-n
They say-3PL that-3PL=they to Brussels go-3PL
'They say that they are going to Brussels'
(Dutch, DeVogelaer and van der Auwera, 2010)

For (26) either an analysis in which *ze* is an agreement morpheme in C or one in which it is an independent element occupying specI of the lower clause is possible, as illustrated in Figures 5.3 and 5.4, respectively.

[7] Although the topic of this chapter is the development of CA on declarative subordinate clauses, for relative clause CA the φ-features of a demonstrative are a potential diachronic source for φ-features on a complementizer. Demonstratives are a common source for relative complementizers also, where relative clause structures may arise through the reanalysis of a biclausal co-relative structure with demonstratives (the one …that one) as a monoclausal embedded structure with a complementizer (the one that…). In fact exactly this ambiguity can be seen in Potwari (as seen in section 1.3)

(i) mai us/o genna-ki thak-ya si jer-a clasay vich
1sg.F.PLN DEM man-OBL see-M PST REL-M class in
par-a-na ona si
teach-CAUS-IMPF use PST
'I saw that man who used to teach in class.'

(ii) o kuri jer-i ka-ni ai boni soni ai
DEM girl REL-F eat-IMPF.F is very beautiful is
'The girl who is eating is very beautiful.' (Potwari, Nazir, p.c.)

This construction is ambiguous between a co-relative as in Sanskrit and an agreeing relative, although at least one native speaker linguist analyzes these as true complementizer structures (Nazir, p.c). However, this ambiguity demonstrates the fluidity of such constructions and the ease with which they may be reanalyzed as agreeing relative complementizer structures.

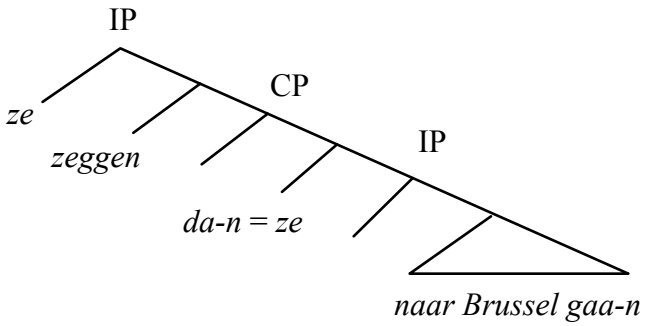


Figure 5.3

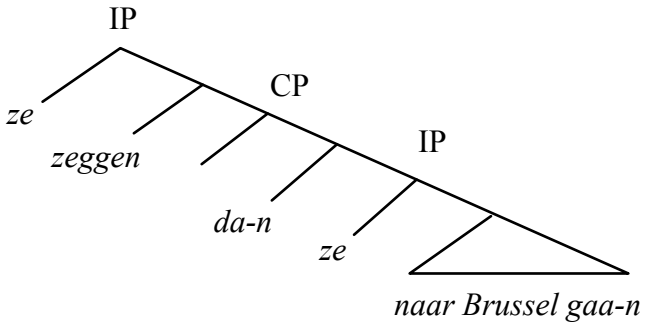


Figure 5.4

Although the surface word order remains the same throughout the change, the internal syntax of the complementizer phrase has changed dramatically. The head has acquired an unvalued φ-probe, which must be valued through a relation with the lower clause subject. This agreement is also valued by affixation of a φ-bearing agreeing element. Although the pronominal clitic subjects are the original source of the reanalysis, these agreement morphemes can now occur with DP subjects as well.

(27) a. Kpeinzen *da* Valère morgen goat
I-think that Valère tomorrow go
'I think that Valère will go tomorrow'
b. Kpeinzen *da-n* Valère en Pol morgen goan
I-think that-PL Valère and Pol tomorrow go
'I think that Valère and Pol will go tomorrow' (West Flemish, Haegeman, 1992)

Once the uφ probe at C^0 has been learned by speakers, the pattern may extend to include CA with any φ-bearing element fed into closest goal position.

5.3.2 Complementizers from verbal sources

The "upward agreeing" complementizers addressed in sections 1.2 and 2.2 do not derive from a nominal or demonstrative source, and the prefixal agreement features that attach to C here do not have the same source as the suffixal agreements discussed above. In these languages, the complementizers are derived from verbal sources: either verbs of saying or quoting or from copular verbs that participated in quotative constructions as auxiliaries. A full historical analysis has not been carried out for these structures as data from earlier stages of the languages are unavailable. However, from data that is available, and from the morphological behavior of the complementizers, some conclusions about their origins can be drawn.

Baker (2008) points out that the Kinande complementizer seen in (12) is "cognate with the verb meaning 'say'." (p. 179) This is not, however, a second, conjoined VP, since elements in the lower clause are available for extraction. Bantu allows extraction of a subject out of a subordinate clause, even when that clause is finite (see Perez 1986), but extraction of a subject out of one coordinated VP into another would be impossible. However, it is probable that the VP structure rejected by Baker as a synchronic analysis does represent the syntax of an earlier stage, prior to reanalysis of a quotative verb as a complementizer. Extraction should have been unavailable at this stage, but we lack direct evidence for this. For a complementizer with a source construction as a quotative verb the two stages would be as follows:

Stage 1: conjoined VP
[$_{VP}$They say/They talk] (and) [$_{VP}$....]

Stage 2:
[(They) say/believe [$_{CP}$3pl-that [$_{VP}$...

Once the reanalysis of the quotative as a complementizer has occurred, a new matrix verb is added, which may or may not be a quotative, hence some languages allow this pattern with verbs of hearing or believing, etc.

Idiatov (2010) describes a similar source for the agreement on Mande quotatives: the morphological fusion of pronominal prefixes with quotative verbs to form quotative markers. The φ-features shown on the clause-linking marker are those of the higher clause subject in the reanalyzed construction. In the source construction, where the clause-linking marker was a verb, the φ-features would have belonged to the verb's subject—i.e., the source of the information being quoted. Before the morphological merger of the pronoun and the quotative, the φ-features of the pronoun were borne inherently by the pronoun from its first merge—as a pronoun is merged into its argument position as a cluster of φ-features—and were not the result of agreement. The change has caused the inherent, valued φ-features of a pronominal to be recast as unvalued φ-features. This change is particularly striking in light of the fact that Mande languages do not usually have verb-subject agreement, and so this quotative agreement is one of the only instances of an unvalued φ-probe operating in the grammar.

However, this series of changes is not surprising from a theoretical standpoint or from the perspective of directionality that follows from such generative approaches to historical syntax as those taken in Roberts and Roussou (2003) and van Gelderen (2009). Roberts and Roussou predict that syntactic changes will tend to reanalyze material "upward," i.e.,

learners will assume a higher position in the tree for an element whose position is ambiguous based on surface position. Van Gelderen also proposes that the progression of reanalysis trends towards the reanalysis of goals as probes. On both counts, the reanalysis here behaves as predicted. The pronominal element moves from the VP in its source construction to the CP in its output construction and the pronoun—an argument and potential goal for verbal agreement—is reanalyzed as an agreement marker: the output of an agree relation triggered by a φ-probe.

The stages of the reanalysis, including the morphological fusion, would be as follows:

Stage 1 [Pronoun [$_{VP}$Quot [...

Stage 2 [$_{VP}$φ-Quot [...
(morphological merger)

Stage 3 Subj. [$_{CP}$φ-C [$_{VP}$...

At Stage 3 a new subject pronoun or NP is added to the construction since the original subject pronoun is now an agreement marker.

Lubukusu complementizers resemble copular verbs morphologically and the prefixal agreement on complementizers resembles that on matrix verbs (Diercks, p.c.). Table 5.1 shows the paradigm of prefixal agreement on the copular verb. Compare this to the morphological forms of the complementizer and its agreements in (11) and (18) and (19) above.

Table 5.1

	Singular	Plural	
1st	n-di	khu-li	
2nd	o-li	mu-li	
3rd	a-li	ba-li	
noun class N	N-li	N-li	(Diercks, 2013)

Prefixal verbal agreement continues from the complementizer's previous life as a copular verb. Either a quotative or copular verbal source for the complementizer combined with the availability of anaphoric agreement across a clause boundary in Bantu generally (see Diercks 2013, Perez 1986) allow the φ-features present on the complementizer to be interpreted as the output of an Agree relation between the uφ-probe at C^0 and an anaphor in the lower clause valued through government by the matrix subject. Prefixal agreement on the verb was reanalyzed as prefixal agreement on the complementizer.

Thus both the Bantu agreeing complementizers and the Mande agreeing quotative markers take their φ-features from the element that was their external argument when they were verbs. When the verb was reanalyzed as a complementizer, it could no longer take an overt external argument, but the φ-features—either as reflexes of agreement or of the features of a proclitic subject—remained. These features were reanalyzed as being valued by an element in the matrix clause. Specifically, following the analysis laid out in section 5.2.2 above, and building on Diercks (2013), the features were relabeled as belonging to a CP layer linked to information source. This CP layer came to host information-source agreement realized on C, and in Mande (and perhaps also in Bantu languages like Lunda where CA is strictly limited to quotatives) this is still how the position and the φ-features operate. In Lubukusu, however, an additional grammaticalization has taken place. Although the structural position may still be related to the logophoric nature of the verb, the contents of C^0 have been altered. Rather than a logophoric operator, Lubukusu has a subject-oriented anaphor, no longer subject to constraints about information source, but instead to syntactic structure. This change follows from the surface data learners were most likely exposed to: the subject is the most common information source for a logophoric verb.

In neither Mande nor Bantu is the change a foregone conclusion from verbal reanalysis, as many cases of verb-complementizer reanalysis do not result in CA. In fact, the Mande and Bantu families themselves include examples of the verb "say" becoming a non-agreeing complementizer. Heine and Kuteva (2002) include such examples from Koranko (Mande) and Bemba (Bantu).

(28) a. ànu kó ń yé: "sìi yíri!"
3:PL say 1:SG to sit IDEO
'They said to me: "Sit down quietly!"'
b. ń yá à fɔ́ í yé, kó í kána tó yà̰.
1:SG TAM 3:SG say 2:SG to that 2:SG TAM:NEG stay here
'I told you that you cannot stay here.'
(Koranko, Kastenholz 1987: 265, 336; in Heine and Kuteva, 2002)

(29) a. a- a- ebele a- a- ti umanaa- ndi a- a- ishile.
he- PAST- say he- PAST- say friend- my he- PAST- come
'He said: My friend has arrived.'
b. a- a- ebele uku- ti umanaa- ndi a- a- ishile.
he- PAST- say INF- say friend- my he- PAST- come
'He said that my friend had arrived.'
(Bemba, Givón 1980: 365–6, in Heine and Kuteva, 2002)

It is unclear exactly what conditions the extension versus the deletion of an agreement pattern. Likely a combination of the frequency of exposure for learners and the number of similar constructions (analogical models) present in the language play a role. However, a change from verb to complementizer leaves the possibility of CA open, and some languages do develop the pattern. The verbal agreement may or may not persist in the post-reanalysis language.

Conclusion

Comparing these types of complementizer agreement, it seems that the source of the construction plays a large role in dictating its syntactic structure. Complementizer agreement

can arise either when elements that bear φ-features are reanalyzed as complementizers or when complementizers and nearby φ-bearing elements are reanalyzed, changing their relationship to one of probe and goal. The conditions that predispose a language to undergoing such a change are the presence of ambiguous surface strings in which φ-feature bundles (pronominal elements) are open to reinterpretation as affixes on the complementizer, or where clitics or subject pronouns of either the higher or lower clause are able to be reinterpreted as agreement triggered by an argument in the other clause, mediated by the complementizer. The structure of the lower clause also contributes to the construction. The structure must have—or develop as part of the reanalysis—a position to host a φ-bearing element as a closest goal for a C^0 probe. This may be a subject or topic position as argued in Chapter 3.

The Dutch case shows the lower clause subject, previously only in an agree-relation with the lower verb, being reanalyzed as participating in an agree-relation with C at the clause boundary. The Mande and Bantu cases show a pronominal argument of a higher clause quotative verb being reanalyzed as bearing a relation to the complementizer and thus to the lower clause. Most strikingly, in the cases that involve morphological fusion of a pronominal element with a complementizer, the inherently valued φ-features of a pronominal element can be reinterpreted as unvalued φ-features, generating a new φ-probe and a new syntactic relation.

CA with lower clause subjects results from a reanalysis of φ-features that were originally located within the embedded clause. The morphological changes here involve suffixation, and the syntactic changes produce a new probe-goal relation between C and an element in the embedded clause. CA with a matrix clause subject is derived from φ-features of

the matrix clause. A matrix clause argument loses its "subject" status relative to the intermediate verb (which is being reanalyzed as a complementizer) and is reinterpreted as an operator with some function within the subordinate clause.

In both cases, the historical source construction includes valued φ-features that are reanalyzed as unvalued features valued through Agree. Interpretable features are reanalyzed as uninterpretable ones, as predicted by van Gelderen's (2009) account of the linguistic cycle. The agreements found synchronically are only typologically strange. When standard morphological reanalyses—e.g., a demonstrative or a verb becoming a complementizer—carry along φ-features, the features may be interpreted in their new syntactic position as the output of an Agree relation, as seen above. In fact, this is an expected result under the economy of the linguistic cycle. CA is the result of complementizer formation when the new complementizer position brings φ-features into C^0 which can be interpreted as a uφ-probe. The rarity of the pattern cross-linguistically is not due to any aspect of synchronic or diachronic syntax working against the existence of CA or uφ-probes at C. Instead, the circumstances that give rise to CA are themselves somewhat rare, and retention of the φ agreement on the reanalyzed complementizer is but one possible outcome for these structures.

CONCLUSION

These chapters have argued that complementizer agreement is, both in its underlying structure and in its diachronic development, a more mundane piece of the syntactic architecture of the languages in which it occurs than it may first appear. Despite the typological rarity of CA, the pattern is derivable from basic assumptions of the probe-goal relationship common to Minimalist syntax. The probe-goal relationship between unvalued features in C^0 and the nearest relevant goal found within its complement has been somewhat obscured by differences in structure below the CP layer that hosts the probe. I have argued here that all cases of syntactic CA (leaving aside the extra-syntactic CA dialects addressed in Chapter 4) are in fact cases of a probe at C^0 behaving straightforwardly, while the differences in output are due to differences in either structure below CP or the featural specification of C^0.

CA may be the result of a uφ-probe at C^0 acting alone, where the φ-features of C^0 are valued through agreement with a closest goal that remains in situ. These cases of CA occur in both Germanic and Bantu languages and may yield either agreement with an embedded subject, which is itself in the closest goal position (as in Germanic), or with a null anaphor in closest goal position which is fed its features from its governing NP in the upper clause (as in Bantu; see Diercks 2013). More common, however, are cases where CA in relative clauses results from the combination of Agree and movement triggered by a probe consisting of both uφ-features and another feature that selects an argument as a goal for movement into specC. This CA with movement may take many forms, from a spelling out of the relativized argument's φ-features on the complementizer, to a simple alternation between complementizers which are and are not compatible with certain extracted arguments. Spe-

cifically, the presence of a non-φ-probing complementizer which cannot check the φ and Case features of a subject is in some cases not compatible with a relativized subject, and a different non-φ-checking complementizer must be used. Although not traditionally considered part of the CA canon, such cases do demonstrate the ability of C^0—even outside of the rare domain of CA—to enter into feature checking relationships with arguments within their domains.

It is not the ability of the C^0 position to enter into these relations that restricts the appearance of CA, but the presence or absence of unvalued features at C^0. If a φ-probe is present in C as part of the numeration, then some form of CA or φ-at-C checking can occur. Likewise the presence of an edge-feature bearing a probe capable of raising material to spec determines whether CA occurs at a distance or as a spec-head agreement—or in fact if it occurs at all. Furthermore the goals available for these probes at C^0 are fed into the closest goal position by the lower structure and by probes within TP. I have argued here that argument structure—e.g., the placement and feature checking of subjects and objects—and information structure—e.g., the raising of Topics into preverbal topic positions—may feed arguments and their φ-features into the path of C^0's probes and yield CA. To this end I have suggested that the probe at C^0 is not sensitive to any distinctions between elements raised to its closest goal position by A vs. A-bar movements. Cross-linguistic differences in which arguments may or may not agree at C^0 follow straightforwardly from differences in the reusability of φ-features in different languages, i.e., in a difference in how the checking relation deals with features that have already been checked, as proposed by Carstens 2003. Thus in languages where the checking relation does not dispose of the φ-features of an argument after checking, and the features are thus reusable as in Bantu, CA with non-subjects

is expected and does occur. These differences arise naturally from previously documented parametric differences between languages and not from any odd behavior of the Agree relation when the CP is involved.

Furthermore, differences in CA patterns have been shown here to arise partly from the varied diachronic sources of the construction. The history of declarative CA is argued to be one of reanalysis in which the complementizer takes its φ-features either from an incorporated pronoun—yielding agreement with a subordinate clause subject—or from agreement features present on a reanalyzed verb—yielding agreement with a matrix subject through a null anaphor. Although neither of these patterns is frequent enough to have made CA a cross-linguistically common pattern, both pathways follow the expected direction of grammaticalization and both are generated from the kind of surface ambiguity that is expected to lead to syntactic reanalyses. The development of CA, and specifically the generation of a φ-probe at C^0, conform to both the proposed directionalities of syntactic change of Roberts & Roussou 2003 and van Gelderen 2009. Roberts & Roussou argue that speakers reanalyze elements as higher positions as seen in a verb-to-complementizer analysis which yields upwards agreeing CA. Van Gelderen argues for a linguistic cycle in which inherent interpretable features are more likely to be reanalyzed as uninterpretable, unvalued ones—i.e., goals are reanalyzed as probes. This is borne out in the cases which arise from the reanalysis of a pronoun's features as the output of an Agree relation. This change—a pronoun reanalyzed as agreement—is actually quite common, and only its occurrence at C^0 sets this instance apart.

Several related areas of inquiry touched upon here remain for future work First, the diachronic development of relative CA, and CA with a moved argument more generally,

have not received their due attention here and I would like to pursue this in the future. Particularly the cases of co-relative/relative structures in Indo-Aryan languages would be an interesting case of reanalysis, and may shed light on the kind of ambiguity that leads to reanalysis into an agreeing complementizer construction.

Another area for future research is the extent of the relation between discourse and agreement. Although Chapter 5 began the exploration of the way in which discourse and information structure may feed agreement and build structure within TP and CP, a full, cross-linguistic examination remains to be conducted. More discourse study of the Algonquian proximate and obviative structure remains to be done. And it would also likely be fruitful to examine the Bantu locative inversions with respect to whether such inversions give the locative a Topic or Focus function.

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