

Chapter 2: Upward Complementizer Agreement

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2.1 Introduction

As characterized in Chapter 1, upward complementizer agreement is a construction in which the C head of an embedded clause (typically but not always a complement clause) appears to agree in person, number, and noun class with an argument of the matrix verb—in practice, almost always the superordinate subject. This upward C-agreement needs to be sharply distinguished from the downward C-agreement found in some Continental West Germanic languages, in which the C head agrees with the subject of its TP complement. This latter shows every sign of being a relatively straightforward instance of direct Agree, not involving the licensing and control of a ghostly DP operator in the CP periphery, which is the special focus of this study. Upward C-agreement is known in a range of languages in sub-Saharan Africa. The best studied case is Lubukusu (Diercks 2013); others include Kinande, Ikalanga, Chokwe, and Ibibio. Reports of this phenomenon in languages from outside this region are very sporadic. The one reasonably well-documented case is the Teiwa language of Indonesia (Sauerland, Hollebrandse et al. 2020). Other possible candidates are the New Guinean language Arapesh (Baker 2008: 182-183) and the Peruvian language Nanti (Michael 2008: 111-112). Sauerland et al.'s characterization of Teiwa is, I believe, fully compatible with my analysis of the African languages offered here. But while they show that the construction is a true instance of CP complementation (not a paratactic construction involving the verb 'say'), they do not give enough detail about other facets of the construction to warrant a separate discussion here. Therefore, I focus entirely on the African languages, while acknowledging that it would be very desirable to replicate the findings in (say) a (Trans-)New Guinean language someday.

Some initial examples of upward C-agreement are given in (1) from Kinande, a Bantu language spoken in the Eastern Congo. (1a) versus (1b) shows that C agrees with the number of the subject—and not with the number of the object, which seems closer to C both structurally and linearly. (1c) shows that full person agreement is possible with a first (or second) person subject. (1d) shows that C-agreement is possible even with nonanimate noun classes as long as the subject can be understood as something that communicates propositional information, like a letter. C-agreement is also possible with animal-denoting subjects in folktale contexts, etc.

- (1) a. **Kámbale** mw-a-ka-bw-ira abá-kalí **a-ti** Maryá
CL1.Kambale AF-CL1.S-TNS-tell-APPL CL2-women CL1-that Mary
mw-á-gúl-ir-é ehí-lole.
AFF-CL1.S.TNS-buy-ASP CL19-bananas
'Kambale told the women that Mary bought bananas.'
- b. Aba-kali mo-ba-kas-ire Kambale **ba-ti** mupaka a-gul-e ehi-lole.
CL2-women AFF-CL2.S-force-ASP CL1.Kambale CL2-C forcefully CL1.S-buy-SBJV CL19-bananas
'The women forced Kambale to buy bananas.'

- c. *nyi-lir-ira Kambale nyi-ti/*ambu a-mbaly' emaske.* (P&P)
 1SG.S-cry-APPL CL1.Kambale 1SG-C/*they.say CL1.S-wear mask
 'I begged Kambale to wear a mask, lit. that he wear a mask.'
- d. *Ebaruha y-a Kambale yi-ka-buga yi-ti/??a-ti a-kisig' ini-a-sa.*
 CL9.letter CL9-ASS CL1.Kambale CL9.S-TNS-say CL9-C/??CL1-C CL1.S-AUX XX-CL1.S-come
 'Kambale's letter says that he will come soon.'

Upward C-agreement in Ibibio is similar, as seen in (2), although this Nigerian language does not have the rich noun class system of the Bantu languages, so there are fewer agreeing forms to choose from—only the six standard person-number combinations. The construction has the signature property of agreeing with the matrix subject but not the matrix object, and agreement is in both person and number.

- (2) a. *M-ma-n-dokko anye m-bo/*á-bo ke Koko a-ma-a-bere usong.*
 1SG-PST-1SG-tell 3SG 1SG-C/*3SG-C that Koko 3SG-PST-3SG-open door
 'I told him that Koko opened the door.' (Torrence 2016)
- b. *Emem a-ke-bip a-bo mme Okon a-ma-i-kid ímò*
 Emem 3SG-PST-ask 3SG-C whether Okon 3SG-PST-3.LOG.O-see LOG
 Emem asked whether Okon saw him.
- c. *Nditò e-ma-e-toiyo Okon (e-bo/*a-bo) ke Emem a-kpena a-dep adesi.*
 children 3PL-PST-3PL-remind Okon 3PL-C/*3SG-C that Emem 3SG-should 3SG-buy rice
 'The children reminded Okon that Emem should buy rice.'
- d. *M-ma-ng-kpak nditò (*e-bo/m-bo) ke Okon i-maa-gha Emem.*
 1SG-PST-1SG-convince children *3PL-C/1SG-C that Okon 3SG-like-NEG Emem
 'I convinced the children that Okon does not like Emem.'

Ibibio is also different from Kinande and Lubukusu in the structure of its complementizer space. Kinande and Lubukusu embedded clauses generally have one complementizer each; this may be the agreeing complementizer or some other C head. For example, the agreeing C *a-ti* is the only C-like head seen in (1a) in Kinande. In contrast, the agreeing C in Ibibio is always optional, and when it appears it is in addition to rather than instead of another C head, such as declarative *ke*, interrogative *mme*, or subjunctive *yak*. Thus, the upward C-agreement construction in Ibibio involves sequences of at least two complementizers, and may involve three. This, together with the presence of serial verb constructions in the language, raises the serious first-order analytical question of whether *a-bo* in (2a) is really an agreeing C or the second verb of a serial verb construction; see the appendix to this chapter for arguments in favor of analyzing it as an agreeing C. (One simple consideration to get us started is that *a-bo* in these examples does not have the meaning of 'say', although it is cognate with a verb that has that meaning.) But apart from this initial analytical issue, this difference in the structure of the C-space in Ibibio as compared to Kinande and Lubukusu has relatively little impact on the syntax of C-agreement.

A basic question raised by (1) and (2) is what does C actually agree with: does it agree with the matrix subject more or less directly (Carstens 2016, Diercks, Koppen et al. 2020) (Letsholo and Safir 2019), or does it agree with the matrix subject indirectly, by agreeing with some null DP near C which is bound by the matrix subject (Baker 2008, Diercks 2013)? Both views present some theoretical challenges. On the one hand, the matrix subject seems a bit far away for the embedded C to agree with directly, both in terms of phases and in terms of the direct object intervening. Thus, some kind of covert movement may be required to feed the agreement, whether raising of the entire CP (Carstens 2016) or of its C head (Diercks et al. 2020) to the vicinity of the matrix Voice head. On the other hand, the indirect agreement view needs to answer questions about what is the null DP near C, and what is the nature of

grammatical relationship between the matrix subject and this DP—questions that Diercks (2013) struggled with (and Baker (2008) did not get to).

Here I argue for a species of the indirect agreement approach. In other words, upward C-agreement in the African languages is a particular realization of the structural template sketched in Chapter 1, where a C-like head licenses a null pronominal DP in its specifier, and that ghostly DP is obligatorily controlled by the subject of the superordinate clause. The ghostly DP then inherits phi-features from its controller, and C picks up these phi-features in an instance of very local agreement. More specifically, I argue that the head in the C-space in this particular construction is the Eval head of Speas and Tenny (2003), and the null DP is what they call the “Seat of Knowledge”, SoK for short. The slightly more refined structure for an example like (1a) is thus (3) (compare (25) from chapter 1).

- (3) [Kambale:3sg told the women [_{EvalP} SoK:3sg Eval:3sg [Maria bought bananas]]]
- |-----| |-----|
- control Agree

This analysis is developed in the following stages. Section 2.2 concentrates on the claim that the ghostly DP is present and can be identified as SoK, licensed by Eval via a kind of thematic role assignment. In particular, I argue that this SoK is semantically detectable, in that examples with upward C-agreement have a slightly different meaning than examples without it in Kinande, Lubukusu, and Ibibio. Section 2.3 turns to the control relationship between the matrix subject and SoK. I argue that the construction obeys a version of Landau’s (2013) “Obligatory Control Signature”, such that if CP (including EvalP) is generated inside the VP headed by verb X, then the null pronoun near the edge of CP must be controlled by an argument of X. Which argument of X is the controller of SoK near the edge of CP is thematically determined: it must be the argument of X whose theta-role best matches the theta-role that SoK gets from Eval—typically the *thematic* subject. Section 2.3 also shows that upward C-agreement is subject to a second, more parochial condition, not familiar from standard control theory: the controller of SoK must itself trigger agreement on T in the matrix clause. I call this the *T/Agree Condition*. Section 2.4 extends the analysis to the very rare phenomenon of double upward C-agreement that has been claimed to occur in Kipsigis, where C in a complement clause can agree with the object of the matrix clause as well as with the subject of the matrix clause. I claim that this shows that C/Eval can theta-mark a second ghostly DP, tentatively called OoK (object of knowledge). This also seems to be semantically detectable, and it reinforces the idea that control in these constructions depends on theta-role matching. Finally, section 2.5 turns to the Agree relationship in (3). For the most part, this is fairly trivial from a theoretical point of view: since SoK is (by hypothesis) so close to the probe Eval, there is relatively little to debate or to learn about agreement here, especially since it is hard to tell *exactly* where SoK (and OoK) is. (Is it above Eval or just below it? Is it within the same phase as Eval? Is there any other DP that could intervene between the two? We are relatively free to assume that SoK is wherever it needs to be to not pose a problem for these Agree-theoretic conditions.) However, I argue that we can use aspects of the theory of Agree to explain why these constructions are subject to the T/Agree condition, discovered in section 2.3. In particular, I show how this constraint can be derived from a particular interpretation of Arregi and Nevins’s (2012) proposal that Agree can be factored into two distinct suboperations, Agree-Link and Agree-Copy. I claim that this understanding of Agree not only works for upward C-agreement, but for other instances of “dependent agreement” such as agreement on infinitives in Hindi and agreement on participles in Icelandic. This is the most significant theoretical result of this chapter, taken on its own.

2.2 C agreement as agreement with a ghostly DP operator

I am of course partly interested in the version of Diercks’s indirect Agree hypothesis in (3) because of its potential to unify the theory of upward C-agreement with the other rare constructions surveyed in Chapter 1. But I believe that the indirect Agree hypothesis can be

motivated internally to the African languages that have upward C-agreement by careful consideration of the fact that examples with C-agreement are semantically different from examples without C-agreement in some systematic ways. This is not expected on a direct Agree approach, given that agreement in itself is taken to be semantically irrelevant, the mere copying of features onto a head whenever the right syntactic conditions hold. In contrast, the indirect Agree approach posits a DP in the Spec of some functional head in the C-space, and we naturally expect such a DP to contribute to the semantics, counting as an argument of the functional head. This is topic of this section. Although there is a strong underlying similarity, the details are different enough in the different languages that we should discuss them one by one. I start with Kinande, where I have new evidence of a clear semantic effect. Then I move to Lubukusu, showing how Diercks's (2013) data makes sense in the light of Kinande. Third, I discuss Ibibio, where only a proper subset of the effects seen in Kinande are visible, presumably because the agreeing Cs in Kinande do not replace other Cs but are stacked on top of them. I also add brief remarks on other African languages for which more fragmentary evidence is available on these points (Ikalanga, Chokwe and its near relatives, Kipsigis).

2.2.1 Kinande

Let us begin then with some fresh data from Kinande.¹ In this language, the agreeing C is *-ti*, which is cognate with a verb that means 'say'.² Other Cs in the language that we can compare *Agr-ti* to include *ko*, *nga*, and *ambu*. There are also some possibilities of stacking these C-like heads, the language allowing at least *ng'oko* (=ng[a]+o+ko?) and *Agr-tiambu*.

One straightforward way to see the meaning contributions of these elements in Kinande is to look at verbs with fairly general meanings, which can appear with a relatively wide range of these Cs. One such verb is 'think', which can appear in the following range of examples.

- (4) a. Kambale a-ka-lengekanaya a-ti a-kandi-hola.
 CL1.Kambale CL1.S-TNS-think CL1-CCL1.S-FUT-die
 'Kambale thinks that he will die.' (his own, possibly irrational, fear)
- b. Kambale a-ka-lengekanaya a-ti ambu a-kandi-hola.
 CL1.Kambale CL1.S-TNS-think CL1-Cthey.say CL1.S-FUT-die
 'Kambale thinks that he will die.' (the witch doctors told him so)
- c. Kambale a-ka-lengekanaya ngoko a-kandi-hola.
 CL1.Kambale CL1.S-TNS-think that CL1.S-FUT-die
 'Kambale thinks (realizes) that he will die.'
 (a generally known fact Kambale is coming to grips with)

¹ The data in this section with developed with Philip Mutaka during a short visit to Rutgers sponsored by the Afranaph project in February 2020, and follow up email discussion with him and Patricia Schneider-Zioga. Sincere thanks to both of them, and to Ken Safir. Further data comes from the Afranaph questionnaire on CP complementation.

² Kinande does not, however, have a productive serial verb construction (SVC), such that the question of whether *Agr-ti* in (1) is just the second verb in an SVC is urgent, the way that it is in Ibibio. Other Bantu languages have a normal complementizer that is historically related to a nonfinite form of 'say', like *ku-ti* in Chichewa. Kinande complementation seems no different from Chichewa complementation except that there is the possibility of agreement.

With *Agr-ti*, the source of the idea that Kambale will die is Kambale himself; perhaps it is his own irrational fear. The speaker does not necessarily assume that this will happen. In contrast, when *ambu* is included, the source of the idea that Kambale will die is someone else; perhaps he has been told this by the witch doctors, for example. Again, the speaker does not assume that it is true; this version has more of a hearsay sense. Finally, *ng'oko* expresses a factive complement: that Kambale will die is assumed to be true in the common ground. (3c) thus has the sense that it is generally acknowledged that Kambale's days are numbered and he is emerging from his denial about that and putting his affairs in order.

Another verb that appears with a relatively wide range of complementizers is *buga* 'to say', with which we get a similar triple, as shown in (5).

- (5) a. Ebaruha y-a Kambale yi-ka-buga yi-ti a-kisig' ini-a-sa.
 CL9.letter CL9-ASS CL1.Kambale CL9.S-TNS-say CL9-C CL1.S-AUX XX-CL1.S-come
 'Kambale's letter says that he will come soon.'
- b. (#)Ebaruha y-a Kambale yi-ka-bug-a yi-ti ambu a-kisig' ini-a-s-a.
 CL9.letter CL9-ASS CL1.Kambale CL9.S-TNS-say CL9-C they.say CL1.S-AUX XX-CL1.S-come
 'Kambale's letter says that he will come soon.'
- c. Ebaruha y-a Kambale yi-ka-bug-a ngoko a-kisig' ini-a-s-a.
 CL9.letter CL9-ASS CL1.Kambale CL9.S-TNS-say that CL1.S-AUX XX-CL1.S-come
 Kambale's letter says that he will come soon.

Here the *AGR-ti* option is the most canonical one, in which the letter from Kambale is the speaker's original source of the information about Kambale's travel plans, with no implication about the reliability of the information. The *ng'oko* version in (4c) is more factive; it implies that Kambale is already making preparations to come, and the speaker takes it to be a fact that he will actually do so. Finally the *Agr-ti ambu* version is grammatical, but a rather funny thing to say: here the letter from Kambale is reporting hearsay information, that it is rumored about that Kambale will come. That is a possible thing for a letter to say, but a rather weird thing to communicate in a letter ("Hey, Mom, have you heard the rumor that I'm coming for a visit you next week?"). A third triple is with *kangirirya* 'teach': this often takes *ngoko*, as people normally teach established facts, but it can occur with *Agr-ti* if the teacher believes the proposition communicated but it is not a well-known fact, and with *Agr-ti ambu* if the teacher is passing on unestablished hearsay (e.g. the teacher taught the children that elephants live in America). It is clear, then, that the choice of C is semantically meaningful in Kinande, including that a C with agreement has a different meaning from one without. Other verbs that are attested with both *ngoko/ko* and *Agr+ti* are 'believe' and 'dream', although I did not investigate the semantic consequences of the choice with these verbs.

We can also consider verbs with narrower meanings, in which the meaning of the verb constrains which Cs can appear in its complement. These co-occurrence facts also seem to be semantically systematic. Thus, a (semi)factive verb like 'remember' occurs with *ko/ngo'ko* but not with *Agr-ti*. (Note that *ko* is a proclitic that attaches to the verb, skipping over an overt subject.)

- (6) a. Kám bale mw-á-kumbuk-íre Marya ko-mw-á-gul-ire e-hi-lóle.
 CL1.Kambale AFF-CL1.S.TNS-remember-ASP CL1.Mary C-CL1.S.TNS-buy-ASP CL19-bananas
 'Kambale remembered that Mary bought bananas.'
- b. *Kám bale mw-á-kumbuk-íre a-ti Marya mw-á-gul-ire ehi-lóle.
 CL1.Kambale AFF-CL1.S.TNS-remember-ASP CL1-C CL1.Mary C-CL1.S-buy-ASP CL19-bananas
 ('Kambale remembered that Mary bought bananas.')

The grammatical version in (6a) has *C ko*, and assumes that Kambale's memory is veridical, that Mary did buy bananas. Another form uses the *C ngoko* (and the verb in a different tense-aspect, *mwakakumbuka*). However, the version in (6b) with *Agr+ti* is bad in this case (with either tense form of the verb). Another verb that is attested only with *ko/ngoko* is 'discover', which does behave as a factive verb in Lubukusu (Ken Safir, p.c.). Similarly, factive verbs that express an emotional state of the subject are attested only with *ngoko* or *ko*.

- (7) a. Cleopatra a-ka-regrethé **ngoko** a-a-hira ekofyase y'-omo Cesar.
 CL1.Cleopatra CL1.S-TNS-regret that CL1.S-TNS-put trust ASS-LOC Caesar
 'Cleopatra regrets that she trusted Caesar.' (Afranaph)
- b. Kámbalé mw-a-sang-ere **ngoko** Marya mw-a-gul-ire ehi-lole.
 CL1.Kambale AFF-CL1.S-be.surprised-ASP that CL1.Mary AFF-CL1.S-buy-ASP CL19-bananas
 'Kambale was surprised that Mary bought bananas.'
- c. Kámbalé a-masusumana Marya **kw'**-a-hola muligolo.
 CL1.Kambale CL1.S-be.surprised CL1.Mary C-CL1.S-die yesterday
 'Kambale is sad that Mary died yesterday.'

Other verbs that we have attested with *ko* or *ngoko* but not *Agr-ti* are two verbs meaning 'know' (*nasi*, *miny*), 'admit' and 'show'/'persuade' (Aphranaph). Overall, *Agr-C* is ruled out with factive complements, where everyone in the context is committed to the truth of the content of CP, not just the referent of the matrix subject.

Kinande also has verbs which only allow *Agr-ti*. These are verbs whose subject has a special responsibility of the content of the CP given the intrinsic meaning of the verb. One such verb is 'force', which in Kinande takes a finite CP complement in subjunctive mood. It is only compatible with the agreeing C, not with factive *ng'oko* or hearsay *ambu*.

- (8) Aba-kali mo-ba-kas-ire Kambale ba-ti/*ng'oko mupaka a-gul-e ehi-lole.
 CL2-women AFF-CL2.S-force-ASP CL1.Kambale CL2-C/*that force CL1.S-buy-SBJV CL19-bananas
 'The women forced Kambale to buy bananas.'

Here, the source of the content 'Kambale buy bananas' is the will of the women. *Ngoko* is not possible, because it is not presupposed here in the common ground that Kambale buys bananas, and *Agr-tiambu* is not possible because 'force' does not readily admit the sense that the women are just passing on content that originated from some other unspecified source. Another similar verb that takes only an *Agr-C* (again with a subjunctive mood complement) is 'want'.

- (9) Kámbére a-sond-ire a-ti (kumbe) i-tw-a-mu-tsakura.
 CL1.Kambere CL1.TNS-want-ASP CL1-C preferably SBJV-1PL.S-TNS-CL1.O-vote
 'Kambere wants that we vote for him.'

Other verbs that are attested only with *Agr-ti* are *leka* 'let', *saga* 'fear', and *ganirya* 'imagine'. *Andika* 'to write' also spontaneously takes *Agr-ti* (and not really *ambu*), as does 'tell' when it is glossed as 'demand' with a subjunctive complement. I conclude that verbs that intrinsically mean that the subject is distinctively responsible for the content of the CP complement require *Agr-ti* in Kinande, whereas verbs that intrinsically imply that the subject is not distinctively responsible for the content of the CP complement forbid *Agr-ti*. This reinforces the data from verbs with

general or flexible meanings, where a shift of meaning goes along with the presence of absence of the agreeing C.

For completeness, I can say a bit more about *ambu* in Kinande. This is like a hearsay marker; it is not factive and it gives the sense that the original source of the content of CP is not the matrix subject. It can appear by itself in some cases, and also in combination with *Agr-ti*, as in several examples above. It is required, for example, with the verb ‘hear’ and with the passive of ‘tell’. ‘Tell+pass’ appears only with *ambu*, whereas ‘hear’ optionally allows Agr-C as well.

- (10) a. Aba-kali mo-ba-kowa (ba-ti) *ambu* Marya mw-a-gul-ire ehi-lole.
 CL2-women AFF-CL2.S-hear (CL2-C) they.say CL1.Mary AFF-CL1.S-buy-ASP CL19-bananas
 ‘The women heard that Mary bought bananas.’
- b. Aba-kali ba-bya i-ba-biribwira *ambu* Marya mw-a-gula ehi-lole.
 CL2-women CL2-AUX XX-CL2.S-tell.APPL.PASS they.say CL1.Mary AFF-CL1.S-buy CL19-bananas
 ‘The women have already been told that Mary bought bananas.’

(10a) allows for the possibility that the report may not be true. (*Ngoko* is also possible with ‘hear’, in which case the CP is a known fact—e.g., ‘Has Kambale heard that Mary is in town?’ where everyone else is aware of this.) Similarly, in (10b) it is not an established fact that Mary did actually buy the bananas. I tentatively take *ambu* to be another C-like head in the C-space of an expanded left periphery: when it cooccurs with *Agr-ti*, the order must be *Agr-tiambu*, not *ambuAgr-ti*.³ Semantically, when *Agr-ti* appears together with *ambu*, the sense seems to be that the matrix subject—the NP C agrees with—is an intermediate source of the content of the CP, although not its original source. That is true for examples with ‘say’ like (5b) above. That also fits the use with ‘hear’ in (10a), on the natural assumption that the speaker knows that the women heard that Mary bought bananas, and hence that Mary might have bought bananas, because the women told the speaker so.

Putting this information together, it is clear that *Agr-ti* means something, and something different from what other Cs in Kinande mean. That is to be expected: different words usually mean different things. But we can go a step farther: *Agr-ti* means that the CP relates in a particular way to the individual that controls the agreement on C. *Agr-ti* says roughly that this individual is distinctively responsible for the content of the CP. As such, it is in paradigmatic contrast with *ko/ngoko*, which is used when everyone involved in the situation shares a commitment to the content, and with *ambu*, which says that some other unnamed people are responsible for the content, not the subject of the matrix sentence (and not the speaker of the whole sentence either). *Agr-ti* says that there is a semantic relationship between a particular individual and the CP it heads, like a thematic relationship. And now we should ask: is it a coincidence that the one C that shows agreement with a DP is the same as the C that expresses a semantic relationship between the content of the clause it heads and an individual named in the sentence? Presumably it is not.

Here is where I make a connection between the Kinande facts and an influential proposal of Speas and Tenny (2003). They claim that the left periphery of clauses can have a limited number of covert DPs which bear what they call p-roles (“pragmatic roles”), conceptually parallel to the familiar theta-roles (“thematic roles”). One of these covert DPs they call the *seat of knowledge* (SoK) argument, which is generated in the Spec EvalP (cf. Cinque 1999); they also refer to this sometimes as a Sentence Phrase—structure that is high in the CP space, although not as high as their SAP (speech act phrase). They describe the meaning of SoK in construction with its proposition-denoting complement as follows: SoK refers to “the sentient ‘mind,’ who

³ Note that in attested cases where an agreeing C appears together with another C head, the agreeing C is the first/higher one. This is also seen in (2) from Ibibio. Similarly, Letsholo and Sa fir (2019) show that ‘ask’ in Ikalanga can take Agr-C plus a question particle *á*, in that order, in Ikalanga. This order might be forced by the Phase Impenetrability Condition, so that the agreeing C can be influenced by outside material (compare Carstens 2016).

can evaluate, or process or comment on the truth of the proposition.” They also argue that the SoK can be controlled by other higher elements in the clause (speaker and hearer) in various ways, to get different effects. This is very similar to what we need for Kinande. *-ti* is the Eval head, taking an EvidP complement. It has a SoK argument in Spec of EvalP, which it agrees with locally, say (for concreteness) by spec-head agreement. That SoK argument is in turn controlled by the matrix subject—the topic of Section 2.3. My conception of the meaning of SoK is a bit narrower than Speas and Tenny’s, such that SoK must be in some sense a source of the propositional content of its EvidP complement.⁴ But overall, the fit is good considering that this is a language and construction that Speas and Tenny were not aware of (although they discuss similar things). The representation then is repeated in (11).

(11) Kambale_i told the women [_{EvalP} DP_i Eval_{AGR} [_{EvidP} Mary bought bananas]].

In contrast, *ko* and *ngoko* would be different C-type heads, which do not have a DP specifier. Meanwhile *ambu* is a plausible head of EvidP, a projection that Speas and Tenny characterize as “hav[ing] to do with the type of evidence available for evaluating the truth of the sentence, for example, personal experience, direct evidence, indirect evidence, and hearsay.” This also fits well with our observation that *ambu* seems to be a C-like head that can appear immediately below the Agreeing C, the head of EvalP.

This Speas and Tenny-style proposal can be contrasted with a direct agreement account, such as Carstens’s (2016). According to her, a high C head cannot agree downward with the embedded subject in African languages, as happens in West Germanic languages like Flemish, because there is a phase boundary (Fin?) in the way (“delayed valuation”). This forces C to do something special to find something to agree with in the matrix clause. Carstens’s specific proposal is that in certain cases (when there is an indirect object present) CP raises to adjoin to VoiceP, and the C head can agree downward with the subject in Spec VoiceP from there. An alternative is Diercks et al.’s (2020) proposal that C undergoes covert head movement to VoiceP and agrees with the subject from there. The mechanics of both these versions are arguably a bit strained. But the more basic point raised by this Kinande data is that they may over generate. As far as I can see, this kind of direct agreement account could be applied to any (high, force-like) C, with any semantics—to a factive complementizer, or to a hearsay complementizer, just as well as to one with the meaning that Agr-C actually has. In this, the direct-Agree account is underconstrained. It does not capture the important connection between the fact that C agrees with a particular NP and the fact that that C assigns responsibility for the content of its TP to the referent of a particular NP—in fact, to the very same NP.⁵

⁴ As such, my version of SoK may have some features of Speas and Tenny’s Speaker argument as well; see below.

⁵ This point is clear for Carstens’s version; see also Diercks et al. (2020) for a similar criticism of Carstens. Carsten (2016: 17) says that the Lubukusu speakers she worked with did not get some of Dierck’s semantic effects, but her discussion is not extensive, and she does not consider the full range of the phenomenon (she doesn’t say, for example, if Agr-C is possible with factive psych verbs for her speakers).

Diercks et al.’s (2020) view is a bit more nuanced. They claim that C moves to adjoin to the matrix VoiceP because C is anaphoric, and that is what (subject-oriented) anaphors do in order to get an antecedent. They further ground the claim that C is an anaphor in the claim that C has interpretable features, and that is grounded in turn by the fact that including that particular C has observable semantic effects. In the end, then, they make a similar prediction to the one that I am aiming for: only Cs with some specific semantics will be Cs that seem to agree upward (in contrast to meaningless Cs in West Germanic varieties, which agree downward). The Force head adjoins to VoiceP, agrees downward with the subject in spec VoiceP, and then is realized in its lower base position with the agreement it got from its higher position. One weakness of their account, as far as I can see, is that they do not make much of a link between agreement and the exact nature of the meaning that C has—only that it has some kind of meaning. I am trying to make one further connection here: not only are agreeing Cs meaningful, but they have the specific meaning of a C that hosts a “seat of knowledge” argument of the type that Speas and Tenny envision, and it is nonaccidental that the NP that C agrees with is the NP that the TP inside CP stands in a semantic relation with.

In contrast, my proposal after Speas and Tenny (2003) does capture this relationship in a natural way. True, pure agreement does not have semantic consequences. But whether a DP is present or not in a certain position—here Spec CP/EvalP—certainly does. My proposal is that some CPs do have such a DP present, and Kinande agreement has the convenient effect of making that visible in the morphosyntax.⁶

A further consequence of this view is that there should be a kind of animacy requirement—really a sentence requirement—on the subject of *Agr-ti*. The NP that C agrees should refer to the kind of thing that is capable of grasping or expressing propositional content. Canonically, that is people, and by extension artifacts that they make for that purpose (e.g. letters). By extension, it can include other beings that we imagine as being similar enough to people in this respect (e.g., animals in folktales). Indeed, Diercks (2013) points out for Lubukusu that, although C can agree with a subject in any noun class in Lubukusu, it cannot agree with just any subject. C can agree with ‘letter’ and with animal-denoting NPs, but not with an NP like ‘marks on the table’. (12) is a Kinande analog of Diercks’s example. Mutaka does allow *Agr-ti* even with ‘marks on the table’, but it involves a degree of pretense, made explicit by crucially adding “are as if they were saying” to the sentence.

- (12) Emi-haruro y’-oko-mesa yi-ka-by-a nga yi-ka-tu-bw-ir-a yi-ti
 CL14-marks CL14.ASS-LOC-table CL14.S-TNS-be how CL14-TNS-1PL.O-say-APPL-FV CL14-C
 Kambale a-na-bya hano.
 CL1.Kambale CL1-PST-be here
 ‘The marks on the table (are as if they) tell us that Kambale was here.’

I take this as a further sign that there is a null DP present that is involved in a quasi-thematic of relationship with C (Eval). It is broadly analogous to the very familiar fact that the subject of a control verb such as ‘want’ needs to be a minded thing, whereas the subject of a raising verb like ‘seem’ has no semantic restriction whatsoever, as seen in (13).

- (13) a. The marks on the table seem to be deep and recent.
 b. #The marks on the table want to be deep and recent.

2.2.2 The semantics of *Agr-C* in Lubukusu

Of course, a direct-Agree theorist like Carstens could tough it out, and say “Yes, it is a coincidence that the agreeing C in Kinande happens to have this particular semantics.” Coincidences do happen. There are only a small number of C forms, and a small number of C meanings, so no particular mapping between the two should be too surprising, even if there is no strong theoretical connection between the form and the meaning. Linguists tend to hate coincidences (especially me), but sometimes more than we should.

The obvious way to evaluate this is to see if a similar connection between form and meaning is found in other relevant languages. In this section I assess the situation in Lubukusu, moving on to new data from Ibibio and brief comments on other languages in the next sections. Lubukusu is significant in that it is the language that we know the most about, thanks to Michael Diercks and Justin Sikuku.⁷ Both

⁶ Note that on this view one might very well expect some languages to have two (or more) Cs which are semantically different, like *-ti* and *(ngo)ko* in Kinande, but where neither one is an agreement probe. This appears to be the case in Swahili, for example (REF). I would expect that the factive complementizer should never agree upward, whereas the nonfactive one may or may not agree with its SoK argument, depending on whether it is specified as being a probe or not.

⁷ In addition to Diercks (2013), I have data collected in fall 2011 when Justin Sikuku had a postdoc at Rutgers, and he, I, and Ken Sa fir investigated sentential complementation in Lubukusu. Much but not all of this data is posted in

Kinande and Lubukusu are in the Great Lakes branch of Northeast Bantu, but they are on different subbranches. I take it to be significant that the agreeing C seems not to be cognate in the two languages. In Kinande, *Agr-ti* is related to the defective verb *ti* ‘say’, whereas in Lubukusu *Agr-li* is related to not to a verb of saying but to the copula and the focus particle. This suggests that the two elements have their own separate histories, having developed semi-independently. As such, convergence between them can be taken as suggesting UG factors.

And indeed there is significant convergence between them in meaning. Diercks (2013) has a brief and somewhat open-ended discussion of the meaning of *Agr-C* versus alternatives near the end of his article. As in Kinande, some verbs in Lubukusu can select CPs with different complementizers, and this choice goes along with semantic differences. For example, ‘say’ can appear with the agreeing C *a-li*, or with the nonagreeing complementizer *bali*, as in (14).⁸

- (14) Mosesi a-lom-ile a-li/bali Sammy k-eb-ile chi-rupia.
 CL1.Moses CL1.S.TNS-say-ASP CL1-C/that CL1.Sammy CL1.S-steal-ASP CL10-money
 ‘Moses has said that Sammy stole the money.’

Diercks says that if Moses didn’t see the event himself, and is reporting what other people have said, then *bali* is possible, but agreeing *a-li* is not. This is like what we saw in Kinande, with *bali* playing approximately the same role as *ambu*. In contrast, if Moses saw the event himself, then *a-li* is possible. This is comparable to the use of *Agr-ti* in Kinande, since in this scenario Moses is the primary source of the content; he asserts it on his own authority, as an eyewitness of the event. Another verb that Diercks discusses as appearing with either of these Cs is ‘hear’, as in (15).

- (15) Mosesi a-ul-ile a-li/bali Sammy k-eba chi-rupia.
 CL1.Moses CL1.S.TNS-hear-ASP CL1-C/that CL1.Sammy CL1.S-steal CL10-money
 ‘Moses heard that Sammy stole the money.’

Here Diercks says that if Moses does not believe the report that he heard, only *bali* is possible: Moses is not a source of the content here. In contrast, if Moses does believe the report, then *a-li* becomes possible; in this case, Moses endorses the content, and becomes an intermediate source. Thus, the Lubukusu example with *a-li* has the same kind of chained-report sense that the Kinande example in (10a) has with *Agr-tiambu*. In both cases, *Agr-C* is used instead of or in addition to the hearsay complementizer if and only if the matrix subject takes on some responsibility for the content. Our work replicated Diercks’ core observations. A revealing additional example from our data is (16), featuring the verb ‘decide’.

- (16) Yohana a-khalaka a-li/bali Marya a-li ne kamakoso.
 CL1-John CL1.TNS-decide CL1-C/that CL1.Mary CL1.S-be with guilt
 ‘John decided that Mary is guilty.’

With *a-li*, John is committed to the proposition that Mary is guilty, but this is not part of the common ground; the speaker in particular is neutral as to the truth of this. With *bali*, Mary’s guilt is more of a matter of hearsay; John is inclined to believe it, and the speaker is suspicious.

Afranaph. Note that Sikuku speaks a slightly different dialect of Lubukusu from Diercks’s consultants, although there are more similarities than differences.

⁸ *Bali* looks like, and probably has its origins in, a form of *-li* that agrees with class two (human plural) subjects (*ba-*). However, it seems to have become a fixed/default form. See fn 10 for some discussion.

Also like Kinande, Lubukusu has semantically coherent classes of verbs that are not compatible with Agr-C as the head of their CP complement. For example, *Agr-li* is not possible with factive verbs in Lubukusu, especially verbs of emotional reaction. Rather, these are given with a third complementizer, *mbo*, in Diercks’s examples.

- (17) N-a-beelele *n-di/mbo si-n-a-ch-ile Bungoma ta.
 1.SG.S-TNS-regret 1SG-C/that NEG-1.SG.S-TNS-go-ASP Bungoma NEG
 ‘I regretted that I didn’t go to Bungoma.’

This is very similar to what we saw above in (7) from Kinande, where a factive verb appears with a nonagreeing complementizer *ngoko*, but not with *Agr-ti*. Sikuku also tends to avoid Agr-C with this class of verbs, although he prefers to use *bali* with them rather than *mbo*. Verbs that take *bali* in our data where *Agr+li* is bad or dispreferred are ‘be surprised’, ‘mourn’, ‘blame/chide’ and ‘regret’. An example is (18).

- (18) Wafula ekicha Wekesa bali/??a-li a-cha engo.
 CL1.Wafula CL1.S.blame CL1.Wekesa that/??CL1-C CL1.TNS-go home
 ‘Wafula blamed/chided Wekesa that he want home.’

My suggestion about this for Kinande was that what it means for the verb to be factive is that the content of its CP complement is presupposed—accepted to be true in the common ground. If the speaker and hearer accept this as being commonly known to be true, it is not important that the subject of the matrix clause is responsible for it. Therefore, an Eval head with an SoK argument controlled by the matrix subject is not called for here; some other C is more appropriate. That reasoning seems to carry over to Lubukusu too.

Another, quite different class of verbs that allow the complementizer *bali* but not Agr-C in Sikuku’s Lubukusu is a set of nonattitude verbs: ‘make it (happen) that...’, ‘be able that...’, ‘seems that...’. With these verbs, the matrix subject does not necessarily have the content of CP in mind: one can cause X to happen without thinking about X happening, or realizing that X happened. Therefore, it makes sense that these CP complements would also not have an SoK, although for a very different reason: it is not that everyone knows the content of CP, but that no one needs to be thinking about it. This is also in accordance with my hypothesis, where Agr-C comes with a particular sort of semantics relevant only to attitude verbs, and a default complementizer is used elsewhere.

- (19) a. Wafula a-a-khola bali/*a-li Wekesa a-kula sitabu.
 CL1.Wafula CL1.S-TNS-make that/CL1-C CL1.Wekesa CL1.S.TNS-buy book
 ‘Wafula made it that Wekesa bought a book.’
 b. Wafula a-nyala bali/*a-li a-cha e-Harvard.
 CL1.Wafula CL1.S-TNS-be.able that/CL1-C CL1.S.TNS-go CL23-Harvard
 ‘Wafula was able to go to Harvard.’

Of course, this class of verbs does not necessarily take a finite CP complement across languages, so its behavior with respect to C-agreement is little known. (I did not try them in Kinande.)

Conversely, Kinande also has verbs that are only compatible with Agr-C, particularly verbs with subjunctive complements like ‘force’ and ‘want’. It seems to be rare for a verb to

allow only Agr-C and not also *bali* in Sikuku's Lubukusu, as far as our data goes. The only time we got an explicit judgement of *bali* being dispreferred relative to Agr-C is with the verb 'say', as in (20), where the matrix subject is clearly a source of the content of CP and responsible for it.

- (20) N-a-loma n-di/?bali/mbo Wekesa a-kula sitabu
 1SG.S-TNS-say 1SG-C/?that/that CL1.Wekesa CL1.S.TNS-buy book
 'I said that Wekesa bought the book.'
n-li: I assert this on my own authority; *mbo*: I'm passing on a rumor, I don't vouch for.

We do however also have some verbs that are attested only with Agr-C that correspond to examples like those that require Agr-C in Kinande, including 'force' (also 'permit' and 'warn').⁹

- (21) Wekesa a-yingilila Wafula (a-li) ach-e mumu-lukha
 CL1.Wekesa CL1.S-force CL1.Wafula CL1-C CL1.S-go-SBJV LOC-party
 'Wekesa forced Wafula to go [that he go] to the party.'

I mentioned above Diercks's claim that there is an animacy condition on Agr-C in Lubukusu, such that the controller of the agreement must have a mind or must represent someone's mind in some direct sense. Diercks (2013: 400-401) says that there cannot be Agr-C in something like 'The marks on the table show that...', nor in 'the letter says that...' (whereas OK is 'the letter of X says that...'). A similar example of ours is shown in (22), where *bali* rather than an agreeing form like *ka-li* is used with the inanimate subject 'remarks'.

- (22) Kama-khuwa ako ka-n-jokesya bali a-li ne buri khu-lomo chefwe.
 CL6-remarks CL6.DEM CL6.S.TNS-1SG.O-suggest that CL1.S-be with worry LOC-proposal our
 'Those remarks suggest to me that he is worried about our proposal.'

In all these respects, the implications of using Agr-C in Lubukusu are similar to those we saw in Kinande.

Lubukusu offers one significant surprise in this area, however: it allows C-agreement with what seem to be expletive subjects. Diercks (2013: 385) offers the two examples in (23), although he also observes that this is "not accepted by all Lubukusu speakers."

- (23) a. Ka-lolekhana ka-li Tegani ka-a-kwa.
 CL6.S-seem CL6-that CL1.Tegani CL1.S-TNS-fall
 'It seems like Tegan fell.'
 b. Li-lolekhana li-li Sammy a-likho a-lwala.
 CL5-seem CL5-C CL1.Sammy CL1.S-PROG CL1.TNS-be.sick
 'It seems like Sammy is sick.'

Lubukusu differs in this respect from Ibibio (see below) and from the theoretical expectations generated by my control-based theory, given that expletive subjects usually cannot be controllers in languages like English (??*It wants PRO to rain this afternoon*). Carstens (2016)

⁹ In a much later follow up email, Sikuku says that *bali* is OK for him in place of *a-li* in (21). If this is right, there may not be anywhere that *bali* cannot be used, as a true default form. In that case, there should be discernable semantic restrictions on where Agr-C is used in Lubukusu, but no semantic restrictions on where *bali* is used.

understandably takes examples like (23) as strong support for her view that C-agreement is a purely formal-syntactic matter in Lubukusu. However, like Diercks, I believe that the overall weight of the evidence is against this view. Moreover, there is another surprising fact about expletives in Lubukusu, which is potentially related; this is that different examples show different agreement with the putatively expletive subject. For example, (23a) appears to have a class 6 null expletive subject, whereas (23b) appears to have a class 5 null expletive subject. This is different from expletive agreement in familiar European languages, where there is only one expletive form consisting of the least marked values in the phi-feature system of the language, the third person (masculine) singular. Sikuku shares the intuition that Diercks reports from his consultants: “Speakers feel strongly that these constructions trigger an interpretation along the lines of ‘the evidence seems that...’” Following this hint, I assume that examples like (23) have a substantive DP in the subject position which has undergone pro-drop, being inferable from the context (perhaps just the context of the rest of the sentence). Given this, we may also take the further step of assuming that the omitted DPs here—whatever they are exactly—though not human-denoting, do satisfy the selectional restrictions imposed by the Eval head on the SoK they control, as just as nouns like ‘face’ and ‘letter’ can in Lubukusu (Diercks 2013: 364). On this interpretation, (23) does not undermine the larger picture that is emerging.

Overall, then, Agr-C in Lubukusu seems very similar to Agr-C in Kinande in the ways that are most relevant to my analysis: it is used only if the agreed-with subject has a particular kind of responsibility for the content of the CP, contrasting with a hearsay C on the one hand and with a factive C on the other hand. It is also not used when the possible controller does not have a mind, and when its mental states are not relevant. I conclude that there is the same kind of motivation for having a null DP in Spec EvalP in Lubukusu as there is in Kinande.

This is not to say that the two languages are identical when it comes to C-selection. There seems to be a systematic difference when it comes to semifactive verbs like ‘know’ (also ‘admit’, ‘show’, ‘persuade’). These are attested only with *ko/ngoko* in Kinande, not with Agr-C. In contrast, they can be found with Agr-C in Lubukusu, in both Diercks (2013) and Afranaph (from Sikuku). Lubukusu is more like Ibibio than like Kinande in this respect (see below). This may be (at least in part) because the Lubukusu verbs have a broader meaning than their English glosses have. Thus, Diercks (2013: 396) shows that ‘know’ in Lubukusu can have a nonfactive sense, and the verb (*manya*) is also sometimes glossed as ‘believe’ in Afranaph. Similarly, a verb glossed ‘admit’ in Afranaph (suggesting factivity) is glossed ‘agree’ by Diercks (not necessarily factive). And a verb glossed ‘show’ or even ‘prove’ in Diercks and Afranaph is also glossed ‘suggest’ (nonfactive) in Afranaph. These verbs thus seem to have nonfactive readings as well as factive ones in Lubukusu, which goes along with the possibility of them having Agr-C in this language. The Kinande verbs may have narrower meanings, or I may not have done enough yet to bring out any latent nonfactive meaning that they may permit.

Even once we allow for the possibility of CP-selecting verbs having somewhat different lexical semantics in different languages, it is probably too strong to say that the semantics of Agr-C constructions is identical in the two languages. That does not seem to be the case. Diercks (2013) reports that the beliefs of the speaker influence the use of Agr-*li* as opposed to *bali* in Lubukusu. Thus, *bali* is used rather than *a-li* in (14), repeated here as (24), even if the matrix subject Moses claims to have seen the event (taking responsibility for the content), as long as the speaker of the sentence as a whole does not believe him.

- (24) Mosesi a-lom-ile a-li/bali Sammy k-eb-ile chi-rupia.
 CL1.Moses CL1.S.TNS-say-ASP CL1-C/that CL1.Sammy CL1.S-steal-ASP CL10-money

‘Moses has said that Sammy stole the money.’
(#*a-li* if Moses did not see the event himself, or if the speaker does not believe him)

Similarly, *bali* is used rather than *a-li* in (15) even if it is the speaker who doubts the veracity of what Moses heard, rather than Moses himself. Lubukusu thus seems to have some kind of speaker endorsement condition on the use of Agr-C, as well as the subject-source condition. We also observed this in Sikuku’s Lubukusu, where Agr+C tends to go along with the speaker’s endorsement of the content of the CP complement (indeed, this component of the meaning is the most salient with semi-factive verbs like ‘know’). I have not seen evidence that Kinande has this additional layer of meaning. However, my claim does not need to be that the semantics of Agr-C to be identical in the two languages; it is enough that both have the sort of semantics that motivates positing a semantically interpreted DP that is controlled by the matrix subject and which C is in a position to agree with. The fact that additional condition(s) may hold in Lubukusu should be harmless, although one would of course like to understand this better.¹⁰

2.2.3 The semantics of Agr-C in Ibibio

The third language with Agr-C that I am in a position to discuss in some detail is Ibibio, a non-Bantu Niger-Congo language from the Cross River region of Nigeria.¹¹ As such, it is further removed historically from Kinande and Lubukusu than they are from each other. Ibibio has two agreeing C-like elements that come historically from verbs: Agr-*te*, which could possibly be cognate with Agr-*ti* in Kinande, and Agr-*bo*, which clearly is not. I use the latter form somewhat more. As mentioned in Section 1, it is a disputable matter in Ibibio whether these elements are agreeing Cs or second verbs in a serial verb construction; see the appendix to this chapter for arguments in favor of them being agreeing Cs.

¹⁰ An interesting side question is what one makes of the C *bali* in Lubukusu. As mentioned in fn 8, this could be parsed as *ba-li*, with class 2 (human plural) agreement on the SoK-selecting complementizer *-li*. This raises the intriguing possibility that *bali* clauses in Lubukusu also have SoK, but an SoK that is left free, interpreted like a PRO_{arb} rather than one that is controlled by the matrix subject. This would result in a meaning like ‘Moses said *they* say/*it* is said that Sammy stole the money’ for an example like (24) with *bali*, which is not unreasonable. In fact, Diercks’s Lubukusu and Sikuku’s are somewhat different when it comes to the use of *bali* and *mbo*, the two alternatives to Agr-*li*. In Diercks’s variety, *bali* seems to have a relatively narrow distribution, and it does have a hearsay meaning, whereas the complements of factive verbs and nonattitude verbs in his examples consistently have *mbo*. In contrast, *bali* clearly counts as the default complementizer in Sikuku’s variety: it is used with the complements of factive verbs and with nonattitude verbs, as well as in impersonal passives (e.g., ‘it was suggested to me that’), not to mention in noncomplement clauses of several kinds. In contrast, *mbo* is rarely the preferred C for Sikuku. Thus the possibility of an uncontrolled SoK would at most be appropriate for Diercks’s variety of Lubukusu. Nor is this possible in my other primary languages: *ba-ti* is bad in Kinande and *e-bo* is bad in Ibibio unless the subject of the matrix clause is third person plural. There would also be theoretical problems with allowing SoK in a complement clause to go uncontrolled in Lubukusu; this could allow it to take long distance antecedents and prominent discourse antecedents as well as receive a PRO_{arb} reading, and that is never possible. Therefore, I assume that SoK in a complement clause must always undergo obligatory control, and the default C *bali* is only related to the agreeing form *ba-li* by having it as its (plausible) historical source.

¹¹ New data from Ibibio comes from 26 3-page questionnaires filled out by Willie Udo Willie of the University of Uyo, Nigeria, between June 2020 and October 2022. During periods of active work, we did one such questionnaire per week, with some email follow up. Additional information on Ibibio comes from Afranaph, which has an anaphora questionnaire and a complementation questionnaire. See also Torrence (2016), who worked with a different speaker.

Overall, there is less evidence that the use of Agr-C in Ibibio has a semantic effect attributable to there being an SoK in Spec EvalP than there is in Kinande and Lubukusu. Verbs with very general meanings like ‘say’, ‘tell’, and ‘think’ allow but do not require Agr-C in their complements, but in Ibibio these options do not go along with a detectable difference in meaning as to who is primarily responsible for the content of the CP. For example, (25) is formally analogous to (4) in Kinande, but *a-bo* is optional here regardless of whether it is an irrational fear of Okon’s that his wife Eno will die, which others (including the speaker) don’t share, or whether it is common knowledge that this will happen.

- (25) Okon a-kere (a-bo) ke Eno a-ya-a-kpa.
 Okon 3.SG-think 3.SG-C that Eno 3.SG-FUT-3.SG-die
 ‘Okon thinks/realizes that Eno will die.’
 (irrational fear of Okon’s or common knowledge in the community.)

Many other examples of this sort are available, for which Willie reports no difference in the version with *a-bo* (or *a-te*) and the version without it.¹² Kinande also has verbs that require the use of Agr-C in their CP complements, particularly verbs that select CPs in subjunctive mood, like ‘force’, ‘want’, and ‘permit’. In contrast, Agr-C is optional with this class of predicates in Ibibio, as shown in (26).

- (26) a. Nnyin i-yem (i-bo/i-te) yak ayin nnyin a-do andikan.
 we 1.PL-want 1.PL-C/1.PL-C C.SBJV son our 3.SG-be winner
 ‘We want our son to be the winner.’
 b. M-beeje (m-bo/n-te) yak a-do ke Ima a-ma-a-kot nwet.
 1.SG-beg 1.SG-C/1.SG-C C.SBJV 3.SG-be that Ima 3SG-PST-3SG-read book
 ‘I hope that Ima read a book.’

Ibibio is also relatively broad-minded about using inanimate NPs like ‘evidence’, ‘letter’ and even ‘marks on the table’ as matrix subjects in sentences with C-agreement. For example, (27) was accepted. Thus, there is little evidence of Agr-C imposing additional selectional restrictions on the construction that are not simply attributable to the matrix verb.

- (27) Mbõn/ndúúú ke okpokoro a-wát a-bo/a-te ke ekpu á-bá ké úfòk ámí.
 scratches on table 3SG-show 3SG-C/3S-C that rat 3SG-be in house this
 ‘The scratches on the table show that there are rats in this house.’

However, there are several important similarities between Agr-C in Ibibio and Agr-C in Kinande and Lubukusu. In particular, the use Agr-C is ruled in Ibibio in several of the same environments where it is bad in Kinande and Lubukusu. I present four such environments. At the top of the list is the fact that Agr-C is incompatible with factive verbs of emotion in Ibibio, just

¹² It should be borne in mind that my method for collecting Ibibio data (see fn 11) was not ideal for detecting subtle semantic differences, in that it was not face to face and did not allow for the detection of hesitancy or for instant follow up. I thus do not rule out the possibility that there is a difference that I was not able to detect. However, I did test many conjectures about where a semantic effect might be found for a wide range of examples over the course of months (whereas it took approximately two sentences and five minutes to detect a difference in Kinande).

as Diercks documented for Lubukusu and I replicated for Kinande. Thus, examples like (28) are bad with an agreeing complementizer included.¹³

- (28) a. Cleopatra á-túa-m̀kpéfiók (*a-bo/*a-te) ké ànyé á-mà-á-dòt-ányìn ké Caesar
 Cleopatra 3.SG-regret 3.SG-C/3.SG-C that she 3.SG-PST-3.SG-place-eye in Caesar
 ‘Cleopatra regrets that she trusted Caesar.’ (CCQ)
- b. Nnyin i-m-i-yat esit (?*i-bo/?*i-te) ke Okon a-ma-a-yip ebot odo.
 we 1PL-PERF-1PL-be.hot heart 1.PL-C/1.PL-C that Okon 3.SG-PST-3SG-steal goat the
 ‘We are upset (lit. hot-hearted) that Okon stole the goat.’
- c. M-me-kop ngkpa idem (??/m-bo) ke Koko a-ma-a-dia adesi.
 1SG-PERF-get death body 1.PL-C that Koko 3.SG-PST-3SG-eat rice
 ‘I am surprised that Koko ate rice.’

Agreeing C was also rejected (?? or worse) with *maa* ‘like’, *fina* ‘worry’, *baak* ‘fear’, and *nem-esit* ‘be happy’. A minimal contrast to this systematic effect is a predicate like ‘hope’ which is associated with some emotional content, but is nonfactive. This verb does allow the agreeing complementizer, showing that factivity is the key factor, not emotional content per se.

- (29) Nditò e-ya-e-dot enyin (e-bo/e-te) ke Okon a-ya-a-di usorò odo.
 children 3PL-FUT-3PL-place eye 3PL-C/3PL-C that Okon 3SG-FUT-3SG-come party the
 ‘The children hope that Okon will come to the party.’

A second restriction on the use of Agr-C in Ibibio is with verbs that take CP complements but are not attitude verbs. We saw that such verbs do not allow Agr-C in Lubukusu, and this is true in Ibibio as well. One such verb is the causative verb *nam* ‘make’, which can take a CP complement with the subjunctive complementizer *yak* but not Agr-C; contrast verbs like ‘want’ and ‘beg’ in (26). Unlike ‘want’ and ‘beg’, ‘make’ is a nonattitude verb, where the subject does not need to mentally represent the event that he/she is causing (although he/she may do so). Like ‘make’ in this respect is *yak* ‘let’.

- (30) Okon a-ma-a-nam (*a-bo) yak ng-kot ngwet.
 Okon 3SG-PST-3SG-make 3SG-C C.SBJV 1SG-read book
 ‘Okon made me read the book.’

Another nonattitude verb with CP a complement is ‘seems’, which also disallows Agr-C, as in (31).¹⁴

- (31) Eniin odo a-ke-ba-nte (*a-bo/*a-te) ke a-ma edi-ka inwañ-akpakpa.
 elephant the 3.SG-PST-be-like 3SG-C/3SG-C that 3.SG-love INF-go field-corn

¹³ In contrast, Agr-C is possible in Ibibio with semifactive verbs like ‘remember’ and ‘know’. In this, Ibibio is like Lubukusu but different from Kinande (see (6)). (Torrence (2016) says that Agr-C is not good with ‘reveal’, but Willie allows it, at least with a matrix subject like ‘the investigation revealed that...’)

- (i) Okon a-ma-a-toiyo (a-bo/a-te) ke imò i-kpina i-dep adesi.
 Okon 3SG-PST-3SG-remember 3SG-C/3SG-C that LOG 3.LOG-should 3.LOG-buy rice
 ‘Okon remembered that he should buy rice.’

¹⁴ Compare Diercks (2013) and Carstens (2016) who show that raising ‘seems’ does not allow an agreeing C in Lubukusu. They go to significant effort to rule this out syntactically, but I have a straightforward semantic explanation of the effect in terms of the meaning associated with SoK and EvalP.

‘The elephant seemed to love to go to the cornfield.’

We have seen that where Agr-C is optional in Kinande and Lubukusu, its use goes along with a sense that the CP is asserted by the matrix subject. Evidence that some weakened version of this is true even in Ibibio comes from verbs with inherent negative context, like ‘doubt’ and ‘deny’. These also are incompatible with using an agreeing C in their complements, as shown in (32).

- (32) a. Okon a-ma a-kañ (??a-bo/??a-te) ke Emem a-ke-yip ebot.
 Okon 3SG-PST-3SG-deny 3SG-c/3SG-C that Emem 3SG-PST-steal goat
 ‘Okon denied that Emem stole a goat.’
- b. Okon a-ma-a-yik (*a-bo/*a-te) ke Emem a-ke-yip ebot.
 Okon 3SG-PST-3SG-doubt 3SG-c/3SG-C that Emem 3SG-PST-steal goat
 ‘Okon doubts that Emem stole a goat.’ (even though other people think he did)

Commented [MB1]: Check these diacritics.

This makes sense given my analysis: if Agr-C is used when the subject of the matrix clause has distinctive responsibility as the source of the content, then it cannot be used with ‘doubt’ and ‘deny’ where part of the lexical meaning of the verb is the subject disavowing the content of the CP complement.¹⁵

The fourth fact along these lines is that, although Ibibio is relatively generous in allowing inanimate NPs with suitable meanings to serve as matrix subjects in C-agreement constructions, this liberty does not extend to genuinely idiomatic subjects, like in (33), or to the expletive subjects of impersonal verbs like ‘seem’ (in their nonraising version), ‘be good that’ and ‘be clear that’, as in (34).

- (33) Obuut a-ma a-mam Okon (*a-bo/*a-te) ke anye a-ma-a-yip ngwet.
 Shame 3SG-PST-3SG-hold Okon 3SG-c/3SG-C that he 3SG-PST-3SG-steal book
 ‘Okon is ashamed (lit. shame holds Okon) that he stole the book.’
- (34) a. A-di-ba-nte (*a-bo) ke afaañidem odo a-due.
 3SG-FUT-be-like 3SG-c that defendant the 3SG-guilty
 ‘It will seem that the defendant is guilty.’
- b. A-fon (*a-bo) ke Mary a-do andikan.
 3SG-good 3SG-c that Mary 3SG-be winner
 ‘It is good that Mary is the winner.’

Note that pure agreement, even multiple pure agreement such as that found in auxiliary constructions in Ibibio, is possible with this class of subjects, as shown in (35). This shows that it

¹⁵ Different from ‘doubt’ is ‘not know’, which does allow an agreeing complementizer. Presumably this is a scope effect: negation comes in to deny the matrix subject’s commitment to the content of CP after C-agreement has already been licensed in the domain of the matrix VoiceP. Perhaps more surprisingly, ‘forget’ also allows Agr-C in Ibibio as shown in (i). Perhaps this is because ‘forget’ implies that the referent of the matrix subject endorsed the CP content at one time, even if they are not in position to do so in the present.

- (i) Okon a-ma-a-fre (a-bo/a-te) ke Emem a-ke-yip ebot.
 Okon 3SG-PST-3SG-forget 3SG-c/3SG-C that Emem 3SG-PST-steal goat
 ‘Okon forgot that Emem stole a goat.’

is the Spec EvalP itself and its meaning that is giving the restrictions in (33) and (34), not the simple presence of a second agreement with the same nonreferential item per se.

- (35) a. A-neke a-fɔn ke Mary a-do andikan.
 3SG-be.very 3SG-be.good that Mary 3SG-be winner
 ‘It is very good that Mary is the winner.’
- b. Obuut a-sak a-mɔn Okon ke anye a-ma-a-yip ngwet.
 shame 3SG-PROG 3SG-hold Okon that he 3SG-PST-3SG-steal book
 ‘Okon is being ashamed that he stole the book.’

In (34), we see the effect that we should have seen in Lubukusu if that language had real/canonical expletive subjects. All told, then, even in Ibibio there are converging reasons to say that Agr-C agrees with SoK, which has a detectable semantics. This semantics may be somewhat bleached in Ibibio as compared to the other languages, but it is still present.

Can we say anything about why the semantics of SoK is less noticeable in some areas of Ibibio than it is in Kinande and Lubukusu? A conjecture is that this is related to the distinctive way that the C-space is structured in Ibibio, which we observed at the beginning of this chapter. It is notable that Agr-Cs stack on top of normal Cs in Ibibio, rather than being an alternative form of C that seems to compete for the same position as other complementizers, as is often the case in Kinande and Lubukusu. This more articulated, less “bundled” C-space might make a difference. Also relevant is the fact that the nonagreeing Cs in Ibibio are sensitive to different grammatical distinctions than in Kinande and Lubukusu. For example, it is notable that the CPs that require Agr-C in Kinande correspond to CPs that have the subjunctive complementizer *yak* in Ibibio, a lexical item which does not have a real equivalent in Kinande or Lubukusu (those languages use the normal agreeing C together with the subjunctive final vowel *-e*). So the crucial semantic contribution that Agr-C makes in constructions with verbs like ‘want’ and ‘force’ in Kinande can be made by *yak* without the help of Agr-C in Ibibio. Something like that might account for why we do not observe that part of the pattern in Ibibio. However, a hypothesis along these lines does not explain why there is no meaning shift induced by Agr-C with a verb like ‘think’ in Ibibio. To develop these hypotheses, one would have to know much more than I do about the features of particular complementizer heads and their lexical meanings, both in general and in these languages in particular. This then remains an open question for now.

2.2.4 The semantics of Agr-C in other languages: Kipsigis, Chokwe, Ikalanga

We have seen, then, that there are broad similarities among Kinande, Lubukusu, and Ibibio as to the semantics of upward C-agreement constructions, although there are some differences too. To be as sure as possible that there is a stable and generalizable core to this, I round out this section with brief discussion of three additional languages—Kipsigis, Chokwe, and Ikalanga—based on secondary sources.

Kipsigis is a Nilo-Saharan language spoken in Kenya. As such, it is typologically rather different from the Bantu/Niger-Congo languages discussed so far, with VSO word order and marked nominative case, among other things. Diercks and Rao (2019) argue that it nevertheless

has upward C-agreement in a form comparable to that in Lubukusu.¹⁶ If so, there is an areal connection with other C-agreeing languages, but not a direct genetic one.

Diercks and Rao state two interpretive effects of having apparently optional C-agreement in Kipsigis, stated in (36).

- (36) a. Subj-CA is most appropriate when the agreement trigger is the source of the information communicated in the embedded clause.
 b. Subj-CA is most appropriate when it heads a CP whose propositional content is being added to the Common Ground.

These conditions are very similar to what I identified for Kinande. (36a) is essentially the same as what I have been emphasizing as being at the heart of the matter, e.g. as the difference between using *Agr-ti* rather than *ambu* in Kinande. (32b) implies that Agr-C in Kipsigis tends to be used when the CP is asserted rather than presupposed—when it is not already in the common ground. This recalls the difference between Agr-C and factive *ko/ng'oko* in Kinande. For example, agreeing C is natural with the matrix ‘say’ but variable with the matrix verb ‘hear’.

- (37) a. Ko-α-mwaa α-le/kɔle ko-∅-ruuja tuya amut.
 PST-1SG-say 1SG-C/that PST-3-sleep cows yesterday
 ‘I said that the cows slept yesterday.’
 b. Ko-α-yas %α-le /kɔle ko-∅-it layok.
 PST-1SG-hear % 1SG-C /that PST-3-arrive children
 ‘I heard that the children arrived.’

This is analogous to the fact that plain Agr-C is fine with ‘say’ in Kinande (and is preferred in Lubukusu over *bali*), but with ‘hear’ it is only used in conjunction with the hearsay C *ambu*. Indeed, one of Diercks and Rao’s speakers observed that the Agreeing C in (37b) seems to imply that “the information is coming from you” (see also Driemel and Kouneli (2020: 21), commenting on their example (35)). This is like the way that *Agr-tiambu* differs from plain *ambu* in (10a) from Kinande, where using *Agr-ti* presents the matrix subject as an intermediate source of the information, even though its ultimate origins are from someone else.

An example that Diercks and Rao use to illustrate (36b) is (38).

- (38) ko-α-mwɔɔ-tʃi Kibeet α-le/ kɔle ko-∅-it tuya amut.
 PST-1SG-tell-3.O Kibeet 1SG-C/that PST-3-arrive cows yesterday
 ‘I told Kibeet that the cows arrived yesterday.’

They say that when the speaker and hearer already share the knowledge that the cows arrived yesterday (they saw them come together), and the point of the sentence is to say that the speaker informed Kibeet of this, then nonagreeing *kɔle* is very natural. That is the kind of situation in which Kinande uses nonagreeing *ng'oko*. In contrast, when the fact that the cows came home is new information for the addressee and this is part of what the speaker intends to convey to them,

¹⁶ Driemel and Kouneli (2022) (D&K) dispute this view, arguing that the relevant item in Kipsigis is synchronically still the verb ‘say’. I tentatively take the view that the crucial element *-le* can be structurally ambiguous: sometimes it is the verb ‘say’ (especially when it means ‘say’) and sometimes it is a true C head (especially when it has no discernable lexical meaning). See the beginning of section 2.4 for some discussion.

then agreeing *a-le* is the natural choice. This is the sort of situation in which Kinande would also use the agreeing C. Again, we see a good deal of similarity in what Agr-C means and how it contrasts with other Cs in the system across languages. As before, the claim does not have to be as strong as saying that the semantics of Agr-C is identical across the languages that have it. Diercks and Rao assert clearly that the meaning is not the same in Lubukusu and Kipsigis. In fact, though, Kipsigis and Kinande may be virtually identical, to the level of detail that we have reached so far. In particular, both of them seem to lack the speaker-oriented evidential overlay that Lubukusu Agreeing C has.¹⁷

Kipsigis is unique and interesting in that when the matrix verb is a ditransitive like ‘tell’, C can agree twice (according to Diercks and Rao), with the matrix object as well as with the matrix subject. I focus on this in section 4 below, after we have a clear handle on the nature of upward subject agreement.

Next consider the languages Chokwe, Luchazi, Lunda and Luvale, a cluster of closely related Bantu languages spoken in Zambia and Angola, studied by Kawasha (2007). Agreeing complementizers seem to have developed in this cluster quite independently of either Kinande or Lubukusu. Indeed, their origins are quite different: they are not cognate with a verb meaning ‘say’ or ‘be’; rather they are related to possessive pronouns with suffixal person/number/class agreement. An example is (39).

- (39) Ka-na-ambe ngw-enyi mw-angana h-a-fwa. (Chokwe)
 1SG.S-TNS-say C-CL1 CL1-chief TNS-CL1.S-die
 ‘He said that the chief is dead.’

Agreeing C is used with verbs of perception, saying, cognition, and thought, as well as subjunctive-clause-takers like ‘want’ and ‘think’—all usual suspects. Kawasha’s key observation for my interests is (Kawasha 2007: 185): “When the content of the complement clause is not asserted by the subject of the main clause, that is, when a person reports what he or she just hears ... , the class 2 complementizers *nawu* in Lunda, *ngwo* in Chokwe, and *ngwavo* in Luchazi and Luvale are used instead of the one agreeing with the subject of the main clause.” (Class 2 here is third plural animate, used as a default form, like *bali* in Lubukusu.) Kawasha’s examples are with ‘hear’ used in the semifactive sense of ‘understand’, which takes nonagreeing C.

- (40) Ngu-ne-evo **ngwo** mu-angana h-a-fw-a. (Chokwe)
 1SG.S-TNS-hea that CL1-chief TNS-CL1.S-die
 ‘I hear (understand) that the chief is dead.’
 (The Agr-C form would be *ngw-ami*, p. 184)

This invocation of the notion of assertion is like what Diercks and Rao say about Kipsigis.

Finally, Letsholo and Safir (2019) report preliminary work on the Bantu language Ikalanga, spoken in Botswana and Zimbabwe. The agreeing C is *-ti* in this language, which could be cognate with Kinande’s version. They say that relatively few verbs allow Agr-C in this language, compared to Lubukusu. The verbs that do allow it include ‘ask’, ‘say’, ‘tell’, ‘tell’ (an

¹⁷ In the variety of Kipsigis described by Diercks and Rao, the nonagreeing C *kolé* seems always to be possible, as an alternative to Agr-C. In this it is approximately like *bali* in Sikuku’s dialect of Lubukusu. The variety described by Driemel and Kouneli (from a different area) apparently lacks this form, but often allows *kè:-lé* with an impersonal agreement prefix; this gives a rumor/hearsay interpretation that looks similar to how *ambu* is used in Kinande.

instruction), ‘agree’/ ‘believe’, ‘disagree’, and ‘think’. These are usual suspects, a subset of the verbs that take Agr-C in Lubukusu. At least half of these verbs can also take the nonagreeing/default complementizer *kuti* (infinitival *ku-ti*); Letsholo and Safir do not discuss whether there is a systematic meaning difference or not. In contrast, the (semi)factive verb ‘prove’ does not allow Agr-C but only *kuti*. Ikalanga thus seems consistent with the overall picture I am painting, but there may be idiosyncratic lexical factors at work in this language too.

I conclude that the semantic connection that CP seems to have with the NP that C agrees with is not accidental; rather, it can be observed to varying degrees in all the African languages that are known to have this kind of phenomenon. This is reasonably consistent inside and outside the Niger-Congo family, and inside and outside the Bantu subfamily of Niger-Congo, from Nigeria to Kenya and south to Botswana. It is also consistent regardless of whether Agr-C evolved out of the verb ‘say’ (the most common case) or some other verb (‘be’ in Lubukusu) or from some quite different, more nominal source (Chokwe). This testifies to a UG component in the analysis of even this rare phenomenon. More specifically, it supports a version of Diercks’s (2013) indirect agreement hypothesis in which the agreed with null DP is an SoK in Spec EvalP in the sense of Speas and Tenny (2003). That in turn is one of the ghostly DP operators in the CP space that I posited in Chapter 1, part of the UG skeleton that can be recruited as an ingredient for a range of “funny things that Cs do to relate to the NPs around them.”

2.3 The obligatory control of SoK

There is, however, a clear cost to this sort of view in which C agrees directly with a null DP in its immediate vicinity. This is that one needs to have an analysis of how that null DP relates to the superordinate subject. Agree proper can be simple and very local on this sort of view, but there is another grammatical relationship to explicate. I argue that this relationship is an instance of *obligatory control* (OC), the second major piece of the analysis sketched in (41) (repeated from (3) above, which in turn was taken from Chapter 1). This seems to fit the job better than competitors, like Diercks’s appeal to a null subject-oriented anaphor.

- (41) [Kambale:3sg told the women [EvalP SoK:3sg Eval:3sg [Maria bought bananas]]]
└──────────────────────────┘ └──────────┘
control Agree

2.3.1 Theoretical preliminaries: The Generalized OC Signature

My case for this being an instance of OC is that it fits the “Obligatory Control Signature” identified by Landau (2013) in his authoritative review of the literature on control up to that point. Landau states this as in (42) (building on sources like Manzini (1983) and Landau (2001)).¹⁸

- (42) *The OC signature:* (Landau 2013: 29)
 In a control construction [...X_i ... [_S PRO_i ...] ...], where X controls the PRO subject of the clause S:
 a. The controller(s) X must be (a) co-dependent(s) of S.

¹⁸ Some of this discussion of the GOCS and its relationship to Landau’s OC signature is borrowed from Baker and Ikawa (2022).

- b. PRO (or part of it) must be interpreted as a bound variable.

The fundamental insight of (42a) is that when a clause containing PRO is an argument or adjunct-modifier of a verb (or other lexical head), then PRO must be controlled by an (other) argument of the same verb. This is what Landau means by saying that X and S must be “co-dependents”. The upshot of this is that PROs in CP complements and some adjunct clauses undergo a special form of control that places strong syntactic conditions on what can be the controller, whereas PROs contained in clauses in other syntactic positions (e.g., CP subjects and extraposed clauses in adjoined positions) are much less constrained as to what their antecedent can be—so-called nonobligatory control (NOC).

Adapting this to the current context, I restate and generalize (42) into a working version of a generalized OC Signature in (43) (this will be subject to some development as the inquiry unfolds).

(43) *The Generalized OC Signature: (GOCS, working version)*

If a clause with an intrinsically null DP (PRO, SoK, other “ghostly DPs”,...) at its edge is generated within the VP headed by verb X, then the null DP is controlled by an argument of X. Which argument of X is the controller is determined by the thematic roles of the controller and the controlee.

The crucial change between (42) and (43) is that (43) refers to a larger class of controllable elements, including not only ordinary PRO but also SoK and the other “ghostly DP operators” that underlie the funny things that Cs do to relate to the NPs around them, according to the hypothesis presented in Chapter 1. I assume that this is a natural class of elements, consisting roughly of minimal pronouns that are necessarily phonologically null and are licensed as the specifiers of special functional heads high in the clausal spine (e.g., nonfinite T for PRO, Eval for SoK, etc.). However, I do not attempt a precise definition of this class here.¹⁹

The other changes between (42) and (43) are more or less housekeeping matters, in the pursuit of clarity. Landau’s way of stating his precondition in (42) is a bit ambiguous as to whether or not control into a clause dependent on V is required or merely possible, although aspects of his discussion imply that it is required. I make this explicit in (43), putting that control happens as well as what the controller must be on the consequent side of the conditional. In interpreting it this way, I am treating the GOCS as an active principle of grammar, whereas Landau arguably thought of (42) as a taxonomic generalization, setting out which instances of control count as OC as opposed to NOC. Second, I state that the controlled clause must be inside the VP headed by the matrix verb, replacing Landau’s somewhat informal term “co-dependent”, a cover term intended to include both complements and adjuncts.²⁰ Third, I drop (42b) from my version of the OCS, since I do not consider the semantics of the relevant constructions in any formal detail (see Section 1.5.2 for some rationale/apologia). I assume that SoK in (41) is indeed

¹⁹ Like (42), (43) does not take into account the fact that overt anaphors (and perhaps pronouns) can appear in controlled positions in some languages, including the East Asian languages; see Landau (2013: 117-119) for an overview. This is relevant to how we should think of the full class of controllable elements, which I leave open here (at least until I discuss Generalized Control Theory in chapter 8).

²⁰ Whether the exact location of a controlled-into clause is inside VP or some constituent that is a bit bigger is a debatable matter (which I may return to some). Resolving this would depend on knowing exactly where clausal adjuncts of various kinds are generated in the relevant languages studied here, which I unfortunately cannot be very precise about at this stage.

interpreted as a variable bound by the matrix subject, and do not know anything against this, but I must admit that I do not know very much about this.²¹

The second sentence of (43) makes explicit Landau's (2013) conclusion, synthesizing much previous work, that which argument of the matrix verb controls the null DP is not specified by the OC signature—the core syntax of obligatory control—but can vary from example to example in complex ways. This will be a topic of much discussion as my inquiry unfolds. When it comes to SoK and the other ghostly DP operators focused on in this work, I argue for the working generalization in (44).

- (44) The obligatory controller of X in a CP inside VP is the argument of V whose thematic role (best) matches the thematic role of X.

For starters, (44) captures the fact that it is the subject *Kambale* that controls SoK in (41), not the object 'the women', given the Speas-and-Tennian assumption that SoK gets a subject/agent-like theta-role (or p-role) from Eval. Some initial grounding for this assumption is the fact that the C/Eval head that licenses SoK is often (although not always) historically related to the verb 'say', with the SoK argument of Eval parallel to the agent argument of 'say'. Supporting (44) in the domain of ghostly operators is in most cases relatively straightforward. What is much less straightforward is showing that (44) also has validity for the ordinary control of PRO, where examples of the theme or goal argument of the matrix verb controlling the agent argument of its infinitival complement abound. In chapter 8, on the topic of "Generalized Control Theory", I explore the idea that a version of (44) works for PRO as well, starting from Panter and Köpcke's (1993) theoretical intuitions about "control shift" in English and German. Until then, conservative readers are welcome to interpret (44) as a statement about a control-like relation between a matrix argument and a ghostly DP operator, suspending judgment about whether this newer relation fully unifies with the familiar relation of obligatory control.

These claims can also be seen against the background of the literature on upward C-agreement (rather than against the background of a generalized control theory). Diercks's (2013) original study argues for the following condition in Lubukusu with considerable care and over a significant empirical range.

- (45) Lubukusu Complementizer Agreement Generalization: (Diercks 2013: 362)
Complementizers agree only with the most local superordinate subject.

I build on this generalization along two dimensions. One is that I confirm that a condition like this is robust in that it carries over also to other languages: mostly Ibibio and Kinande, with a smattering of Kipsigis and Ikalanga. The other is that I consider more carefully exactly what should be meant by "subject" in this condition. It is well-known that generative theory makes available multiple senses of the notion subject, depending on what subparts of the theory are

²¹ In many cases, it is not so obvious what to look for to test this hypothesis, given the challenges of observing SoK directly. However, it should be open to empirical investigation by the resourceful linguist. For instance, one could consider an example with a quantified matrix subject like 'Everyone thinks Agr-C that 3.sg will die' in Kinande (cf. (4a)) to see if it means 'For all x, x thinks that x will die, and the source of x's thought is x' (e.g., everyone has their own potentially irrational fear that they themselves will die). Similarly, one could see if in an ellipsis context like 'Kambale thinks Agr-C 3.sg will die and Maria does too' the source of Maria's thought about impending death is Maria's own psychology (not Kambale's). For what it is worth, my bet is yes. However, my wife wisely does not allow me to bet much money on linguistic facts.

involved (see McCloskey (1997) for an overview). For example, there is the notion of a thematic subject, versus the notion of a structural subject, versus the notion of a subject for purposes of case and agreement. These different notions of subject line up with each other in many simple and canonical cases. But they can also come apart in a few very instructive cases. For example, the thematic subject (agent) is different from the structural subject (Spec TP) in passive sentences. Similarly, the structural subject (Spec TP) is different from the subject for case and agreement (the nominative DP) in dative subject constructions in Icelandic. And so on. When one plays close attention to this and tries to harmonize the crosslinguistic data, I claim that Dierck's unified condition in (45) breaks down into the two distinguishable conditions in (46).²²

- (46) a. The SoK that C agrees with can only be controlled by the closest thematic subject.
b. C can agree with SoK only if T enters into an Agree relationship with the controller of SoK. (*The T/Agree Condition*)

In other words, indirect C agreement is manifest with DP X only if DP X is *both* a thematic subject and an agreement subject.²³ The subgeneralization in (46a) is essentially the result of the GOCS together with (44); its reference to thematic roles shows that it is a reflex of control theory. (46b) then emerges as a further condition on upward C-agreement, with quite a different nature; I refer to this as the *T/Agree Condition*. In addition to the fact that they invoke quite different theoretical notions (thematic roles versus Agree relations), the distinctness of the two conditions becomes evident from a broader typological perspective: all of the ghostly operator constructions from Chapter 1 will be found to obey (46a), whereas most of them do not obey (46b).

In the rest of this section, I develop the argument that upward C-agreement constructions involve obligatory control in the following steps. First, I consider the structural conditions that the GOCS in (43) places on the controller in section 2.3.2. Next, I consider the thematic conditions relevant to this type of control in section 2.3.3, supporting (44). Finally, I consider the conditions that the GOCS places on the position of the clause that contains the controlled element (SoK) in section 2.3.4. As the discussion unfolds, I point out nearby data that are not ruled out by (43) and (44) but are ruled out by the *T/Agree Condition*. In this section, I simply recognize this as an additional factor at work in upward C agreement, returning to the task of explaining it in terms of the theory of Agree later in the chapter, in section 2.5

2.3.2 Structural conditions on what can control SoK

I begin, then, with the evidence that the controller of SoK must be an argument of the verb that the clause containing it depends on, in accordance with the GOCS.

First and foremost, this generalization covers the uncontroversial fact that only the *closest* superordinate subject can control C-agreement in cases of full finite embedding. Deircks (2013: 373-374) shows this for Lubukusu; so does (47) for Kinande and (48) for Ibibio (see also

²² It is pretty clear what Diercks had in mind with his (45): he was thinking of the structural subject (Spec TP) and the agreement Subject (thing which agrees with T), which are extensionally the same thing in Lubukusu. He argues against C-agreement being controlled by the "logophoric center", which is close to the same thing as the thematic subject as I develop that notion. However, some of his remarks about the effect on C-agreement of a *by*-phrase in passives, or even the covert agent of passives, are precursors to the idea that (46a) holds as well as (46b).

²³ Note that being an agreement subject in the African languages—triggering an agreement on T—is extensionally very close to the same as being a structural subject—occupying Spec TP, because of parametric properties of these languages; see Baker (2008: Ch 5) and Carstens (2005), among others.

Torrence (2016)). For example, in (47a), the C of the most deeply embedded clause can agree with *Kambale*, the subject of the verb that selects that clause, but not with ‘the women’, the subject of a higher verb (the one that selects the clause that contains the verb that selects the clause headed by the Agr-C in question). The other examples are similar.

- (47) a. Aba-kali ba-lya-buga ba-ti Kambale a-kalenge-kanaya **a-ti/*ba-ti**
 CL2-women CL2.S-TNS-say CL2-C CL1.Kambale CL1.S-TNS.ASP-think CL1-C/*CL2-C
 ba-kandi-mu-la:kya.
 CL2.S-TNS-CL1.O-beat
 ‘The women say that Kambale thinks that they will beat him.’
- b. Aba-kali ba-lya-buga ba-ti n-galenge-kanaya in-di/*ba-ti
 CL2-women CL2.S-TNS-say CL2-C 1SG.S-TNS.ASP-think 1SG-C/*CL2-C
 ba-kandi-mu-la:kya.
 CL2.S-TNS-CL1.O-beat
 ‘The women say that I think that they will beat him.’
- (48) Okon á-kére a-bo ké nditọ e-ké-n-dòkkọ {**e-bo/*a-bo/*m-bo**} ké Mfon
 Okon 3SG-think 3SG-C that children 3PL-TNS-1SG.O-tell 3PL-C/*3SG-C/*1SG-C that Mfon
 é-kpóno ímọ.
 3SG.3.LOG.O-respect LOG
 ‘Okon thinks that the children told me that Mfon respects him.’

In the examples in (47) and (48), the highest subject is separated from the lowest Agr-C by two full CP boundaries. However, the same restriction holds even when the complement of the highest verb is somewhat reduced, possibly a TP rather than a CP. For example, in (49) from Kinande, the complement of the highest verb ‘make’ does not have a C node, overtly anyway. Nevertheless, Agr-C in the complement of ‘think’ cannot agree with the subject of ‘make’ rather than the subject of ‘think’.

- (49) Aba-kali mo-ba-lek-ire Kambale in-a-lenge-kania a-ti/*ba-ti a-kandi-hola.
 CL2-women AFF-CL2.S.TNS-let-ASP CL1.Kambale XX-CL1.S-TNS-think CL1-C/*CL2-C CL1.S-FUT-die
 ‘The women made Kambale think that he is going to die.’

This is also true in Lubukusu with a verb like ‘force’ which takes a subjunctive TP complement with no overt C head (see (50)), and in Ibibio where causative verb ‘make’ takes a complement with the verb inflected for the subject but no complementizer or tense marker (see (51)).

- (50) Sammy ka-ingil-ile baba-ana ba-búul-e ba-li ba-limi
 CL1.Sammy CL1.S-force-ASP CL2-children CL2.S-reveal-SBJV CL2-that CL2-farmers
 ba-fun-ile kama-indi.
 CL2.S-harvest-ASP CL6-maize
 ‘Sammy forced the children to reveal that the farmers harvested maize.’ (Diercks 2013: 371 (38))
- (51) a. M-ma-n-nam Koko á-kere a-bo/*m-bo ke Eno a-ma-a-kpa.
 1SG-PST-1SG-make Koko 3SG-think 3SG-C/*1SG-C that Eno 3SG-PST-3SG-die
 ‘I made Koko believe that Eno died.’

- b. Nditò e-ma-e-nam Koko á-kere á-bo/*e-bo ke Edem i'-maá-ghá imò
 children 3PL-PST-3PL-make Koko 3SG-think 3SG-C/*3PL-C that Edem 3SG-like-NEG LOG
 'The children made Koko think that Edem doesn't like him.'

This follows the GOCS well: the lowest CP with the agreeing complementizer is not the complement of 'make'/'force', nor is it adjoined to the VP headed by this verb. Therefore, the agent argument of 'make'/'force' cannot be the controller of SoK in these examples. In contrast, if one thought of the restriction against Agr-C agreeing long distance as primarily being a matter of phase boundaries, an effect of the PIC, then one might expect reduced TP/VP complements to behave differently.

The smallest verbal complements of all are those that are selected by affixal causative elements in languages that have them. I assume that such causative items are distinct syntactic elements (Baker 1988) which select something like VP or VoiceP, rather than CP or TP. For productive causatives in Kinande, Agr-C cannot agree with either the causee or the causer, as shown in (52).

- (52) a. ?Aba-kali bá-lya-buy-isaya Kambale {ngoko/*a-ti/*ba-ti} a-kandi-gula ehi-lole.
 CL2-women CL2.TNS-say-CAUS CL1.Kambale that/CL1-C/CL2-C CL1.S-FUT-buy CL19-bananas
 'The women made Kambale say that he will buy bananas.'
- b. Aba-kali ba-lag-isaya Kambale *a-ti/*ba-ti ba-ka:sa. (P&P, p.c.)
 CL2-women CL2.TNS-announce-CAUS CL1.Kambale CL1-C/CL2-C CL2.S-TNS-come
 'The women (powerful witches) made Kambale announce that they are coming.'
 (OK with *ngoko* with verb in a different tense: ... *mobalagisirie* ... *ngoko/*bati* ...)

Note that the base verbs in these examples, 'say' and 'announce', are compatible with Agr-C in their complement, as expected given their meanings. Letsholo and Safir (2019) point out the same effect in Ikalanga: neither the causee nor the causer can control Agr-C in an example like (53b) (compare the noncausative example in (53a), which allows C-agreement).

- (53) a. Neo w-aka-zwi-buzw-a (a)-ka-ti a Nchidzi w-aka-tenga lori tshwa.
 CL1.Neo CL1.S-PST-REFL-ask CL1-PST-C Q CL1.Nchidzi CL1.S-PST-buy car new
 'Neo wondered (asked herself) whether Nchidzi had bought a new car.'
- b. Ba-isana b-aka-buzw-isa Neo mme-abe kuti/*e-ti/*be-ti kene
 CL2-boys CL2-PST-ask-CAUS CL1.Neo mother-her that/*CL1-C/*CL2-C whether
 b-aka-tenga ma-bisi.
 CL2.S-PST-buy CL6-melons
 'The boys made Neo ask her mother whether they had bought melons.'

By hypothesis, the structure of an example like (52a) is something like (54), with the causee in the Spec VoiceP of the VoiceP complement of 'make'.

- (54) [_{TP} Women_i T [_{VoIP} t_i Voice [_{VP} make [_{VoIP} Kambale_k Voice [_{CP} SoK_{*i,*k} that [_{TP} he will buy ...]]]]]]]

Here the causer 'woman' is not eligible to control SoK, because it is not an argument of the verb 'say', the verb that takes CP as its complement—another effect of the GOCS. In contrast, the GOCS allows the causee Kambale to control SoK, since this is an argument of the verb (or verbal complex, consisting of Voice+V) that selects CP.

Importantly, the causee also cannot be the target of upward C-agreement in these examples. This is our first indication that agreement with C is constrained by the T/Agree Condition as well as by the GOCS. What is special about causees in these languages is that they are thematic subjects that T does not agree with; there is only one T head above SoK in (54), and it agrees with the causer rather than the

causee. That is why *Neo* can trigger agreement on C in (53a) but not in (53b), I claim. There is a particularly instructive minimal comparison between (52)/(53b) and (51), the periphrastic causative construction in Ibibio. (54) could very well be the structure for (51) in Ibibio as well; there is no possibility of an overt C or T head in the complement of ‘make’, hence no clear evidence that the complement of ‘make’ is more than a VoiceP.²⁴ However, there is agreement with the causee internal to the complement of ‘make’ in Ibibio; I tentatively assume that Voice agrees with the NP in Spec VoiceP in this language, in addition to normal T agreement. This can be seen independently of causative constructions in the fact that tense-marked verbs have double subject agreement in Ibibio: one instance of subject agreement appears before the tense morpheme, and one appears after it, attached directly to the verb root (see (28b) and (29), among many other examples). So in a language where the causee triggers agreement on the verb, the causee can trigger agreement on C as well, whereas in languages where the causee does not trigger agreement on the verb, it cannot trigger agreement on C either. This is (a generalization of) the T/Agree Condition in (46b). In fact, (46b) needs to be revised slightly to say something like “C can agree with SoK only if some head in the clausal spine enters into an Agree relationship with the controller of SoK”, where “some head” includes Voice as well as T. However, T accounts for the bulk of the cases (and “T/Agree” rhymes), so I continue use that label for the empirical generalization.²⁵

We can pursue morphological causatives one step farther to see our first hint that the GOCS and the T/Agree Condition block C-agreement with a particular NP in different ways. Recall that Kinande has certain verbs that require an agreeing C in their CP complement in simple active structures. One of these is ‘force’, as in (55a); the alternative Cs *ambu* and *ngoko* are ruled out in the complement of this verb. Now a causative based on ‘force’ is grammatical, as shown in (55b), but like in (52) the CP complement of the base verb must be a nonagreeing C (*ambu*), given the GOCS and the T/Agree Condition.

- (55) a. Kambale a-sond-ire a-ti/*ambu (kumba) i-tw-a-mu-tsakura.
 CL1.Kambale CL1.S-want-ASP CL1.-C/they.say forcefully XX-1PL.S-TNS-CL1.O-choose
 ‘Kambale wants us to vote for him.’
- b. Aba-kali mo-ba-sond-esirye Kambere ambu/*a-ti/*ba-ti mupaka
 CL2-women AFF-CL2.S-want CAUS.ASP CL1.Kambere they.say/*CL1-C/*CL2-C forcefully
 a-gend-e omo-soko.
 CL1.S-go-SBJV LOC-market
 ‘The women made Kambere want to go to the market.’ (Kambere doesn’t usually like to go there, but the women tell him how nice it is now, how they cleaned it up and started selling better goods.)

Now (55a) implies that ‘want’ in Kinande selects for an EvalP-type CP with SoK in its Spec, for semantic reasons (see Section 2.2.1). All things being equal, we expect this selectional requirement to carry over to the situation when a VP headed by ‘want’ appears in the complement of the causative morpheme, as in (55b). Therefore, we expect the most embedded CP in (55b) to contain an SoK too, which needs to be controlled by the wanter argument, in order to get the meaning to work out right (the immediate source of the content ‘he go to the market’ is the wanter Kambere). So we have reason to think that control of SoK by the causee in (55b) actually succeeds, even though this does not allow C to agree with the wanter via SoK (i.e., *a-ti*

²⁴ The only difference would be a morphological one: the causative morpheme is an affix in Kinande and Ikalanga whereas it is a root in Ibibio.

²⁵ There is some question as to whether object agreement also allows an argument to trigger agreement on C when other circumstances (like theta-role matching) might allow this. If the answer is no, then (46b) must refer to a narrower class of heads (T-like ones) after all. See xx for some discussion.

is impossible). This is one reason why (46b) is phrased as a condition on agreeing with SoK, not a condition on controlling SoK. In contrast, the fact that ‘women’ cannot trigger agreement on C in (55b) (so *ba-li* is also impossible) is because it cannot control SoK in the first place, ‘the women’ not being an argument of ‘want’, the verb that selects a CP complement, but only of ‘cause’. This subtle fact about (55b) is a clue to the nature of the T/Agree Condition, a lead I pick up in Section 2.5.

Before moving on, I acknowledge that more research is called for to see how general the empirical pattern seen in (52), (53), and (55) in Kinande and Ikalanga is. Diercks (2013) does not report this pattern for morphological causatives in Lubukusu. On the contrary, he gives examples where the causer can trigger agreement on Agr-C, such as (56).

- (56) Ba-sasi ba-many-isya Sammy ba-li/*a-li ba-keni b-a-cha. (p. 370 (37))
 CL2-parents CL2.S.TNS-know-CAUS CL1.Sammy CL2-C/CL1-C CL2-guests CL2-PST-leave
 ‘The parents informed (lit. ‘made-know’) Sammy that the guests left.’

Other examples have the glosses ‘cause-to-believe’ (p. 367, ex (22), (23)) (=convinced, persuaded?) and ‘cause-to-be-surprised’. This judgment is not surprising if Dierck’s examples are really lexical causatives—lexical items which are morphologically causative but are listed in the lexicon and that (optionally?) enter the syntax as ordinary ditransitive verbs. Diercks’s gloss of ‘made-know’ as ‘informed’ is suggestive of this. Then the subject of morphologically complex, syntactically simple verb ‘inform’ can trigger upward C-agreement just like the subject of ‘tell’ can. Such lexical causative constructions exist in Kinande too, as in (57). Here ‘remember+cause’ has the somewhat idiosyncratic meaning of ‘remind’ and behaves syntactically just like the verb ‘tell’. (57) (from Letsholo and Safir (2019)) contrasts with (52) in this respect.

- (57) Yohani mo-a-sirisya-buk-ia aba-kholho a-ti ba-lwe b’-eri-soma echapitre 2.
 CL1.John AFF-CL1.S-TNS.ASP-remember-CAUS CL2-students CL1-C CL2-AUX CL2-INF-read chapter 2
 ‘John reminded (lit. ‘made remember’) the students that they should read chapter 2.’

It is not clear, then, whether Lubukusu will turn out to be like Kinande and Ikalanga in this respect if one can find unambiguous cases of syntactic causatives that do not have a lexical causative parse. There could be a minor difference among the languages here, but we have no clear evidence of it at this point.²⁶ Meanwhile, Ibibio and Kipsigis (non-Bantu languages) do not have morphological causative constructions at all. The effect in (52)/(53) is thus less robustly attested across languages than the others I have discussed.

One other first-order fact about the trigger of upward C-agreement that is attributable to the GOCS is that C can agree with an argument of the matrix verb but not with the possessor of an argument of the matrix verb. This is shown in (58) for Kinande, Lubukusu, and Ibibio.

- (58) a. Eba-ruha y-a Kambale yi-ka-buga yi-ti/??a-ti a-kisig’ ini-a-sa.
 CL9-letter CL9-ASS CL1-Kambale CL9.S-TNS-say CL9-C/??CL1-C CL1.S-AUX XX-CL1.S-come
 ‘Kambale’s letter says that he will come soon.’ (Kinande, =(1d))
 b. Mu-moni mw-a Nelsoni mw-ekesie mu-li/*a-li o-mu-sangafu.

²⁶ I also elicited a small number of causatives from Justin Sikuku by email, modeled on the Kinande examples in (52) and did not get any in which the causer could not control SoK, triggering agreement on C. It is possible that this language has only morphological causatives, or that the structure of syntactic causatives is a bit different such that the causee does not count as a thematic subject. (Perhaps ‘cause’ in Lubukusu selects something smaller than a VoiceP, for example; see xxx on the different structures of causatives in different languages.)

CL18-face CL18-ASS CL1.Nelson CL18.s-show CL18-C/*CL1-C CL1-CL1-happy.person
 'Nelson's face has shown that he is a happy person.'
 (Lubukusu, Diercks 2013:400; see also p. 401 (116).)

- c. Dɛ́tá ndító a-ké-bó *é-te/á-te ké Edem í-maá-ghá mm-ímò.
 letter children 3SG-PST-say 3PL-C/3SG-C that Edem 3SG-like-3SG-NEG PL-LOG
 'The children's letter says that Edem does not like them.' (Ibibio)

For example, (58a) is bad with *a-ti* rather than *yi-ti* because 'Kambale' cannot control SoK, it not being an argument of the verb 'say' that selects the CP that contains SoK. The other examples are similar. If the antecedent of SoK was semantically constrained to be the source of the content of CP, but not syntactically constrained to be an argument of the matrix verb, then *a-ti* here could very well be possible.²⁷ (The reader will note that C agreeing with the possessor in (58) is also ruled out by the T/Agree Condition, given that the possessor in these Niger-Congo languages does not trigger agreement on T (or on any other functional head, for that matter). However, the fact that possessor control of SoK is blocked by the GOCS turns out to be the more fundamental fact, because a similar restriction holds even in languages and constructions which are not subject to the T/Agree Condition, as we will see.)

We see, then, that the GOCS has a range of positive effects, explaining cases where upward C-agreement cannot happen. Inasmuch as this condition is borrowed from the theory of control, this supports the hypothesis that obligatory control is involved in the upward C-agreement constructions.

2.3.2 Thematic conditions on what can control SoK

Recall that the GOCS says that an SoK (or other ghostly DP) in a suitably positioned clause must be controlled by an argument of the verb that selects that clause, but it does not determine which argument is the controller. The hypothesis is that that is determined by (44), which says that the argument that controls SoK is the one whose thematic role best matches that of SoK. By hypothesis, SoK receives an agent-like thematic role from the Eval head. Therefore, the controller must also have an agent-like thematic role. This subsection explores this aspect of the control relation. More specifically, I claim that the controller of SoK must have one of the thematic roles listed in (59).

- (59) The controller of a subject-like operator must have the thematic role of: agent, causer, source, or experiencer.

I take this to be a natural class of thematic roles. For example, they are roughly those roles that can be assigned to an external argument in Spec VoiceP (although I do not claim that they are always assigned there).

The initial motivation for (44) and (59) is the first-order fact that upward C-agreement is agreement with the agent-subject of the matrix verb, not with the theme or goal object of the matrix verb in all the relevant languages, as we have seen throughout. This basic distinction

²⁷ Compare the literature on logophors and long-distance anaphors, which are often said to be able to take the possessor rather than the subject as their antecedents in structures like (58) ((58c) contains an instance of this). However, I claim in chapter 5 that even for logophors this possibility is not generally available, and the limited attested examples are the result of a kind of metonymy.

could be characterized in a variety of ways, however. Instead of focusing on thematic roles, one could focus on syntactic position, or on which argument T agrees with, among other possibilities. Help in distinguishing these possibilities comes from passive constructions in languages that have them; this includes the Bantu languages Kinande, Lubukusu, and Ikalanga, but not Ibibio and Kipsigis. The passive agent is still of course an agent; it may even be licensed in Spec VoiceP position (as, for example, in Collins's (2005) theory of the passive). In contrast, the derived subject still has a theme or goal role, on standard assumptions. The prediction of (44) and (59), then, is that simple passivization should not feed upward C-agreement.

This basic prediction is supported in Kinande. This language indeed does not allow the passive subject to control C-agreement, regardless of whether the agent phrase is covert; rather C must be the nonagreeing form *ambu*, or in some cases *ngoko*. This was first reported by Letsholo and Safir (2019: 18), using the verb 'remind'. (60) gives further examples using other verbs with the right argument structure.

- (60) a. Aba-kali ba-bya ba-biri-bw-ir-wa ngoko/*bati/*bati ambu Marya
 CL2-women CL2-be CL2.S-TNS.ASP-tell-APPL-PASS that/*CL2-C/*CL2-C they.say CL1.Mary
 mw-a-gul-ire ehi-lole.
 AFF-CL1.S-bought-ASP CL19-bananas
 'The women were told that Mary bought bananas. (also OK: *ambu* with different TAM)
- b. Kambale a-lir-ir-awa ambu/*a-ti a-mbaly' emaske.
 CL1.Kambale CL1.S-beg-APPL-PASS they.say /*CL1-C CL1.S-wear mask
 'Kambale was begged that he wear a mask.'
- c. Kambere a-lek-awa ambu/*a-ti a-nga-nagemb' esy-onderu sy-a Kambale.
 CL1.Kambere CL1.S-allow-PASS they.say/CL1-C CL1.S-TNS-shave CL10-beard CL10-ASS Kambale.
 'Kambere was allowed to shave (lit. that he shave) Kambale's beard.' (P&P)

Similarly, Letsholo and Safir (2019: 7) say that when a verb taking clausal complement is passivized in Ikalanga, the form of the complementizer is usually a nonagreeing one like *kuti* or *kuyi*.²⁸

Here again, we can learn a little bit more by attending to the fact that in Kinande verbs like 'force' require Agr-C in their subjunctive CP complement in Kinande, for semantic selectional reasons. However, even 'force' cannot have an agreeing C in the passive, as shown in (61).

- (61) Mo-n-a-kas-irwe ambu/*in-di nyi-gend-e.
 AFF-1SG.S-TNS-force-PASS.ASP they.say/*1SG-C 1SG.S-go-SBJV
 'I was forced to go.' (P&P)

The requirement that 'force' must select EvalP and its SoK specifier should apply to the passive as well as the active, all things being. This implies that SoK is present in (61), but it is controlled by the covert agent not by the derived subject; it is, after all, the implicit agent who is responsible for the content of the CP complement. However, C cannot manifest agreement with SoK unless T agrees with the controller of SoK—another instance of the T/Agree Condition at work. This converges with the evidence from

²⁸ However, Letsholo and Safir add that some speakers (older ones, they suspect) allow a form of C in which C agrees with the derived subject as well. They do not discuss what happens when a *by*-phrase is present in an Ikalanga passive. If speakers that allow an agreeing C allow it only when there is no overt *by*-phrase, then the proposal that I make for Lubukusu below may be appropriate for them as well. Note that C-agreement in Ikalanga is somewhat special in that the C head of CP can also show agreement with the matrix verb in Tense marking (only if the matrix verb is in past2) and in voice (-*ti* if the matrix verb is active; -*yi* if the matrix verb is passive). I have nothing to add to Letsholo and Safir's discussion of these fascinating matters.

causatives in (52)-(55) above. The passive agent is like the causee in being able to control SoK (we infer), but not being able to trigger agreement on the Eval head. This further motivates the particular version of the T/Agree Condition given in (46b), as a condition on agreement rather than on the control of SoK per se. (The claim that the passive agent can control a ghostly operator in the CP complement will be much clearer when we come to indexical shift and LD anaphoric constructions—constructions that are not subject to the T/Agree Condition.)

The interaction between passive and C agreement in Lubukusu is broadly similar, but a bit more nuanced, according to Diercks (2013). When a passive sentence has an overt *by*-phrase, Agr-C in the complement of the verb is impossible, as shown by (62). On the one hand, Agr-C cannot agree with the agent in the *by*-phrase, as in (62a); this satisfies (44), but again violates the T/Agree Condition (Diercks 2013: 367-368 (ex (25), (26))). On the other hand, it cannot agree with the goal in subject position, as in (62b), because that DP does not have the right kind of thematic role, according to (59).

- (62) a. Ba-sasi ba-bol-el-wa nende Sammy mbo/*a-li ba-keni ba-a-rekukha.
 CL2-parents CL2.S-say-APPL-PASS by CL1.Sammy that/CL1-C CL2-guests CL2.S-TNS-leave
 ‘The parents were told by Sammy that the guests left.’ (also, by implication: **ba-li* CL2-C)
- b. Nelson ka-a-bol-el-wa nende ese mbo/*n-di/*a-li ba-keni ba-a-cha.
 CL1.Nelson CL1.S-TNS-say-APPL-PASS by me that/*1SG-C/*CL1-C CL2-guests CL2.S-TNS-go
 ‘Nelson was told by me that the guests left.’ (p. 380 (61))

Diercks (2013: 380) also reports that in a significant number of cases, his consultants rejected C-agreement with the passive subject in an example like (63), even when there is no overt *by*-phrase. Indeed, he says: “On several occasions, however, speakers explicitly referred to the implicit agent in a passive as the reason why they did not accept the complementizer agreement.”

- (63) Alfredi ka-a-bol-el-wa mbo/%a-li sy-akhulia si-li tiyari.
 CL1.Alfred CL1.S-PST-say-APPL-PASS that/% CL1-C CL7-food CL7.S-be ready
 ‘Alfred was told that the food was ready.’

That is the pattern I expect, and what we see in Kinande.

The complication is that Diercks says that in short passives with no *by*-phrase there were also “a large number of times that complementizer agreement with derived subjects of passives was deemed acceptable. ... Whereas several speakers readily accepted this example [(63)], others strongly opposed the agreeing complementizer here, stating that since ‘Alfred was told’ something, somebody had to have told him, and as such the class 1 *a-li* agreement from was unacceptable.” Diercks then adds that even the speakers that strongly rejected *a-li* in (63) on one occasion accepted it on other occasions.

My interpretation of this empirical situation is in two parts. First, I follow Diercks (2013: 381) in saying that there is some ambiguity/indeterminacy as to whether a covert agent is present in a short passive construction in Lubukusu. This is not the normal Chomskyan assumption, which is that an agent is always syntactically expressed in the passive, by a null category if not by an overt one. But it is not unprecedented either; for example, Baker and Vinokurova (2010) make the same assumption as Diercks does for Sakha passives: a covert agent can be present, triggering dependent accusative case on the theme argument, or it can be absent, in which case the theme argument is nominative. Second, I assume that whether an agent is present or not can

influence the thematic interpretation of its coargument with a verb like ‘tell’. This is expressed in (64), which I take to be a principle of the theory of thematic roles.²⁹

- (64) The goal argument of a verb can count as an experiencer as well as a goal, but only if there is no agent argument in the same clause.

I assume that (64) is on a par with other plausible statements about what thematic roles can be associated with particular verbs such as “no verb can have an instrument argument without having an agent argument”, “no simple (noncausative) verb can have a causer argument distinct from its agent argument”, and perhaps even the venerable “no simple verb can have more than three obligatory arguments.” Such statements, while not so familiar in syntactic theory, are plausibly rooted in how humans conceptualize events and package them for expression in clauses headed by simple verbs. Now active sentences, long passives, and short passives with implicit agents clearly in mind all have syntactically expressed agents, so a goal argument in the same clause must be a pure goal, not an experiencer-goal. As a result, it cannot control SoK, by (59). In contrast, short passives with no syntactically present agent do allow the goal argument to take on an experiencer role. In that special case, C-agreement with the subject of a passive in a sentence like (63) can be acceptable in Lubukusu (and for some Ikalanga speakers).³⁰ (64) may seem a bit ad hoc, but it will do a fair amount of work for us in other constructions as well.

These conclusions about thematic factors in the control of SoK can be largely replicated by considering the behavior of verbs like ‘hear’ with respect to C-agreement. Thematically and semantically a sentence of the form ‘X heard (from Y) that Z’ is very similar to the passive ‘X was told (by Y) that Z.’ However, ‘hear’ is not morphologically passive, and even languages that do not have a productive passive construction do have ‘hear’. Kinande, Ibibio, Lubukusu, and Kipsigis all allow the subject of ‘hear’ to control C-agreement on the complement of ‘hear’ (although Diercks and Rao’s consultants judgments about (65c) vascilated some); only Ikalanga where C-agreement is lexically restricted to a proper subset of CP-selecting verbs apparently does not. Examples are given in (65).

- (65) a. Kambale mw-ow-ire {a-ti ambu/ngoko} Marya mw-a-gul-ire ehilole.
CL1.Kambale AFF-CL1.S.hear-ASP CL1-C they.say/that CL1-Mary AFF-CL1.S-buy-ASP bananas
‘Kambale heard that Mary bought bananas.’ (Kinande)
- b. Okon a-ma-a-kop (a-bo / a-te) ke Emem a-ma-a-due.
Okon 3SG-PST-3SG-hear 3SG-C/3SG-C that Emem 3SG-PST-3SG-sin
‘Okon heard that Emem is guilty.’ (Ibibio)
- c. Ko-α-yas %α-lε/kole ko-Ø-it layok

²⁹ Hopefully other semantic tests can be developed that can help support (64). For example, I sense a difference in English between (i) and (ii): example (i) is natural, but (ii) feels a bit off. This makes sense if the goal argument of an active ‘tell’ is not an experiencer (so its referent does not have to be conscious), whereas the goal subject of passive ‘tell’ naturally does take on the experiencer role as well (incompatible with its referent being unconscious).

- (i) John told Mary that she was beautiful while she was in a coma.
(ii) ?#Mary was told that she was beautiful while she was in a coma.

³⁰ Diercks (2013: 381) adds the following intriguing detail: “When presented with a large collection of sentences such that speakers do not dwell on any single sentence, they readily accept agreement with the derived subject of a passive. The tendency, rather, was that when speakers became consciously aware of the implicit agent in the passive construction, they rejected the complementizer agreement with the derived subject of the passive.” Apparently thinking more carefully about what a sentence means makes one more likely to project an agent in the structure.

PST-1SG-hear % 1SG-C/that PST-3.S-arrive children
 'I heard that the children arrived.'

Such sentences have no agent, overt or covert, so the hearer subject is freely and naturally taken to be an experiencer.³¹ As such, it can control SoK, in accordance with (44) and (59).

Much like there is some ambivalent behavior with long passives, we see some variation with 'hear' when a source phrase is included. In Lubukusu and Ibibio, this does not interfere with C-agreement, which is still possible with the surface subject, the hearer.

- (66) a. Khw-a-ulila khukhwamakhu Sammy khu-li/*a-li ba-limi ba-a-funa kama-indi.
 1PL.S-TNS-hear from LOC CL1.Sammy 1PL-C/*CL1-C CL2-farmers CL2.S-TNS-harvest CL6-maize
 'We heard from Sammy that the farmers harvested maize.' (Lubukusu, Diercks 2013:366)
- b. M-ma-ng-kop n-to Koko m-bo/*a-bo ke Ima a-ma-a-yip ngwet.
 1SG-PST-1SG-hear 1SG-from Koko 1SG-C/*3SG-C that Ima 3SG-PST-3SG-steal book
 'I heard from Koko that Ima stole a book.' (Ibibio)

However, in Kinande and Diercks and Rao's (2019) variety of Kipsigis, including a source phrase with 'hear' in the matrix clause makes it impossible for the hearer-subject to control C agreeing in the CP complement:³²

- (67) a. Kambale owir-ira oko-ba-kali *a-ti/*ba-ti (ambu) Marya a-hol-ire.
 CL1.Kambale CL1.S.hear-APPL LOC-CL2-women *CL1-C/*CL2-C they.say CL1.Mary CL1.S-die-ASP
 'Kambale heard from the women that Mary died.' (Kinande)
 (OK with C=*ko*, procliticized to the verb)
- b. Ko-a-γas kobun Kiproono kɔɛ/*a-le ko-Ø-ruuja tuya amut.
 PST-1SG-hear through Kiproono that/*1SG-C PST-3SG -sleep cows yesterday
 'I heard through Kiproono that the cows slept yesterday.'

Apparently there may be interference between a source phrase and C agreeing with the experiencer subject, similar to what we find with long passives, although there is not always such interference. I suggest that the variable interference might be attributed to two factors: (i) whether the source phrase counts as an argument of 'hear' or not, and (ii) whether the source of 'hear' is taken to be equivalent to the agent of 'tell' or not. If both of these factors hold, then the presence of the source (=agent) phrase prevents the subject of 'hear' from being an experiencer, which in turn prevents it from controlling SoK, by (59). If either of these factors does not hold—if the source phrase is not taken to be (equivalent to) an agent argument of 'hear'—then (64) does not prevent the subject of 'hear' from counting as an experiencer, and it can control SoK, just as it does in (65).³³ The relevance of whether the source phrase counts as an argument is suggested by the contrast between (67a) in Kinande and (66a) in Lubukusu: in

³¹ Evidence that the subject of 'hear' is an experiencer in English is the clear deviance of (i); compare fn. 29.

(i) #Mary heard that she was beautiful while she was in a coma.

³² In contrast, Driemel and Kouneli (2022) report that Agr-C (if it is that and not the verb 'say') can agree with either the source phrase or the hearer in their dialect of Kipsigis. That it can agree with the source suggests that the T/Agree Condition may not hold in Kipsigis (the only non-Niger Congo languages with upward C-agreement). That it can agree with the hearer shows that the source phrase is not considered equivalent to an agent in this variety (see below). Indeed, for Kipsigis these possibilities hold independently of whether the source phrase is expressed as an applied object or as a PP, contrary to the suggestion made about the Kinande/Lubukusu contrast below.

³³ However, whether the source of 'hear' is realized as an applied object or a PP does not seem to make a significant difference in Driemel and Kouneli's dialect of Kipsigis. See their examples (24a) and (27), and my fn. 32.

Kinande, ‘hear’ is an applicative verb (a locative applicative), implying that the source phrase counts as an argument of this extended predicate, whereas in Lubukusu ‘hear’ is not applicative and the source phrase has a robust preposition as well as locative gender marking. These differences in the syntactic status of the source may correlate with the fact that the source interferes with C-agreement in Kinande but not in Lubukusu. However, I do not have more general tests for whether a source PP counts as an argument or not across languages,³⁴ or for whether a language distinguishes source and agent or not for purposes of (64). These matters call for closer study of the particular languages in the hopes of tightening the screws on this aspect of the analysis. Note that *by*-phrases and source-phrases interfere with C-agreement with an experiencer subject in similar ways, but to different degrees: overt *by*-phrases always interfere, whereas covert ones sometimes do; in contrast, overt *from*-phrases sometimes interfere, whereas covert (absent) ones never do.

The door is also open for us to say that the source-phrases of ‘hear’ can control SoK, satisfying semantic/selectional properties. They just do not allow C to agree with the SoK that they control, because of the T/Agree Condition. In this, (some) source phrases associated with ‘hear’ would have the same status as the *by*-phrases of passive sentences and the causees of morphological causatives in (at least) Kinande. Again, we will see support for this in future chapters, in that source arguments associated with verbs of hearing can clearly control ghostly operators in constructions that are not subject to the T/Agree Condition.

We have seen that agents and experiencers can control SoK and hints that sources might as well, whereas pure goals and themes cannot control SoK. I include causers as possible SoK-controllers in (59) as well to cover the fact that inanimate subjects of verbs like ‘show’ and ‘tell’ can trigger upward C-agreement in languages where the selectional restrictions that Eval puts on SoK are less strict. Two relevant examples are given in (68), from Kinande and Ibibio.

- (68) a. Emi-haruro y’-oko-mesa yi-ka-by-a nga yi-ka-tu-bw-ir-a yi-ti
 CL14-marks CL14.ASS-LOC-table CL14.S-TNS-be how CL14-TNS-1PL.O-say-APPL-FV CL14-C
 Kambale a-na-bya hano.
 CL1.Kambale CL1-PST-be here
 ‘The marks on the table (are as if they) tell us that Kambale was here.’ (Kinande)
- b. Ifiok-nduun̄o a-wat (a-bo/a-te) ke Okon a-due.
 evidence 3SG.S-show 3SG-C/3SG-C that Okon 3s-guilty
 ‘The evidence shows that Okon is guilty.’ (Ibibio)

If one likes to make only course-grained role distinctions, one might well imagine collapsing this case with the case of agents controlling SoK. However, future chapters will give us some reason to distinguish causers and agents within the overall system, in that inanimate causer subjects do not prevent the direct object from counting as an experiencer the way that true agent subjects do. In other words, causers are distinct from agents for purposes of (64). Again, the effects of this are mostly concealed in upward C-agreement constructions by the T/Agree Condition: even if the object of ‘show’ in an example like (68b) could count as an experiencer, it still could not trigger agreement on C (via SoK) because it does not trigger agreement on T. But experiencer objects can control ghostly DP operators in other languages.

Finally, the fact that experiencer arguments can control SoK, as allowed by (59), can be seen to some degree apart from the special verb ‘hear’ (and ‘tell-PASS’), as long as the experiencer is a surface subject. However, to see this, one needs to be able to navigate around the anti-factivity associated with C-

³⁴ Source phrases are unusual in Ibibio in that the P-like element *to* bears agreement with the subject. This makes it look like some kind of grammaticalized serial verb construction. Indeed, *to* can be used as the sole predicate in a sentence, as in *ami n-to Uyo* ‘I am from Uyo’. Although I do not know what the structure of this special kind of serial verb construction is, it seems plausible that agreement on ‘from’ is a cue to language learners that the source phrase is syntactically object-like, not subject-like in Ibibio.

agreement, discussed in Section 2.2. In this light, Torrence (2016) has an interesting discussion of experiencer predicates in Ibibio. He observes that an experiencer object in Ibibio cannot control C-agreement, even when the subject is an idiomatic nominal, such that the experiencer object is arguably the thematically highest-ranked DP in the matrix clause. Such experiencers can take on some subject-like properties, including controlling a logophoric operator in the CP complement (see chapter 5), as in (69).

- (69) EsIt a-nem Okon ke Emem á-máá ímò.
 heart 3SG-sweet Okon that Emem 3SG-like LOG
 ‘Okon_i is happy that Emem likes him_i.’

Nevertheless, this sort of experiencer is strongly out as a trigger of agreement on C/Eval. Thus, (70a) is strongly impossible. However, (70a) contrasts to some extent with (70b), where the experiencer argument rather than the body part idiom has moved to the subject position, as is often possible in Ibibio. (Presumably both ‘heart’ and ‘I’ are projected inside the VP headed by the unaccusative verb ‘be sweet’ and either one can move to Spec TP). Even in (70b), C-agreement with the experiencer is quite marginal; this is presumably because ‘be happy that’ needs to be coerced to take a nonfactive complement in order to make Eval and SoK semantically compatible with it. Despite this factor, a contrast is clearly evident to Torrence’s consultants and mine: (70b) is notably better than in (70a).

- (70) a. EsIt u-nem (*à-bo/*a-te) ke Ima a-ma-a-tem adesi.
 heart 3SG.s.2SG-sweet *2SG-C/*2SG-C that Ima 3SG-PST-3SG-cook rice
 ‘You are happy (lit. the heart sweetens you) that Ima cooked rice.’
- b. Àmì m-mé-nèm-ésít (??m-bo/??n-te) ké áfitówó é-yà-é-diõñò ákpáníkó.
 I 1SG.S-PERF-sweet-heart ??1SG-C/??1SG-C that everybody 3PL-FUT-3PL-know truth
 ‘I am happy (lit’ I am heart-sweetened) that everybody will know truth.’

One implication of this is that we do want to include experiencer arguments on the list of possible controllers of SoK in principle, even if in practice many cases are degraded due to the semantic consequences associated with having Eval and SoK present.³⁵ Another implication of this is that it gives yet another eloquent testimony to the importance of the T/Agree Condition on upward C-agreement, since just about the only difference between (70a) and (70b) is that the experiencer triggers agreement on T in (70b) but not in (70a).

This completes my exploration of the thematic factors that influence which argument of a matrix verb controls SoK in the CP complement of that verb. We have seen that only arguments with a “subject-like” thematic role can be the controller: agents, causers, sources, and experiencers. And, along the way, we have also seen more robust evidence for the T/Agree Condition.

2.3.3 Structural conditions on where SoK must be to be controlled

Having considered in some detail the conditions on what can be the obligatory controller of SoK in accordance with the Generalized Obligatory Control Signature, let us move to the other side of the relation: where SoK needs to be to be controlled. Landau’s (2013) OCS said something about this as well, that it is clauses that are “dependents of S” whose subjects undergo obligatory control by a codependent of S. PRO in clauses in other positions is either impossible or undergoes a distinct, not syntactically constrained, form of nonobligatory control. Building on previous literature—especially Manzini (1983) and Landau (2001)—Landau draws a distinction

³⁵ Indeed, Driemel and Kouneli (2022: 5 (8)) show that in their dialect of Kipsigis, which does not obey the T/Agree Condition, Agr-C (if that is what it is) can agree with the experiencer object of ‘forget’. (Note that this verb is particularly unlikely to be semantically compatible with a true verb meaning ‘say’.)

between CP complements on the one hand, and CP subjects and extraposed clauses on the other hand. My version of this, stated in the GOCS ((43)), is that OC is required for controllable null DPs at the edge of clauses that are generated inside VP—complement clauses or low adjunct clauses only. In this subsection, I consider this aspect of the syntactic constraints on OC as it applies to SoK in the upward C-agreement constructions.

It needs to be acknowledged that the literature on this topic is particularly small. It has been taken for granted that upward C-agreement happens in complement clauses. The implication is that it does not happen (or not much) in other kinds of clauses, but not much data has been explicitly presented about this. Therefore, Ibibio figures prominently in this discussion, for two reasons. One is that I have been able to collect explicit data from this language. The other is that Ibibio has the special property of stacking an agreeing C on top of other Cs, rather than replacing a nonagreeing C with an agreeing one. Therefore, if most Cs in complement clauses do allow an Agr-C to occur with them, whereas most Cs in noncomplement clauses do not, that begins to look syntactically significant. Then there is a generalization that is not well-captured simply by saying that (say) relative clauses happen to have this particular C and this particular C happens not to license SoK or probe for phi-features, as an idiosyncratic lexical property. The upshot of the investigation will be that C-agreement is ruled out outside of contexts of OC, complement clauses and a subclass of adjunct clauses. I claim that this follows from the GOCS in (43) together with the assumption in (71).

(71) SoK must undergo obligatory control (it cannot undergo NOC).

In future chapters, (71) will in turn be derived from the fact that SoK has no intrinsic semantically interpretable features. Therefore, it must get such features via a syntactic process by the time that the relevant phase undergoes Spell Out. OC is the syntactic process that can give it the features that it needs.

Consider first the possibility of CP subjects. Landau (2001) identifies these as a context of NOC, rather than OC in English.³⁶ My generalizations then expects that C-agreement should be impossible in CP subjects, wherever those are allowed. This seems to be true. Letsholo and Safir (2019: 16 (23)) show that a default C needs to be used instead of Agr-C in Ikalanga, as in (72b). Note that this is passive construction, and the corresponding active version does allow Agr-C. Therefore, Agr-C is not out in (72b) for selectional reasons. It is true that there is no obvious sentence-internal controller for Agr-C in (72b), but it is not inconceivable that a default form of Agr-C would be possible (*a-ti* or *ba-ti*), or that Agr-C could agree with some DP present in the larger context. Such things happen when NOC is at work.

- (72) a. Neo w-aka-duma (a)-ka-ti Nchidzi w-aka-tenga lori.
 CL1.Neo CL1.S-PST2-agree CL1-PST-C CL1.Nchidzi CL1.S-PST2-buy car
 ‘Neo agreed (or conceded) that Nchidzi had bought a car.’
- b. Kuti ba-thu ba-njinji a-ba-to-thoph-a kw-aka-dumi-gw-ana.
 that CL2-people CL2-many NEG-CL2.S-NEG-vote CL1 7-PST2-agree-PASS-RECP
 ‘That many people don’t vote was agreed on.’

³⁶ Landau (2001: 125) does not entirely rule out OC in CP subjects, however, to the extent that phrases A-moved to Spec TP can reconstruct into the vP domain. He takes this to be marked, but not impossible.

Similarly, Sikuku's Lubukusu allows CP subjects, but only with his default complementizer *bali*, not with Agr-C. For example, the psych object cannot trigger C-agreement on the CP subject.

- (73) Bali/?mbo/*a-li Wafula a-a-cha ly-a-siim-isya Wekesa.
 that/?that/CL1-C CL1.Wafula CL1.S-TNS-go CL5.S-TNS-like-CAUS CL1.Wekesa
 'That Wafula left pleased Wekesa.'

It is true that *a-li* in (73) is ruled out apart from control theory by the T/Agree Condition, given that the potential controller of SoK here is an object, and objects do not trigger agreement on T (or any similar head) in Lubukusu. Agr-C in CP subjects is thus expected to be bad both from the perspective of control theory and from the theory of Agree. Still, (73) is consistent with (43) and (71). As for Kinande and Ibibio, they do not allow bare CPs in the subject position, so the issue of C-agreement in this configuration does not arise for them.³⁷ The nearest equivalents of (72b) and (73) that my sources are comfortable with have the CP embedded inside a "carrier noun" such as 'the fact that ...' or 'the news that ...', and in these constructions one needs to take into account covert arguments of the carrier noun (see below).

Consider next the possibility of Agr-C in adjunct clauses. Certain kinds of adjunct clauses are another canonical environment of NOC rather than OC according to Landau (2013: 231-233, etc.)—especially high adjunct clauses that appear before the main clause, or that appear after the main clause set off by an intonation break. At the same time, other kinds of adjunct clauses allow for, even require OC; see Landau (2021) for the most extensive and recent discussion, based primarily on English. Against this background, (71) leads us to expect that some adjunct clauses in the African languages might allow upward C-agreement, whereas other types will not allow it. As a broad-brush expectation, this is borne out. Deircks (2013: 403) says that Agr-C is not possible in 'because' clauses and conditional clauses in Lubukusu, as in (74).

- (74) Mikaeli a-likho a-cha sikilia mbo/bali/*a-li a-likho e-elekesia Tegani.
 CL1.Michael CL1.S-PROG CL1.S-go because that/that/ CL1-C CL1.S-PROG CL1.S-escort CL1.Tegani
 'Michael is leaving because he is escorting Tegan.'

On the other hand, Justin Sikuku provides the example in (75), where an Agr-C occurs along with a second C-like element in a purpose clause.³⁸

- (75) Wekesa a-pa baba-ana a-li ne ba-kesiy-e.
 CL1.Wekesa CL1.S-hit CL2-children CL1-C so.that CL2.S-be.clever-SBJV

³⁷ One or two marginal examples of a bare CP subject in Ibibio can be found in Afra naph, but Willie did not like them at all in my elicitation, and I did not push the issue to see whether they allowed C agreement without further degradation (my prediction is no).

³⁸ Sikuku also allows Agr-C in the example in (i), glossed as having a 'because' clause. I do not know if there is a semantic difference between the kind of adjunct clause in (74) and the kind in (i) that underlies this, or if it is idiosyncratic interdialectal variation. (It is also notable that Agr-C follows the word glossed 'because' in (74) but precedes it in (i). This difference could be significant in light of phase boundaries and the locality conditions on OC and Agree.)

- (i) Wekesa a-pa baba-ana a-li khubele ba-nywa kama-beele. (Lubukusu)
 CL1.Wekesa CL1.S-hit CL2-children CL1-C because CL2.S-drank CL6-milk
 'Wekesa hit the children because they drank the milk.'

‘Wekesa hit the children so that they would be clever.’

Kawasha (2007: 189 (14b)) also gives a purposive example with agreeing C for the Zambian/Angolan language Lunda. The same distinction between CP adjuncts that allow Agr-C and ones that do not is found in Ibibio. As in Lubukusu, Agr-C is possible with a purposive clause, as in (76).

- (76) Okon á-ke á-dát íbók ódó (a-bo / a-te) m̀bàak (imo) i-dí-dóñó.
 Okon 3SG-PST-3SG-take medicine the 3SG-C/3SG-Cso.that LOG 3.LOG-prohibit-be.sick
 ‘Okon took the medicine so that he would not get sick’

In contrast, other types of adjunct clause do not (or are not known to) allow an Agr-C to be generated on top of the other complementizing elements in Ibibio. For example, ‘because’ clauses headed by *sia* never occur with an Agr-C in this language.

- (77) Nnyin i-m-i-yat esit (*i-bo/*i-te) sia Okon a-ma-a-yip ebót odo.
 we 1PL-PERF-1PL -hot heart *1PL-C/*1PL-C because Okon 3SG-PST-3SG-steal goat the
 ‘We are upset/angry because Okon stole the goat.’

Similarly, none of my examples have Agr-C along with *ke ini* ‘when’ (lit. ‘at time’) or *akpedo* ‘if’ in Ibibio. So adjunct clauses do vary in their tolerance of upward C-agreement, as expected.

The question arises, then, whether this variation among adjunct clauses has a syntactic basis (rather than a purely semantic basis, or mere lexical differences in the properties of the C heads). I tentatively assume that it does. For example, in Ibibio there seems to be a correlated difference in island behavior: purpose clauses are like CP complements in allowing the extraction of a focused *wh*-word, whereas ‘because’ clauses and ‘when’ clauses do not.

- (78) a. Anie ke Okon a-di-ka Lagos mbaak anye a-di-kit?
 who FOC Okon 3SG-FUT-go Lagos so.that 3SG 3SG-FUT-see
 ‘Who will Okon go to Lagos so that he will see?’
- b. ?*Anie ke Okon a-ke-ka Lagos sia anye a-ke-yem adi-kit?
 who FOC Okon 3SG-PST-go Lagos because 3SG 3SG-PST-want INF-see
 ‘Who did Okon go to Lagos because he wanted to see?’
- c. ?*Anie ke Okon a-ke-bọọñ-mkpo ke ini anye a-ke-kit-te ke urua?
 who FOC Okon 3SG-PST-shout LOC time 3SG 3SG-PST-see-REL LOC market
 ‘Who did Okon shout/call out when he saw in the market?’

This suggests a structural difference. Another correlated difference is that logophoric pronouns are licensed in ‘so that’ clauses in Ibibio, but not in ‘because’ clauses or ‘when’ clauses—the same split. From a broader perspective, Landau (2021) shows that control behavior is correlated with syntactic position for adjunct clauses in English: adjunct clauses inside VP require obligatory control (unless other factors intervene), whereas adjunct clauses outside VP uniformly

allow nonobligatory control.³⁹ Therefore I tentatively assume that adjunct clauses that allow Agr-C in the African languages are generated lower, inside VP (or just above it), whereas adjunct clauses that systematically do not are generated higher, outside VP and adjoined to TP or so. Thus my version of the GOCS in (43) distinguishes clauses that are inside VP from clauses that are outside VP: the former group includes CP complements and one class of adjunct clauses ('so that' clauses); the latter group includes CP subjects and the other class of adjuncts ('because', 'when' and 'if' clauses). CPs that are outside VP do not allow an SoK at their edge to undergo OC, so they cannot have SoK by (71). As a result, they cannot have Agr-C, C having nothing nearby to agree with. However, I am not able to nail this down the way that Landau does for English, not having the necessary tests for VP constituency in these languages. (Ibibio does not have VP ellipsis, for example, nor VP fronting.) This particular formulation is thus a bit tentative, and I remain open to alternative ways of distinguishing the one class of adjunct clauses from the other.

Consider next relative clauses. Although Landau says little about control in infinitival relatives in English, these are generated inside a nominal projection, not a VP or extended VP. As such, they are not a context of OC according to the (G)OCS. Indeed, to the extent that infinitival relative clauses are possible in English, their PRO subjects do not need to be locally controlled, as seen in (79).

(79) Mary_i thinks that on the table there is [a good book [PRO_{i,arb} to read to herself_i/oneself at bed time]].

Given this, the expectation of the GOCS plus (71) is that upward C-agreement should be impossible in relative clauses. This is true for Ibibio, as shown in (80); neither Agr-C can be added on top of the relative complementizer *se*, whereas they can be added above the Cs that head CP complements (*ke, mme, yak*).

(80) Okon a-sak a-yem ngwet (*a-bo/*a-te) se (ami) ng-k-i-nọ imo.
Okon 3SG-PROG 3SG-seek book *3SG-C/*3SG-C REL I 1SG-PST-1SG-give LOG
'Okon is looking for the book that I gave him.'

Nor has agreeing C been attested in relative clauses in any of the other relevant languages, although this may not have been explicitly considered very often.

This brings us to the very interesting case of CP complements to nouns, such as *Mary heard [the news [that Sue will visit soon]]*. Like relative clauses, these are generated inside NPs/DPs, not inside VP. Therefore, they should not be contexts of obligatory control for the GOCS. Nevertheless, Diercks (2013: 378 (53)-(55); 393 (99), (100)) observes that in Lubukusu when this sort of [N+CP] constituent is the object of a verb (or even of a preposition), C agreeing upward with the subject of the verb is possible. Two of his examples are in (81).

(81) a. N-a-ulila li-khuwa n-di Sammy ka-a-kula li-tunda.
1SG.S-PST-hear CL5-word 1SG-C CL1.Sammy CL1.S-PST-buy CL5-fruit
'I heard the rumor that Sammy bought the fruit.'

³⁹ One exception is that low adjuncts that have null operator movement do allow NOC, because OC is incompatible with the binding of the operator. A more serious mismatch between what I assume here and what Landau (2021) argues for is that he claims that high adjuncts in English allow OC as well as NOC. A large part of the reason (although not the only reason) Landau assumes this is because PRO in a high adjunct can have an inanimate controller, which he takes to be indicative of OC (although he acknowledges that topical inanimates can sometimes be NOC controllers). To keep to the simple view adopted in the text, I have to assume that inanimates can be NOC controllers rather freely in the right contexts.

- b. Palin a-biyila e-nganakani a-li Obama a-kha-khile e-kuura.
 CL1.Palin CL1.S-hates CL9-idea CL1-C CL1.Obama CL1.S-FUT-win CL9-election
 ‘Palin hates the idea that Obama will win the election.’

Letsholo and Safir (2019) mention in passing that this is possible in Ikalanga as well, and one of Diercks and Rao’s (2019) two Kipsigis speakers also allows it (p. 376 (13)). This construction is also possible in Ibibio, as in (82).⁴⁰

- (82) a. Emem a-me-kop mbak **a-bo** ke Okon a-ma-a-due.
 Emem 3SG-PERF-hear news 3SG-C that Okon 3SG-PST-3SG-guilty
 ‘Emem heard the news that Okon was guilty.’
- b. Emem a-ma-a-dokko Ekpe mbak **a-bo** ke Okon a-ma-a-due.
 Emem 3SG-PST-3SG-tell Ekpe news 3SG-C that Okon 3SG-PST-3SG-guilty
 ‘Emem told Ekpe the news that Okon was guilty.’
- c. **Nditọ** e-ma-e-n-dokko e-bańa údúak Okon **e-bo** ke Emem a-ya n-nwam.
 children 3PL-PST-3PL-1SG.O-tell 3PL-about plan Okon 3PL-C that Emem 3SG-FUT-1SG.O-help
 ‘The children told me about Okon’s plan that Emem will help me.’

Diercks does not give explicit evidence that these N+CP sequences count as an NP constituent in Lubukusu. However, for Ibibio this can be confirmed by clefting evidence.⁴¹ (83a) shows that it is possible to move the N+CP to the front of the clause as a unit by focus-fronting, whereas (83b) shows that the noun ‘news’ cannot be fronted by itself, leaving the CP behind.⁴²

- (83) a. [Mbak ke Okon a-ke-due] ke Emem a-ke-kop/a-ke-dokko Ima.
 news that Okon 3SG-PST-guilty FOC Emem 3SG-PST-hear/3SG-PST-tell Ima
 ‘It’s the news that Okon was guilty that Emem heard/told Ima.’
- b. *Mbak ke Emem a-ke-dokko Ima -- [ke Okon a-ma-a-due].
 news FOC Emem 3SG-PST-tell Ima that Okon 3SG-PST-3SG-guilty
 (literally: ‘It’s the news that Emem told Ima that Okon was guilty.’)

Examples like those in (81) and (82) are of theoretical interest in that they are quite problematic for a direct Agree account, as Letsholo and Safir acknowledge. Carstens (2016: 30-31) has a brief discussion in which she claims that direct agreement is possible as long as D is not a phase head in Lubukusu. I think that the bulk of evidence is that Ds are normally phase heads across languages, but it may be that these “carrier nouns”, which do not denote normal

⁴⁰ In contrast to its Bantu kin, Kinande does not seem to allow CP as the complement of N. The closest it has is a periphrastic construction like ‘Kambale announced news of saying that Mary will go’, where the CP is not the complement of the noun ‘news’ but rather of the infinitival verb ‘say’ in construction with ‘news’.

⁴¹ Similar evidence from Lubukusu passive and focus movement suggests that the CP may be parsed as a constituent of NP (Sikuku p.c. April 2020). However, Sikuku also accepts the N(P) moving by itself, stranding the CP (similar to (83b)).

⁴² For Ibibio, C-agreement inside the fronted [N-CP] in an example like (83a) was deemed impossible (*mbak a-bo ke Okon... ‘news CL1-C that Okon...’). This is an interesting issue for the theory of connectivity, since it isn’t clear why reconstruction couldn’t make the control of SoK by *Emem* possible. The analogous example in Lubukusu was considered degraded (??) but not impossible, so it is not clear how general/robust this effect is.

individuals, do not necessarily come with D heads. However, an example like (82b), in which the [N+CP] constituent is the second object of a ditransitive verb like ‘tell’, poses additional problems for Carstens’s direct Agree hypothesis, I believe. Carstens allows the C head to agree with the subject in Spec VoiceP either in situ, from its base position (probing predictably upward), or by moving covertly to an outer Spec VoiceP and probing downward. Neither option works well for (82b). If C probes upward from its base position, the goal argument should count as a defective intervener, blocking C from agreeing with the more remote subject. (The goal itself cannot agree with C because it receives inherent case from an applicative head, according to Carstens.) This is thus the sort of structure that requires movement to Spec VoiceP within Carstens’s system. But in this case what would move to Spec VoiceP is presumably not just CP but the larger [_{NP} N+CP] constituent. Then the C embedded inside this larger NP constituent does not c-command the subject in the inner Spec VoiceP, such that it could find the subject by probing downward. There is, then, no convenient direct agreement account this kind of example.

The examples in (81) and (82) pose a challenge for my account too. It seems that the subject of (say) ‘tell’ in (82b) cannot control SoK inside the CP complement of ‘news’ because it is not a coargument of that CP. The solution to this problem, I suggest, is to say that SoK in these examples is really controlled by a null argument of ‘news’. Since this null argument is a coargument of the CP, it can be an obligatory controller of SoK. The matrix subject can then control the null argument of ‘news’ (an instance of NOC, the null argument of N not being subject to (71)), giving the appearance that the matrix subject controls SoK directly. This gives us the analysis of (82b) sketched in (84).

- (84) [Emem_i told Expe [_{NP} *pro*_i’s news [_{CP} SoK_i C that [Okon is guilty]]]].
 |—————| |—————| \ /
 control (NOC) control (OC) Agree

This structure is also compatible with the T/Agree Condition, as long as we take “controller of” to be a transitive property. Then *Emem* is a controller of SoK (by controlling *pro*), and T agrees with *Emem*, so C can manifest agreement with SoK in this case.⁴³

This analysis is supported by what happens when the head noun in this [N+CP] construction has an overt possessor argument. Diercks (2013: 378 (56), (57)) observes that if the noun with a CP complement has a distinct possessor, it blocks agreement between the matrix subject and the C of CP within the NP in Lubukusu. Thus, in (77) the presence of the possessor ‘Alfred’ makes it impossible for the C head of the complement of ‘certainty’ to agree with the matrix subject ‘I’.

- (85) M-bona bu-ng’ali bw-a Alfredimbo/*ndi/*a-li ba-ba-ana b-ewa ba-kha-khile.
 1SG.S-PRS.see CL14-certainty CL14-ASS Alfred that/*1SG.C/*CL1-C CL2-children CL2-his CL2.S-FUT-win
 ‘I see Alfred’s certainty that his children will win.’

⁴³ An alternative analysis could be to say that expressions like ‘hear the news that’ can count as complex predicates, perhaps as a result of ‘news’ covertly incorporating into the verb ‘hear’. Then the subject of the sentence and the CP are both arguments of the derived complex predicate ‘hear-news’, making OC possible. On this alternative, we would have to add something to get the badness of C-agreement with the subject in examples like (85): we would have to say that overt possessors block complex predicate formation. However, that constraint may not be unreasonable. Whatever mechanics we settle on, we know that OC does happen into NPs in examples like *Chris_i made a valiant attempt [PRO_i to escape]*, so the analogy between upward C agreement and control of PRO is not threatened by these examples.

Deircks and Rao (2019: 376 (14)) also document this effect in Kipsigis, which rules out the analog of (85). This fact makes good sense given the analysis sketched in (84). Clearly the subject of ‘see’ does not control the possessor of ‘certainty’ in (85), because they are realized by distinct overt NPs, which are not coreferential. Therefore, the subject of the verb cannot control SoK in the CP complement of the noun indirectly in this case. Then the GOCS steps in to explain why the subject of the verb cannot control the SoK in the CP complement directly either: it is not an argument of the head ‘certainty’ that CP is a complement of. (85) then does bring out the locality of obligatory control which is concealed in (81) and (82) by the possibility of a null possessor.

The analysis in (84) implies that it is possible for the possessor of a noun to obligatorily control something at the edge of a CP complement of the noun. This calls for a revision to the GOCS, so that it does not refer specifically to verbs (as (43) does) but to any argument-taking lexical head. This is stated in (86), with the revisions underlined.

(86) *The Generalized OC Signature: (GOCS, revised)*

If a clause with an intrinsically null DP (PRO, SoK, other “ghostly DPs”,...) at its edge is generated within the *XP* headed by lexical head X, then the null DP is controlled by an argument of X. Which argument of the X is the controller is determined by the thematic roles of the controller and the controlee.

This cross-categorical version of the GOCS is needed for control of PRO in languages like English too, since we have OC inside nominals as in [*Chris’s attempt [PRO to solve the puzzle]*] and indeed in adjectival constructions like [*Chris was rude [PRO to slam the door on the way out]*]. Once we allow this, it might seem like a problem that the *a-li* form of C in (85) is ruled out, which would be C agreeing with SoK controlled by the possessor ‘Alfred’. However, this is not a problem, because this agreement is ruled out in (85) by the T/Agree Condition, given that possessors do not trigger agreement on T or any analogous DP-internal head in Lubukusu. This then is the fourth case in which a “thematic subject” of some sort (which possessors often are) fails to trigger C-agreement itself while still preventing some other argument from doing so, along with the causees of productive syntactic causatives, the *by*-phrases of long passives, and the source phrases of verbs like ‘hear’ in some languages.

This investigation could now lead us into questions about the fine-grained structure of nominals in the various relevant languages, which would be an edifying topic. I enumerate some of the issues that arise and comment briefly on them, but do not carry out a full investigation. One further detail is that Diercks (2013: 378 (57)) shows that modifying the head noun in a [N+CP] structure with a locative/PP element does not block C from agreeing with the subject of the sentence in Lubukusu, the way that modifying it with a possessor does. Thus (87) contrasts minimally with (85) above.

(87) M-bona bu-ng’ali mu-Alfredi **ndi** baba-ana b-ewa ba-kha-khil-e.
 1SG.S-PRS.see CL14-certainty CL18-Alfred 1SG.C CL2-children CL2-his CL2.S-FUT-win-SBJV
 ‘I see the certainty in Alfred that his children will win.’

This is syntactically compatible with my analysis: it is perfectly possible for an NP to have both a possessor and a distinct PP modifier (e.g. *Chris’s book on the shelf*), so ‘certainty’ in (87) could have a null possessor controlled by ‘I’ as well as the PP modifier ‘in Alfred’. However, it would have to be worked out what the complex NP in (87) would have to mean on this analysis, and

then tested to see if it does in fact mean that. Perhaps more surprisingly, having an overt possessor inside NP does not block C in the complement of N from agreeing upward with the subject in Ibibio the way that it does in Lubukusu and Kipsigis. Examples are in (88). Here the possessors inside NP (*Emem* in (88a), ‘children’ in (88b)) cannot trigger C-agreement, as expected given the T/Agree condition, but they do not block C-agreement with the matrix subject (‘children’ in (88a), *Okon* in (88b)). (82c) is another example of this type.

- (88) a. Nditō e-me-kop mbak Emem e-bo/*a-bo ke Okon a-ma-a-yip ngwet.
 children 3PL-PERF-hear news Emem 3PL-C/*3SG-C that Okon 3SG-PST-3SG-steal book
 ‘The children heard Emem’s news that Okon stole the book.’
- b. Okon a-me-kop mbak nditō a-bo/*e-bo ke Emem a-ma-a-dep ebot.
 Okon 3SG-PERF-hear news children 3SG-C/*3PL-C that Emem 3SG-PST-3SG-buy goat.
 ‘Okon heard the children’s news that Emem bought a goat.’

This can be subsumed to the possibility of (87) if the overt “possessor” in Ibibio is not necessarily a subject-like argument, but can be structurally more like ‘sincerity in Alfred’ in (87) than like ‘Alfred’s sincerity’ in (85) in Lubukusu.⁴⁴ This kind of variation is not too surprising from a broader typological perspective, since we know that possessors are more subject-like in some languages than in others; for example *John* in *John’s book* looks superficially like a subject of DP (a specifier) in English, whereas *Juan* in *el libro de Juan* looks superficially more like a PP complement of N. But again, the details would have to be worked out.

Another “fine structure of NP/DP” question that arises is whether the possibility of a controllable null possessor of N should make upward C-agreement in a relative clause possible as well, contrary to fact (see (80)). One way to foreclose on this possibility is to say that relative clauses in these African languages are high adjunct modifiers inside the DP—dependents of some high head in the extended projection of the nominal, not of NP itself. Then relative clauses will not be contexts of OC, even by the possessor, for the same reason that high clausal adjuncts like ‘when’ clauses and ‘because’ clauses are not contexts of OC. Taking this one step farther, one would not have to say that CPs in construction with nouns like ‘news’, ‘rumor’ and ‘idea’ are literally complements of the noun to make it possible for SoK in them to be controlled by the possessor, and hence indirectly by the subject of the clause. We get the same result if these clauses are adjoined to NP, in which case they are contexts of OC by an argument of N, just like low adjuncts of VP are contexts of OC by the subject of the verb. We can then allow for a degree of freedom here in the exact analysis of these [N+CP] constructions. Finally, one can wonder about what might happen when an [N+CP] construction is used as the subject of a clause, rather than as the object of the clause, in structures like ‘The news [*Agr-C?*] that Eno won the lottery surprised Okon’ and ‘Okon thinks that the news [*Agr-C?*] that Eno won the lottery is surprising’. In fact, this is what Ibibio does instead of allowing bare CPs in subject position, as mentioned above. The descriptive fact is that *Agr-C* agreeing with ‘Okon’ is not possible in these contexts. When ‘Okon’ is the object of the psych verb, this is expected given the T/Agree Condition. But when ‘Okon’ is the subject of a higher verb like ‘think’ there is a T that agrees with it, so this instance of long distance upward C agreement is not ruled out by the T/Agree Condition. I revisit this point in a later chapter, arguing that the Phase Impenetrability Condition prevents long-distance upward C-agreement in this “super-equi” like context (see section xx).

⁴⁴ Logophoric pronouns in Ibibio also show that a noun like ‘news’ can have a null argument in addition to the possessor. See Chapter 5, as well as fn 50 below.

Tearing myself away from these finer points, then, I summarize the overall pattern. In addition to Agr-C being possible in the CP complements of verbs (the canonical case), we have seen that it is also possible in low adjunct clauses ('so that' clauses) and in the CP complements of nouns. However, Agr-C is not possible in CPs in a variety of other syntactic positions: sentential subjects, high adjunct clauses ('because', 'when' and 'if' clauses), and relative clauses. To this we can also add the elementary fact that Agr-C is not routinely found in root clauses in any of these languages.⁴⁵ This distribution is analogous to what we find in control theory, where CP complements and some CP adjuncts are contexts of obligatory control, whereas CP subjects, other CP adjuncts, relative clauses, and root clauses are not contexts of obligatory control. The fact that the upward C-agreement constructions and canonical control constructions have parallel distributions in this way argues in favor of my hypothesis that obligatory control is crucially involved in upward C-agreement constructions. In particular, it is what provides the link between SoK which C is in a position to agree with and the NP in the matrix clause which is the ultimate source of the phi-features that are manifested on C.

We have now considered the two crucial ingredients of C-agreement according to the indirect agree hypothesis: how the local trigger of C agreement is licensed (by a kind of theta-role assignment from an Eval head) and how it is controlled by an argument of the lexical head which the CP merges with. These two ingredients provide the core of my account.

4 Object-oriented C-agreement in Kipsigis

There is one other very interesting potential case of upward C-agreement in this range of African languages that is worth additional discussion. This is the fact that, according to Diercks and Rao (2019) (D&R), C in Kipsigis can bear upward object agreement as well as upward subject agreement. Basic examples are shown in (89).

- (89) a. Ko-i-mwaa-an i-lɛ-ndʒan ko-Ø-it layok.
 PST-2SG.S-tell-1SG.O 2SG-C-1SG PST-3-arrive children
 'You (sg) DID tell me that the children arrived.'
- b. Ko-a-mwaa-tʃi a-lɛ-ndʒi ko-Ø-it layok.
 PST-1SG.S-tell-APPL.3.O 1SG-C-3 PST-3-arrive children
 'I DID tell him/her/them that the children arrived.'

Here agreement with the matrix subject is a prefix on C, whereas agreement with the matrix object is a suffix on C. This second agreement is said to be a productive possibility with any verb

⁴⁵ Although this is taken for granted by all, it is not so easy to show clearly in languages in which Agr-C is homophonous with the verb 'say', like Ibibio and Kinande. For example, the second sentence in (i) could give the impression that the Agr-C *a-bo* is possible in a root clause in Ibibio. However, it fits perfectly to say that *a-bo* is just the main verb 'he says' in this case. Despite such examples, it is clear that the normal (null) C in root clauses does not routinely bear overt agreement in these languages.

- (i) Okon a-ma-n-dokko miin ke imo i-ma-i-dep udia ye a desi.
 Okon 3SG-PST-1SG.O-tell me that LOG 3.LOG-PST-3.LOG-buy yam and rice.
 Ndion **a-bo** imo i-ma-i-tem adesiodo.
 then 3SG-C LOG 3.LOG-PST-3.LOG-cook rice the
 'Okon told me that he bought yams and rice. Then [he said that] he cooked the rice.'

that selects both a CP and a matrix object; for example, it is possible with the manner of speech verb ‘whisper’, as well as the generic speech verb ‘tell’ (D&R 382 (29)).

- (90) ko-ɑ-tʃɔm-dʒi Kiproono ɑ-lɛ-(ndʒi) ko-Ø-it tuɣa amut
 PST-1SG.S-whisper-APPL.3.O Kiproono 1SG-C-(3.O) PST-3-arrive cows yesterday.
 ‘I whispered to Kiproono that the cows arrived yesterday.’

Upward C-agreement is considerably more marked than C-agreement with subjects, attested only in this one language to date (at most). But that does not mean that one cannot learn important things about universal grammar from it. Indeed, this extension of the C-agreement phenomenon fits well with my grand unification project: it allows for a broader comparison between C-agreement and languages that allow indexical shift of ‘you’ as well as ‘I’, and those that have addressee pronouns as well as logophoric pronouns.

This section comes with a caveat. Driemel and Kouneli (2022) (D&K) have recently disputed D&R’s analysis, claiming that the putative agreeing C *-le* in Kipsigis is still synchronically a verb, not a C at all. I cannot fully adjudicate this debate, not knowing anything about this language except what the four authors tell me. But my working hypothesis (best guess) is that *-le* is a genuine C in some examples and a verbal participle in others. D&K do give good evidence that *-le* is sometimes a verb in subjunctive mood in Kipsigis: it can be inflected for aspect as well as for mood, it can be modified by an adverb, it can have an overt subject (rarely), and it can bear applicative, reflexive, and reciprocal morphology. However, they do not argue strongly that *-le* is never a genuine complementizer. The sense of their paper is an Occam’s Razor argument: some instances of *-le* are unambiguously verbs, all instances of *le* can be analyzed as verbs (they claim), so all instances of *-le* should be analyzed as verbs. Although this is a very reasonable hypothesis to entertain, it is not at all rare in natural languages for one vocabulary item to be multifunctional in significant ways. *Prima facie* reasons to think that *-le* can be a C in Kipsigis are: (a) it often appears where we would expect a C to be (before an embedded clause in a head-initial language); (b) it has the meaning we expect a C to have (i.e., not much meaning; in particular it clearly does not mean ‘say’ in some examples); (c) it has a unique syntax, being the only element possible in some of the positions where it occurs, as expected for a C. (On D&K’s view, not at all clear why other verbs with similar meanings and selectional properties couldn’t be used in the same positions, V being an open class category.) Therefore, I assume that in examples where there is nothing in the structure that forces *-le* to be parsed as a verb, it can be parsed as a C-head, as D&R claim. This C analysis is particularly appropriate when there is no explicit sense of saying associated with *-le*—when *-le* is used with a verb like ‘think’ or ‘hear’ or ‘forget’.⁴⁶ Therefore, I provisionally accept D&R’s claim that Kipsigis has upward C agreement—with objects as well as with subjects. Another reason why I am willing to take on this assumption is that nothing significant needs to be added to my overall framework to allow for this sort of C-agreement. On the one hand, this means I do not need a heavy burden of proof to believe that the phenomenon is genuine; on the other hand, my sense of the overall theoretical landscape will not change very much if this case is rejected, making the risk of being credulous on this point is not very high. In particular, allowing there to be two ghostly DPs in the same clausal periphery will be motivated for indexical shift, allocutive marking, and languages with

⁴⁶ I find it potentially significant that most if not all of D&K’s striking examples of *-le* showing verbal behavior are ones in which the matrix/first verb is a verb of speaking, where the lexical meaning of ‘say’ is redundant. For example, when *-le* bears imperfective aspect in their (16), the matrix verb is ‘say’; when *-le* is modified by the adverb ‘slowly’ in (23), the matrix verb is again ‘say’; when it has an overt subject of its own in (31), the matrix verb is again ‘say’; when it has applicative morphology that cannot be analyzed as object agreement in (47) and (48), the main verb is ‘complain’ or ‘write’. I would like to know if these unambiguous verbal behaviors are possible when *-le* follows verbs like ‘think’, ‘hear’ and ‘forget’, and if so, whether a clear sense that a saying event was involved emerges which *-le* does not otherwise require.

addressee pronouns, even if no language shows it for upward C-agreement. However, readers are welcome to take this section with however many grains of salt they consider called for.

What then needs to be said to generalize my account of upward C-agreement to upward agreement with the object? The first step is that the C-space in Kipsigis must license a second ghostly DP operator, in addition to SoK. I tentatively refer to this as OoK, for “object of knowledge”. The structure could look like (91).⁴⁷

(91) I_i tell Kiproono_k [_{Eval1P} SoK_i Eval1 [_{Eval2P} OoK_k Eval2 [_{TP} the children arrived]]]

Here the Eval1 head agrees with SoK and Eval2 agrees with OoK. Eval2 then moves into Eval1 to create a single head, spelled out as *le*. This complex head then has two distinct bundles of phi-features, coming from different sources.⁴⁸

Is the presence of the OoK in a structure semantically detectable, the way that I have argued that SoK is in section 2.2? The answer is a resounding “maybe”. D&R do report that examples like (89) and (90) have a different force with upward object agreement and without it; they tentatively identify it as examples with object agreement on C having verum focus, as seen in their glosses for (89a,b). However, it is not clear just how to relate that kind of meaning to the presence of a theta-role receiving DP like OoK. Nor do D&K comment on this in the variety of Kipsigis they studied. Therefore, I refrain from further speculation about the semantic issues.

The other major piece of my analysis of upward C-agreement comes from control theory. In this case, the matrix subject controls SoK and the matrix object controls OoK, as shown by the indexing in (91). This is in line with the GOCS: both null controllable DPs in the periphery of the CP complement are controlled by arguments of the verb that CP is the complement of. Indeed, D&R (2019: 383 (31)) show that upward object agreement on C in Kipsigis has the same clause-level locality that upward C agreement with the subject has. Thus in (92a) the complementizer in the lowest CP can agree with ‘you’, the object of the verb ‘tell’ that CP is a complementizer of, but it cannot agree with *Kiproono*, the object of the higher verb. (92b) shows that the C in the lowest CP cannot agree with the object of a verb two clauses up even if the intermediate verb (‘think’) does not take an object of its own (thanks to Madaline Bossi p.c. for providing this example). This also follows from the GOCS, whereas a relativized-minimality-style statement like “C in Kipsigis shows suffixal agreement with the closest c-commanding object” might allow *i-le-ndʒan* in (92b).⁴⁹

(92) a. Ko-Ø-mwɔɔ-tʃi tʃɛpkɔɛtʃ Kiproono kɔle ko-a-mwaa-un a-le-ndʒin/ *a-le-ndʒi
 PST-3.S-tell-APPL.3.O Chepkoech Kiproono that PST-1SG.S-tell-2SG.O 1SG-C-2SG.O/*1SG-C-3.O
 ko-Ø-ruuja tuya
 PST-3.S-sleep cows

⁴⁷ In that there are two DPs in the periphery, (91) starts to resemble Speas and Tenny’s (2003) SAP structure, which has two ghostly DPs (speaker and hearer), rather than their EvalP structure, which has only one DP (SoK). Indeed, I will want to say that SoK and OoK in Kipsigis are parallel to Sp and Ad in other languages like Magahi. But despite the parallelism, SoK and OoK also differ from Sp and Ad in a cluster of ways. For example, Sp and Ad have 1st and 2nd person features whereas SoK and OoK do not. I discuss this in detail in chapters 3 and 4.

⁴⁸ There are various ways to develop the details, which do not matter much for my purposes. For example, Eval2 could be segmentally *ndZ*—a distinct piece of the morphology of a agreeing C which is cognate with an applicative affix found on verbs (see D&K). It is also possible to posit a single Eval head that licenses two specifiers, an outer one (SoK) and an inner one (OoK), if one’s framework allows multiple specifiers.

⁴⁹ Indeed, I do not know how (92b) would be ruled out with *i-le-ndʒ-an* in D&K’s analysis, according to which *-an* in *i-le-ndʒ-an* is an object clitic ‘me’ licensed by applicative formation on the verb *le* ‘say’.

‘Chepkoech told Kiproono that I told you that the cows slept (recently).’

- b. Koo-mwa-waan Kibeet ko-le-(ndʒan) ii-bwat-i i-le-(*ndʒan) tiiny-e
 PST.3.S-tell-1SG.O Kibeet 3SG-C-(1SG.O) 2SG.S-think-PROG 2SG-C-(*1SG.O) have-PROG
 Chepkoech tɔ̀ndet kaaron.
 Chepkoech guest tomorrow
 ‘Kibeet TOLD me that you think that Chepkoech will have a visitor tomorrow.’

The GOCS similarly predicts that C in Kipsigis can agree with the object of the matrix verb but not with the possessor of the object of the matrix verb, since that is not an argument of the verb of which CP is the complement. This has not been tested in the two articles on this topic, however.⁵⁰

The most interesting thing about upward C-agreement in Kipsigis for developing my overall theory is that it strongly supports (44), the statement that the obligatory controller of a ghostly DP X is the argument of the CP-selecting verb whose thematic role best matches the thematic role of X. This is my core generalization about controller choice, at least for the ghostly operator constructions. So far, we have only seen one side of this generalization: the agent-subject (or source, or experiencer) of the matrix verb can control SoK and hence trigger agreement on C, but the goal or theme object cannot. This is the basis for my answer to the question of why C agreement in languages like Kinande and Lubukusu apparently skips agreeing with the object, which looks like a closer target, and agrees with the subject instead. Now in Kipsigis we can see the other side of a pleasingly symmetrical coin: the matrix goal-object can control OoK and thus trigger agreement on Eval2, whereas the agent-subject cannot. This fits with (44) on the assumption that Eval2 assigns a theme or goal-like role to OoK, rather than an agent-like one. This in turn makes sense of we think of OoK as being like the object of C in a neo-performative theory, just as SoK is the like the subject of C—C here thought of as a grammaticalization of triadic ‘tell’ rather than of dyadic ‘say’. This shows that there is no intrinsic ban on objects controlling ghostly operators, and no intrinsic priviledge for subjects to control them. It is just that the thematic roles of the controller and the controllee need to be taken into account—as is also true for the ordinary control of PRO. Thus, D&R (2019: 373 (8)) show that C in Kipsigis cannot show *prefixal* agreement with the object, as in (93). This is the same fact that the object cannot control SoK that we have seen in Kinande, Lubukusu, and Ibibio.

- (93) Ko-a-mwaa-wuun kɔ̀le/a-le/ *i-le ko-Ø-ruuja tuya amut.
 PST-1SG.S-tell-2SG.O that/1SG-C/*2SG-C PST-3.S-sleep cows yesterdat
 ‘I told you (sg) (that) the cows slept yesterday.’

⁵⁰ Another similarity between upward C-agreement with objects and upward C-agreement with subjects is that both are possible in the CP complement of a noun like ‘story’ functioning as the object of a verb like ‘tell’, as seen in (i) (Diercks and Rao 2019: 384(35)). My analysis from section 2.3.3 can extend to this case if we assume that ‘story’ can have two null arguments, an agent-like null possessor and an implicit goal (cf. English *your letter/story to me*). Then the subject and object of ‘tell’ can control the two null arguments of ‘story’ and the null arguments of ‘story’ can control SoK and OoK in accordance with the GOCS. (It would also work to say that ‘tell+story’ is a complex predicate here; see fn. 43).

- (i) Ko-i-mwaa-an atindoniot kɔ̀le/%i-le/%i-le-ndʒan ko-Ø-it la yok.
 PST-2SG.S-tell-1SG.O story that/%2SG-C/%2SG-C-1SG.O PST-3-arrive children
 ‘You (sg) told me the story that the children arrived.’

In contrast, the possibility of *suffixal* agreement on C with the matrix object in Kipsigis shows that matrix objects of ditransitives can control into CPs with an agreeing Cs—they just can't control the SoK element, but only OoK. Conversely, D&R's (2019: 383 (30)) in (94) shows that the subject of the matrix clause cannot control OoK, such that it triggers suffixal agreement instead of or in addition to prefixal agreement.

- (94) ko-a-mwaa-un a-le-ndzin/ *a-le-ndzan ko-Ø-ruuja tuya.
 PST-1SG.S-tell-2SG.O 1SG-C-2SG.O/*1SG-C-1SG.O PST-3.S-sleep cows
 'I told you (sg) that the cows slept.'

This is the empirical evidence that the agent can control SoK but not OoK and the goal can control OoK but not SoK—straightforward and symmetrical matching of thematic roles.⁵¹

There is also some evidence that this is better thought of in terms of thematic role matching than in terms of grammatical functions like subject and object. Of course, thematic roles and grammatical functions usually line up in predictable ways. Moreover, Kipsigis does not have passive and causative constructions, which are what create the obvious mismatches between thematic roles and their usual structural positions in Bantu languages. But D&K (2022: 5 (8)) do mention one kind of example in which a surface direct object can trigger prefixal agreement on *-le*, in contrast to D&R's (93). This happens in (95) with the matrix verb 'forget'.

- (95) Ka-Ø-wu:t-u-an a:-le kɔ:-Ø-ker Kibe:t kurge:t.
 PST-3.S-forget-VENT-1S.O 1SG-C PST-3.S-close Kibeet.NOM door
 'I forgot that Kibeet closed the door.'

Here the syntactic object does control SoK (and not OoK). The difference with (93) is that (95) has a nonthematic (expletive) subject rather than an agentive one, and the object is an experiencer, not a pure goal. In this case, the structural object does have the right kind of thematic role to control SoK. This shows (again) that the kind of thematic role that an argument has is an important factor, not just its structural position/grammatical function.

C-agreement in Kipsigis also shows that there is an interaction between the two control relations sketched in (91). There is an interesting implicational relationship between subject agreement on C and object agreement on C that D&R discuss in some detail, and Madeline Bossi (p.c.) spontaneously replicated. D&R show that OoK-agreement appears to be optional. So is SoK agreement, in that the nonagreeing complementizer *kɔle* seems always to be possible in the dialect D&R discuss. However, there is an implicational relationship between these two loci of optionality: the presence of object agreement on C is contingent on the presence of subject agreement on C. It is possible to have subject agreement on C without object agreement, but it is not possible to have object agreement on C without subject agreement. This is shown in (96).

- (96) a. Ko-a-mwaa-un a-le/ a-le-ndzin /kɔle/ *kɔle-ndzin ko-Ø-it tuya amut

⁵¹ D&R point out that the existence of C agreement with objects in Kipsigis disrupts Diercks's (2013) account of C-agreement in terms of agreeing with a subject-oriented naphor. This is hard to generalize to upward C-agreement with objects, since standard Binding theory does not know of distinctively -object oriented naphors. I agree with this criticism. My use of control theory is in better shape here, because object control does exist alongside subject control—although it will still be a challenge to get object control and subject control in all and only the situations where we want them. (D&R present Diercks et al.'s (2020) account as an improvement here, where C moves to Voice P and can agree downward from there, with both the subject and object.)

PST-1SG-tell-2SG.O 1SG-C/1SG-C-2SG.O/that/*that-2SG.O PST-3-arrive cows yesterday
 ‘I told you that the cows arrived yesterday.’

- b. Kɔɔ-mwa-uun a-le/ a-le-ndʒin/*kole-ndʒin pagagt-aan.
 PST.1SG-tell-2SG.O 1SG-C/1SG-C-2SG.O/*that-2SG.O leave-1SG.O
 ‘I told you to leave me alone.’

This asymmetry does not follow directly from anything that I have said so far.

My analysis of this asymmetry has two parts. The first is the assumption that the C-space cannot license OoK without having SoK, whereas it is possible to have SoK without OoK, as in the Niger-Congo languages that never display upward object agreement. Recall that agreeing Cs often develop historically from a verb like ‘say’ in these languages, and that is true of Kipsigis -*le* in particular. Moreover, whether agreeing C has this source or not, it has an argument structure similar to that of ‘say’/‘tell’, according to Speas and Tenny’s (2003) neo-performative hypothesis. Now a straightforward observation about ‘say’ is that it can take an agent argument with no explicit goal argument, but it cannot take a goal argument with no explicit agent argument. This is shown in (97). As far as I know, this is robust across languages and is presumably grounded in the nature of saying events.

- (97) a. Chris said that it was raining.
 b. Chris said to Pat that it was raining.
 c. *It_{EXP} said to Pat that it was raining.

It is plausible, then, to assume the same thing about C/Eval (possibly decomposed into Eval1 and Eval2, an analog of VP-shell structure). Then the GOCS says that the null DPs at the edge of a complement clause must be controlled by (corresponding) arguments of the selecting verb, but it does not say that the null DPs need to be there in the first place. (96a) with *a-le-ndʒin* is the result of CP having both SoK and OoK, control and agreement being obligatory (compare (97b)). (96a) with *a-le* is the result of CP having only SoK, not OoK (compare (97a)). But (96a) with *kɔle-ndʒin* is bad. The presence of *-ndʒin* implies that OoK is present to be agreed with. Then if SoK is not present, the structure is thematically bad like (97c); if SoK is present, then it must be controlled by the GOCS, and then agreement with C is obligatory too, giving *a-le-ndʒin* rather than *kɔle-ndʒin*.

There is one instructive gap in this account. Suppose a CP complement in Kipsigis contains both OoK and SoK, but control of SoK fails because the matrix clauses has no agent argument to control it. Could one get C-agreement with the object but not the subject in this special case? A plausible case in point is (95) with the matrix verb ‘forget’, repeated in (98). This verb has an object-like argument, the experiencer, but no thematic subject argument. Above I discussed how the object of ‘forget’ can control SoK and trigger prefixal/subject agreement on C; now I ask why it cannot (I infer) control OoK and trigger suffixal object agreement on C.⁵²

- (98) Ka-Ø-wu:t-u-an a:-le kɔ:-Ø-kɛr Kibe:t kurge:t.
 PST-3.S-forget-VENT-1S.O 1SG-C PST-3.S-close Kibeet.NOM door
 ‘I forgot that Kibeet closed the door.’ (Unattested: C= (ke:)-*le-ndʒan*, (IMP)-C-1SG)

⁵² I assume (at least for the sake of argument) that the experiencer role is closely related to the goal role, and as such it would be thematically possible for it to control OoK rather than SoK. See also Magahi in chapters 3 and 4, where goals and experiencers are both marked with the same kind of dative case.

This I suggest is a kind of locality effect. Still in the spirit of Speas and Tenny (2003), I have assumed that SoK, as a kind of subject in the C space, is projected into a higher structural position than OoK, which is like an object in the C space (see (91)). Perhaps the fact that subject agreement on C is prefixal and comes to the left of object agreement on C is a morphological reflection of this structural asymmetry. Given this, I posit the *Edge Condition*, stated in (99).

- (99) a. *The Edge Condition*:
Only the highest null DP in the periphery of the clause can be controlled from outside the clause.
b. The Edge Condition is subject to the Principle of Minimal Compliance (Richards 1998).

(99a) recalls familiar syntactic principles that it could be a special case of—for example, Chomsky’s (2000, 2001) notion that only something at the edge of a phase is visible to elements outside the phase, and Rizzi’s (1990) notion that a phrase of type X cannot enter into a relationship with Y if another phrase of type X comes between them. As such, I take it to be a reasonably comfortable sort of condition. This allows the agent/subject to control SoK, even if nothing else happens—even if the matrix verb has no object to control an OoK. Moreover, if the agent controls the SoK, then it becomes possible for the object to control OoK: the Edge-Condition tax has already been paid, to use Richards’ metaphor. However, (99a) makes it impossible for the object (or the subject) to control OoK if nothing controls SoK. This completes an account of why there is a subject-object asymmetry in how C agreement happens in Kipsigis. Future chapters will show analogs of this asymmetry in the domains of indexical shift and logophoric pronouns as well.

A final thing to note about upward object agreement in Kipsigis is that it does not seem to be subject to the T/Agree Condition. There is apparently no true object agreement in Kipsigis. First and second person object pronouns are realized as suffixes on the verb, but Bossi (p.c.) argues that these are object clitics, not real object agreement. Kipsigis shows no overt sign of object agreement with a third person object as in the embedded clauses of (92b) and (95). Nevertheless, unagreed with objects can still control OoK and thereby trigger agreement on Eval2, as we have seen. This converges with evidence from D&K that suggests that even upward C-agreement in Kipsigis is not subject to the T/Agree Condition, in that source phrases with ‘hear’ and the experiencer object of ‘forget’ can trigger subject-type upward C agreement in Kipsigis, unlike in Ibibio and its kin. However, the T/Agree Condition could be a factor in explaining why upward C-agreement with objects is much rarer than upward C-agreement with subjects. The Niger-Congo languages in question have robust subject agreement but not object agreement with overt in situ objects; this allows them to have upward agreement on C with subjects but not with objects. Even if OoK is posited in the periphery of CP in a Niger-Congo language, it cannot lead to upward object agreement in these languages that obey the T/Agree Condition but do not have true/full object agreement.

5. Deriving the T/Agree Condition

Why then do most of the languages with upward C-agreement show the behavior described by the T/Agree Condition? This question allows us to turn the spotlight on the third essential element of my analysis of upward C-agreement: the fact that C can enter into Agree with SoK

(and OoK). For the most part, this Agree relationship is charmingly straightforward. By hypothesis given the structures I have suggested, SoK matches Eval in feature attributes, is in a c-command relationship with it, is not separated from it by any phase boundaries, there is no other DP that intervenes between it and Eval, and SoK is not rendered inactive by a valued case feature. Moreover, since SoK is a silent element, we know approximately where it is, but not exactly where it is in the CP space. Therefore, if one thinks something a bit different about one of these conditions, there may well be room to tweak my structures to align with one's views. For example, if one is set on agreeing heads always probing downward, one could assume that the agreeing head is not Eval itself, but the next higher head in the C-space that selects EvalP as its complement—a minor revision, consistent with the observed facts. Therefore, there is little to explicate about the Agree relation in these structures, other than their adherence to the T/Agree Condition. This is, however, an appropriate place to ponder that condition. Whereas the control theory generalizations laid out in this chapter come up again and again and are refined in subsequent chapters, this Agree-theoretic phenomenon does not; it only applies to one other of my rare constructions (indexiphors/monstrous agreement; see Chapter 6). Now then is the T/Agree Condition's time to claim the spot light.⁵³

First, let us recap what we have seen about this so far. I originally stated the T/Agree Condition as follows, repeated in (46b). (This version generalizes from SoK to apply in principle to any of the ghostly DP operators outlined in Chapter 1.)

(100) *The T/Agree Condition*

C can agree with ghostly operator X if and only if T enters into an Agree relationship with the controller of X.

The empirical basis of this generalization is the observation that there is a range of “thematic subjects” which should be able to control SoK as far as the principles of control are concerned, but which never make it to Spec TP and which T does not agree with. These thematic subjects may indeed control SoK, as suggested on semantic/selectional grounds and by comparison with other ghostly operator constructions. However, these thematic subjects cannot trigger agreement on C in Kinande, Lubukusu, Ibibio, and Ikalanga. This class includes the causees of productive morphological causative constructions, the *by*-phrases of passives, the source phrase used with verbs like ‘hear’, experiencer objects as opposed to experiencer subjects, and the possessor of a noun like ‘news’ in a noun complement construction. This difference between upward C-agreement and other ghostly operator constructions is particularly striking in Ibibio, which has both upward C-agreement and logophoric pronouns: logophoric operators can be controlled by these nonagreed-with thematic subjects (see Chapter 5), but C cannot agree with them—a minimal contrast present within a single language. Why should this be?

To unravel this, I start by observing that agreement plays a double role in (100): the dependent factor is whether C agrees with SoK, and the conditioning factor is whether T agrees with the controller of SoK. Therefore, the theory of Agree(ment) is where it seems we must look for a deeper explanation. At first this seems very peculiar: why should the agreement of one head be contingent on whether a higher head agrees with a particular NP or not? There is something intrinsically countercyclic in this, it seems. Furthermore, Agree is normally

⁵³ I do not, however, consider here why the T/Agree Condition seems not to hold in Kipsigis. This is because I know less about this language over all, and because it is less than certain that it is a true case of upward C-agreement (see D&K 2022).

determined very locally, as a private affair between two consenting linguistic elements: the probing head and its nearby goal. Why should what happens in a higher clause affect this?

There are, however, some other cases of what I will call *dependent agreement* in the literature on Agree. One very interesting case which has been studied in detail by Bhatt (2005) is agreement on infinitives in Hindi. Consider the examples in (101), which have an infinitival clause with no overt subject subject functioning as the complement of the matrix verb ‘want’.

- (101) a. Shakrukh-ne [tehnii kaat-nii] chaah-ii thii.
 Shahrukh-ERG branch.F.SG cut-INF.F.SG want-PERF.F.SG be. F.SG
 ‘Shahrukh had wanted to cut the branch.’ (Bhatt 2005: 761)
- b. Shakrukh [tehnii kaat-naa/*nii] chaah-taa thaa.
 Shahrukh branch.F.SG cut-INF.M.SG /*INF.F.SG want-IPFV.M.SG be. M.SG
 ‘Shahrukh wants to cut the branch.’ (Bhatt 2005: 762)

In (101b), the matrix verb ‘want’ is in present-imperfective tense/aspect, so the subject of ‘want’ is in nominative case, and ‘want’ agrees with that subject. In this case, the infinitive ‘to cut’ cannot show agreement with its object ‘branch’ in number and gender: it shows up in the masculine/default form *kaat-naa*, not the feminine form *kaat-nii*. In contrast, in (101a) the matrix verb ‘want’ is in past-perfect tense/aspect. As a result, the subject of ‘want’ is in ergative case, in accordance with the type of split ergativity found in Hindi (see Baker in press for a recent analysis in terms of Dependent Case Theory). Therefore, T in the matrix clause cannot agree with the subject of the matrix clause in (101a). As a result, it probes further down into the structure to find something to agree with, much as T does in dative subject constructions in Icelandic and many other languages. In this case, it finds ‘branch’, the object in the embedded clause. (Presumably this means that ‘want’ is a restructuring construction in Hindi, where the embedded infinitive does not have a structural subject like PRO and does not come with a CP projection, where C is a phase head; see Bhatt (2005) on Hindi and Wurmbrand (2003) on restructuring more generally.) The crucial surprise is that in this case the infinitive ‘cut’ also agrees with its object ‘branch’, showing up in feminine form as *kaat-nii*. Infinitives in (this common dialect of) Hindi thus show dependent agreement: they agree with their object if and only if the higher head T does.⁵⁴

Similar behavior can be seen in participial constructions in Icelandic. In (102b), the participle ‘sold’ is in construction with the active/transitive auxiliary ‘have’. T in this clause agrees with the agent subject, as usual. In this case, the participle cannot agree with its theme-object argument ‘boats’; it is not the masculine plural form *sel-dir*, but rather the default (neuter singular) form *sel-t*. However, in (102a), the participle ‘sold’ is in construction with the passive/intransitive auxiliary ‘be’. As a result, there is no agent subject for T to agree with. Instead, T probes downward into the VP and agrees with the only full DP in the construction: the theme argument ‘boats’. When this happens, the participle also agrees with ‘boats’, showing up as *sel-dir*, not default *sel-t*. This is another instance of dependent agreement.

⁵⁴ Similarly, in a sentence like (i), where the infinitival phrase is a subject rather than a complement, the infinitive ‘eat’ does not agree with its object ‘tamarind’ in the dialect of Hindi that Bhatt discusses (Bhatt 2005: 771 (24)).

- (i) [imlīi khaa-naa] achchhaa hai. (not *khaa-nīi*, INF.F.SG)
 tamarind.F eat-INF.M.SG good.M.SG be.PRS.3SG
 ‘To eat tamarind is good.’

- (102) a. Það munduþá sennilega ekki verða seldir bátar á uppboðinu
 there would then probably not be sold.M.PL boats. M.PL at auction-the
 ‘Boats would then probably not be sold at the auction.’ (Sigurðsson 2000)
- b. ...að hann hefur ekki selt bátana. (Sigurðsson 2000)
 that he has not sold.N.SG boats.the.M.PL
 ‘...that he hasn’t sold the boats.’

I propose that there is a connection between this phenomenon of dependent agreement in Hindi and Icelandic and the T/Agree Condition cases described in (100): in each case a “weak” or “dependent” agreeing head—Inf in Hindi, Part in Icelandic, Eval in the African languages—agrees with a certain DP if and only if a “strong” or “primary” agreeing head—namely T—also agrees with it. A theory of agreement that accounts for this feature of Hindi and Icelandic could potentially generalize to explain (100) in the African languages.

Not every theory of Hindi and Icelandic agreement will in fact generalize in this way. Here is a sketch of one that does. Arregi and Nevins (2012) decompose the operation of Agree into two distinct components: Agree-Link, which happens first and creates a pointer from the probing head to a DP that has the feature attributes the head is probing for, and Agree-Copy, which happens later and transfers the actual feature-values on the goal to the probe (deleting the pointer). This is stated in Arregi and Nevins’s terms in (103).

- (103) a. Agree-Link: In the syntax, *P* has a probe feature [*F*] that triggers Agree with *G* (possibly more than one). The result is a pointer from *P* to *G*.
- b. Agree-Copy: If there is a pointer from *P* to *G*, copy the values of the phi-features of *G* onto *P* and delete the pointer.

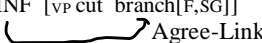
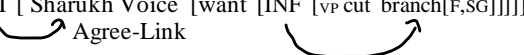
Different theorists have made use of this distinction in a variety of ways. Arregi and Nevins themselves use it to factor out what is consistent about agreement with objects across the Basque varieties and what varies; Bhatt and Walkow (2013) and Marušič, Nevins et al. (2015) use it to explain the distribution of resolved versus closest conjunct agreement in Hindi and Serbo-Croatian; Atlamaz and Baker (2018) use it to account for instances of partial agreement with oblique subjects in some languages but not others; Baker and Camargo Souza (2020) argue that Agree-Link without Agree-Copy is a building block of switch-reference constructions.

Here is a new possible use of this distinction: we can think of dependent agreeing heads like Inf in Hindi and Part in Icelandic as heads that trigger Agree-Link but not Agree-Copy—a property specified in the lexical entries of those heads. In contrast, T in these languages is a head that triggers both Agree-Link and Agree-Copy, as usual. As a result, Inf and Part establish a link with a nearby NP, but they do not in themselves have the power to use that link to copy features. If nothing else relevant happens, they fail to manifest actual agreement with the NP that they enter into Agree-Link with. However, I also propose that T’s ability to trigger Agree-Copy for itself also spreads to these other heads, such that the features of the NP end up being copied onto Inf and Part as well as onto T. This can be captured by reformulating Agree-Copy as in (104).

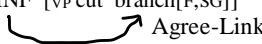
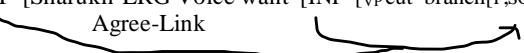
- (104) Agree-Copy
 If *H* points to *DP* and *H* is [+Agree-Copy], then phi(*DP*) is copied onto *all heads* linked to *DP*.

The novelty here is that a head triggering Agree-Copy not only transfers phi-features to itself, but also to any other head that is linked to the goal within a web of pointers created by Agree-Link.

It is not hard to give an analysis of dependent agreement in Hindi using these notions. We can now give the following derivations for the Hindi examples in (101). (101b) is derived as in (105). Inf is merged and undergoes Agree-Link downward with the only DP in its c-command domain, the object, as in (105a). (Recall that there is no CP or VoiceP projection here, following Wurmbrand's (2003) theory of restructuring.) Other heads then merge in one at a time, including the matrix verb 'want', the matrix Voice, the experiencer subject in Spec VoiceP, and finally T. T also triggers Agree-Link, resulting in a pointer from T to the wanter *Sharukh*, as shown in (105b). T then triggers Agree-Copy, but T is the only head linked to *Sharukh* in this case. The features of *Sharukh* are transferred to T, but no features are transferred to Inf. Inf is then assigned default feature values (masculine singular), as shown in (105c).

- (105) a. INF [_{VP} cut branch[F,SG]]

 b. T [Sharukh Voice [want [INF [_{VP} cut branch[F,SG]]]]]

 c. T Sharukh Voice [INF [_{VP} cut branch[F,SG]]]
 3, M, SG (default)

The corresponding derivation of the more interesting (101a) is sketched in (106). Inf undergoes Agree-Link with the object of 'cut' in (106a), as before. Other heads merge in up to the matrix T in (106b), as before. T triggers Agree-Link, as before. But now crucially the subject of the matrix clause bears ergative case, since the tense-aspect of the matrix clause is perfective. As a result, the wanter *Sharukh* is not an active goal that T can enter into Agree-Link with. Therefore T searches farther and finds the next closest goal in its domain, establishing a pointer to that. That happens to be the object 'branch' in the VP of the InfP complement of 'want'—the same goal that Inf found earlier in the derivation.⁵⁵ Next, T triggers Agree-Copy, and according to (104) this transfers the phi-features of 'branch' not only to T, but also to Inf, given that Inf also points to 'branch'. Thus both T and Inf are 3rd feminine singular ((106c)).

- (106) a. INF [_{VP} cut branch[F,SG]]

 b. T [Sharukh-ERG Voice want [INF [_{VP} cut branch[F,SG]]]]

 c. T [Sharukh-ERG Voice want [INF [_{VP} cut branch[F,SG]]]]

⁵⁵ There is an important assumption here: that Inf itself is not a nominal head—at least not in this context, at least not nominal enough to make InfP itself a goal that matches T. This is debatable, and others have claimed that T is really agreeing with InfP in this construction, where InfP (somehow) inherits gender and number from its object. However, those theories typically cannot explain why Inf fails to agree with the object when there is no T or T agrees with something else. Moreover, whatever plausibility this sort of account has for Hindi does not generalize to Icelandic (or the African languages) where the participle head (or the Eval head) does not have the quasi-nominal properties that infinitives have.

The derivations for (102a,b) in Icelandic are similar, except they have a participle head where (105) and (106) have an infinitival head, and they have an auxiliary verb ('have' or 'be') where (105) have (106) a restructuring verb ('want'). I submit that this is a plausible way of capturing the phenomenon of dependent agreement using theoretical notions with some currency.

I observe in passing that there is a strong similarity with Pestskey and Torrego's (2007) conception of agreement, which is another inspiration for this account. Pestskey and Torrego also assume that Agree-relationships can be established even before the elements in that relationship have specific feature values to be shared, and that when one member of an old Agree relationship gets phi-features by a subsequent process of Agree, those features automatically belong to the second member of the original Agree relationship as well. My proposal here is essentially a marriage of Pesetsky and Torrego (2007) with Arregi and Nevins (2012), using the technology of the latter to capture some of the intuitions of the former. These leading ideas are thus motivated without yet considering the phenomenon of C-agreement.

This type of analysis now extends readily to C agreement in the African languages. The key idea is that C, like Inf and Part, is a dependent agreeer: it is specified in the lexicon as undergoing Agree-Link but not Agree-Copy, whereas T in these languages is a primary agreeer, triggering both Agree-Link and Agree-Copy, as in the IE languages.⁵⁶ We do need one further assumption, though. In Hindi and Icelandic, T and the dependent agreeer both enter into Agree-Link with literally the same DP, the object of the lower verb. That is not true in the African cases of upward C-agreement on the current account: C/Eval agrees with SoK in Spec Eval, whereas T agrees with the matrix subject. However, the matrix subject and the SoK are closely related DPs, in that the matrix subject obligatorily controls SoK. Included in this, the two DPs are closely related in a sense relevant to the theory of agreement, in that SoK necessarily agrees with its controller in phi-features, i.e. it inherits its phi-features from its controller.⁵⁷ This needs to be a feature of any account of this phenomenon, taken for granted in my exposition to this point. Suppose that we represent this logically distinct kind of phi-feature sharing in the same format, by saying that control creates a pointer from SoK to its controller. Now we can derive the T/Agree Condition as stated in (100). Consider a positive case in which T agrees with the matrix subject and C agrees with it too, like (107).


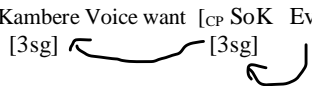
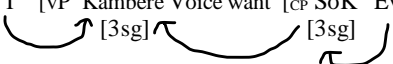
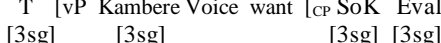
- (107) Kámbére a-sond-ire a-ti (kumbe) i-tw-a-mu-tsakura.
 CL1.Kambere CL1.S-want-ASP CL1-C preferably SBJV?-1PL.S-TNS-CL1.O-vote
 'Kambere wants that we vote for him.'

⁵⁶ I revise this assumption in the next chapter to explain a difference between upward C-agreement in African languages and addressee agreement. There I claim that C is a primary agreeer after all, but it cannot copy phi-features from SoK immediately because SoK doesn't have phi-features yet, control not having happened yet. What T in the matrix clause then does is trigger a fresh application of Agree-Copy. By that point SoK does have phi-features as a result of control. See section xx. This refinement is not needed here though.

One starts to wonder what it is about T that makes it a primary agreeer in a variety of languages, whereas other functional heads are prone to being dependent agreeers. Presumably this relates somehow to the unexplained but robust fact that T is the most likely head to undergo Agree in the first place, but I refrain from further speculation for now.

⁵⁷ For the bulk of the examples, it is enough that there be a pointer from SoK to its obligatory controller. However to complete the analysis sketched in (84) of C in the CP complement of a noun like 'news' agreeing with the subject of the sentence, I also need to say that the null possessor of the noun has a pointer to the matrix subject, which I took to be an instance of non-obligatory control (it not being an instance of the structure described by the GOCS).

This is derived as in (108a). First the EvalP/CP is built. Eval undergoes Agree-Link with SoK, giving (108a). (Again, this could be downward Agree, or upward/Spec head Agree, depending on the fine structure of the CP periphery.) However, Eval does not trigger Agree-Copy, as a lexical property. Then the matrix vP is built up in stages, as in (108b). At this point, obligatory control applies, with the matrix experiencer controlling SoK. By hypothesis, this results in a pointer from SoK to the experiencer in Spec VoiceP, expressing that the former gets its phi-features from the latter. Finally, the matrix T is merged, as in (108c). T triggers Agree-Link in the usual way, creating a pointer from T to the experiencer subject in Spec VoiceP, as in (108c). Now T is a primary agreeer, so it also triggers Agree-Copy. This puts the features of ‘Kambere’ on T, as usual. But in accordance with (104) it also puts the features of ‘Kambere’ on Eval, given that Eval is also linked to Kambere (via SoK) by a chain of two pointers, as in (108c). Therefore, C/Eval receives phi-features from SoK because T agrees with the controller of SoK. This accounts for the observed effect, deriving the positive case of (100).

- (108) a. [CP SoK Eval [we vote for him]] Agree-Link (C)

- b. [vP Kambere Voice want [CP SoK Eval [we vote for him]]] Control

- c. T [vP Kambere Voice want [CP SoK Eval [we vote for him]]] Agree-Link (T)

- e. T [vP Kambere Voice want [CP SoK Eval [we vote for him]]] Agree-Copy (T)


In contrast, suppose that the vP structure in (108b) is generated not as the complement of a T head, but rather as the complement of the causative head ‘make’. In this case C cannot manifest agreement with the superordinate thematic subject, as shown again in (109).

- (109) Aba-kali mo-ba-sond-esirye Kambere ambu/*a-ti mupaka a-gend-e omo-soko.
 CL2-women AFF-CL2-want-CAUS.ASP CL1.Kamabale they.say/*CL1-C forcefully CL1.S-go-SBJV LOC-market
 ‘The women made Kambere want that he go to the market.’

The structure and derivation is the same up to (108b) (except for the content of the lowest TP, which is irrelevant here). But in (109) the next thing to merge is not a T but the causative verb, and then its external argument, the causer ‘women’. When T is finally merged with this larger VoiceP, it probes downward and enters into Agree-Link and Agree-Copy with the causer, not the causee. The result is that T gets the phi-features of the causee ‘women’, and Eval doesn’t copy any phi-features at all; it doesn’t point to any DP that enters into a primary Agree relationship that it can piggy-back on. This derives the ‘only if’ side of (100).

Similarly, suppose that vP in (108b) has a passive Voice head rather than an active one. There is still an agent in Spec vP, I assume: either an oblique PP (the *by*-phrase) or a featureless null DP. This agent can control SoK. However, T cannot agree with it, because it does not have

phi-features (the covert agent) or the phi-features are shielded from T by the presence of a P (the *by*-phrase). Again, nothing triggers Agree-Copy with the passive agent, and Eval doesn't get its features. Similar results follow for other possible controllers of SoK that T does not agree with, like the source phrase in a 'hear' construction, or the possessor of a CP-selecting noun like 'news'. The important results thus follow.

We can take this one step further by contrasting causative constructions in Ibibio with causative constructions in Kinande. The causative construction in Ibibio does allow C-agreement with the causee, as shown in (110), different from (109) in Kinande.

- (110) M-ma-n-nam [Koko á-kere [á-bo/*m-bo ke Eno a-ma-a-kpa]].
 1SG-PST-1SG-make Koko 3SG-think 3SG-C/*1SG-C that Eno 3SG-PST-3SG-die
 'I made Koko think that Eno died.'

This is not too surprising because the verb 'think' does bear agreement with its subject, the causee 'Koko', in Ibibio's periphrastic causative construction. However, this is a bit different in that the functional head that agrees with the causee here is not T. Causative verbs normally take something smaller than TP as their complements in the languages of the world—VoiceP, or perhaps AspP—and there is evidence that this is true in Ibibio as well. Thus, a causative construction is ungrammatical if the embedded verb bears an overt T morpheme as well as subject agreement, as shown in (111).

- (111) Okon a-ya-a-nam nditọ e-dia/*e-ke-dia/*e-di-dia adesi..
 Okon 3SG-FUT-3SG-make children 3PL-eat/*3PL-PST-eat/*3PL-FUT-eat rice
 'Okon will make the children eat rice.'

Strictly speaking, then, (110) is a counterexample to the T/Agree Condition as stated in (100): no T agrees with 'Koko' but still the C does. But (111) is not a counterexample to the theory of dependent agreement that I derived (100) from. All that needs to be said is that the lower head that agrees with the causee in (110) and (111), whatever it is (Voice, I assume), is also a primary agreeer, triggering Agree-Copy as well as Agree-Link. That must be true anyway, since there is observable agreement with the causee on 'eat' in (111), without any other head agreeing with the causee that this can be dependent on. So we see that it is the application of a certain kind of agreement that is crucial for paving the way for C-agreement to take place, not the presence of one particular functional head (T) per se. T is probably the most common primary agreeer, but there is no reason to think it is the only one.

Before claiming a complete victory, however, I need to say a bit more about one case that pushes the envelope of the T/Agree Condition. This is the fact that the subject of an infinitival TP can trigger upward C-agreement in Lubukusu, even though the infinitive does not show visible agreement with that subject. Two examples are given in (112). (112a) has an infinitive with an overt NP subject, whereas in (112b) the subject of the infinitive is PRO controlled by the object of 'order'. In both cases, Agr-C in the complement of the infinitival verb 'say' can agree with *Wekesa*, even though no other head agrees with it overtly.

- (112) a. Ba-saani b-enya [Wekesa khu-boola [a-li Wafula a-khamba lulw-imba].
 CL2-men CL2.S-want CL1.Wekesa INF-say CL1-C CL1.Wafula CL1.S-sing CL11-song
 'The men want Wekesa to say that Wafula sang a song.' (Lubukusu, Sikuku p.c.)

- b. Ba-saani ba-inglila Wekesa [**PRO** khu-bola [*a-li* omw-eene aa-ba omu-miliyu]].
 CL2-men CL2.S-order CL1.Wekesa INF-say CL1-C CL1-self CL1.S.TNS-be CL1-smart
 ‘The men ordered Wekesa to say that he was smart.’ (Lubukusu, Sikuku p.c.)

Letsholo and Safir (2019: 8 (11)) make a similar point for Ikalanga. These examples might suggest that it is the presence of T—any T, even a nonagreeing one—that facilitates C-agreement, contrary to the analysis I have given. In order to bring examples like (112) into the fold, I hereby stipulate that infinitival T in Lubukusu (unlike Hindi) triggers both Agree-Link and Agree-Copy, just as other Ts do in the language. The difference is that the phi-features expounded on T do not condition any distinctive allomorphs of T in this case. In other words, T [α -person, β -number, γ -gender, -finite] always triggers insertion of the vocabulary item *khu-* in Lubukusu, regardless of the values of α , β , and γ . This is a PF “quirk” of this particular T, which is invisible to the principles of syntax. Since Agree-Copy happens in (112), phi-features are copied onto Eval in Lubukusu too, and there they are expounded.⁵⁸ This captures the intuition that, although T doesn’t literally agree in infinitival constructions in Lubukusu, T is still there and enters into some kind of head-to-phrase relationship with its subject, and that is enough for the T/Agree Condition to be satisfied. This contrasts with constituents that have a thematic subject but no T at all, like the complement of a causative verb in Kinande. I do not have any independent evidence that infinitives in Lubukusu agree syntactically with their subjects covertly. But the technology to say this is present in the theory to be used, so this strikes me as a relatively minor assumption to finish the job.⁵⁹

With this qualification made, all the major effects in the vicinity of the T/Agree Condition in the Niger-Congo languages have come under analysis. From a theoretical perspective, what we have learned from this investigation is more about how “dependent” agreement phenomena work in natural language, and how they are the result of the inner workings of Agree consisting of Agree-Link and Agree-Copy.⁶⁰

2.6 Chapter Conclusion

⁵⁸ It is worth noting that this fact about Lubukusu is not an inevitable consequence of UG, but language particular. Ibibio does not have full phi-feature agreement on C/Eval in examples like (112), but rather uses the special exponent N- in this context, as seen in (i). The theoretical significance of this variant is unclear.

- (i) Okon a-maa-kpan nditọ [**PRO** edi-dokkọ Eno (**m-bo**/***e-bo**) ke imọ i-ma i-yip akak.
 Okon 3SG-PST-prevent children INF-tell Eno ??-C/*3PL-C that LOG 3.LOG-PST-3.LOG-steal money
 ‘Okon prevented the children from telling Eno that he stole some money.’

⁵⁹ A somewhat similar situation arises in imperatives. Diercks (2013: 384) mentions that imperative verbs in Lubukusu do not show overt agreement with their second person subject, as in many other languages, but still second person agreement can show up on Agr-C in the CP complement of the imperative verb. This is true in Ibibio too. In this case, however, it is quite natural to say that T agrees with its second person subject, albeit with a null morpheme not used in other moods (see Zanuttini 2008).

⁶⁰ A question arising for a grand unified theory here is whether similar effects arise with normal control of PRO. There are languages in which the embedded verb (a subjunctive) in a control structure does agree with controlled PRO, such as Greek. Is this agreement ever dependent on the controller agreeing with T in the matrix clause? If so, we might see a pattern in which the subjunctive verb agrees with PRO in cases of subject control but not in cases of object control (since primary agreeer T agrees with subjects but not objects). This seems not to be the case in Greek, but it would be worth studying the question more broadly and systematically (possibly in Chapter 8).

This chapter has both provided a detailed analysis of upward complementizer agreement in a range of Central African languages and introduced some foundational concepts for how ghostly DP operator constructions can be analyzed more generally. First, it argued that the ghostly DP in upward C-agreement constructions is a “Seat of Knowledge” (SoK) DP in the sense of Speas and Tenny (2003), licensed by a kind of thematic role assignment from the Eval head in an articulated C-space. This accounts for the subtle but distinctive ways that examples with agreeing complementizers mean something a bit different from examples without them. Second, it argued that SoK is obligatorily controlled by an argument of the matrix clause in a way that has recognizable similarities with the control of ordinary PRO. This was expressed in a generalized version of Landau’s Obligatory Control Signature and in the generalization that the controller and the controllee must match in thematic role. In particular, the controller of SoK, and hence the trigger of upward C agreement, must be a thematic subject of the matrix verb, while the CP containing SoK must be inside VP, as the complement or low adjunct to the verb (or to a noun like ‘news’). Third, the account was generalized to (putative) upward C-agreement with the object in Kipsigis, where it was shown that a CP can have a second ghostly DP operator (OoK, “object of knowledge”), this one controlled by the thematic object of the matrix verb. Moreover, OoK can be present and controlled only if SoK is present and controlled, motivating what I called the Edge Condition. Fourth, I discussed an additional condition that is more narrowly restricted to upward C agreement constructions: the T/Agree Condition, which says that C can only manifest agreement with SoK if T agrees with the controller of SoK. I derived this from the distinction between Agree-Link and Agree-Copy, claiming that C only triggers Agree-Link, but T later triggers Agree-Copy, which copies phi-features from a “chain” of related DPs onto every functional head linked to one of those DPs. In this way, the rare phenomenon of upward C-agreement, known only in this area of Africa and a handful of other languages around the world, can be built out of UG principles of DP licensing, obligatory control, and Agree. The stage is then set to show how other rare phenomena can also be built out of these elements.

Appendix: Evidence that Ibibio has Agreeing Cs in addition to serial verb constructions

Throughout this chapter, I have assumed that Ibibio has bona fide agreeing complementizers, on a par with those known from Lubukusu. This analysis was first proposed by Torrence (2016). Two examples are given again in (113).

- (113) a. M-ma-n-dokko anye (m-bo/*á-bo) ke Koko a-ma-a-bere usong.
 1SG-PST-1SG-tell 3SG 1SG-C/*3SG-C that Koko 3SG-PST-3SG-open door
 ‘I told him that Koko opened the door.’
- b. Nditò e-ma-e-toiyo Okon (e-bo/*a-bo) ke Emem a-kpena a-dep adesi.
 children 3PL-PST-3PL-remind Okon 3PL-C/*3SG-C that Emem 3SG-should 3SG-buy rice
 ‘The children reminded Okon that Emem should buy rice.’

However, this claim requires some defense. As in plenty of other languages, both of Ibibio’s putative agreeing complementizers (*-bo* and *-te*) are homophonous with main verbs meaning ‘say’, as can be seen in (114). (*Bo* can be inflected for tense, whereas *te* cannot be.)

- (114) a. Nditò Okon e-ma-e-bo ke anye i-maa-gha Emem.

children Okon 3PL-PST-3PL-say that 3SG 3SG-like-NEG Emem
 ‘Okon’s children said that he doesn’t like Emem.’

- b. Okon a-te ke Koko a-ya-a-dia fufu.
 Okon 3SG-say that Koko 3SG-FUT-3SG-eat fufu
 ‘Okon says that Koko will eat fufu.’ (but **i-ma-i-te* ‘we said’, etc)

Thus, it needs to be considered whether *bo* and *te* are really complementizers historically related to ‘say’ or synchronic instances of the verb ‘say’ itself. This issue has been debated for other languages; recent examples include Driemel and Kouneli (2022) for Kipsigis (discussed briefly above), Sauerland et al. (2020) for Teiwa, and Major (2021) for Uyghur, among others—with different authors reaching different conclusions for different languages.

The possibility that *bo* and *te* in examples like (113) are really verbs in Ibibio is particularly plausible in that this language has a productive serial verb construction (SVC), similar to those found in its less-inflected Nigerian relatives Yoruba and Edo. Some typical SVC examples that have nothing to do with sentential complementation are in (115).

- (115) a. N-dep udia n-tem.
 1SG-buy yams 1SG-cook
 ‘I buy yams and cook them.’
- b. Ami n-tò esio m-bom.
 I 1SG-hit pot 1SG-break
 ‘I hit the pot, breaking it.’
- c. Ami n-dep udia n-nò Emem.
 I 1SG-buy yams 1SG-give Emem
 ‘I buy yams for Emem/giving them to Emem.’

Note that in each case the second verb of the SVC agrees with the subject of the sentence, just as the first verb does. Given the existence of examples like these, it is not at all implausible that *Agr-bo* in (113) could really be the second verb in an SVC.

Without going into what are probably fascinating details, we can roughly think of SVCs as consisting of two VPs being (somehow) conjoined without a conjunction to form a complex VP. This VP is then the complement of a single T node (with other projections in between, presumably⁶¹). The rough structure of (115a) would then be something like (116).

- (116) [_{TP} I Agr-T [_{VP} [_{VP} agr-buy yams] [_{VP} agr-cook (them)]]].

That there is only one T node in SVCs is seen clearly in examples like (117), where only one TAM prefix or auxiliary appears, and that comes before the first verb of the SVC.

⁶¹ In particular, I do not take a firm stand on whether there are two Voice heads in an SVC construction or only one. Baker and Stewart (1999) argue for the former. If the instance of subject agreement that attaches directly to the verb root in Ibibio is a agreeing Voice, then there are definitely two Voice heads in (116), one above each component VP.

- (117) a. Ami n-sak n-dep udia n-tem.
 I 1SG-PROG 1SG-buy yam 1SG-cook
 'I am buying yams and cooking them.'
- b. Ami n-yaa-dep udia n-tem
 I 1SG-FUT-buy yam 1SG-cook
 'I will buy yams and cook them.'

Similarly, a single negation realized on the first V of the SVC only as shown in (118).

- (118) Ami η-ηοη-ηο n-te Okon.
 I 1SG-be.tall-NEG 1SG-pass Okon
 I am not as tall as Okon.

Given this, a putative agreeing C could be parsed instead as 'say' functioning as the V2 in an SVC, 'say' then selecting a CP complement headed by *ke*, as usual. In other words, (113a) might be analyzed as having the structure in (119a) rather (119b), as I have assumed in the text.

- (119) a. I Agr-T [VP [VP Agr-tell Okon] [VP Agr-say [CP that TP]]].
 b. I Arg-T [VP Agr-tell Okon [CP Agr-C that TP]]

In fact, the SVC analysis has some real advantages. One relatively easy argument that is often made to show that an agreeing form is a C and not a verb is that it cannot be inflected for categories like tense, aspect, and negation in its putative agreeing C usage in examples like (113). Some take this to show that elements like *bo* and *te* are not verbs in this construction (see Torrence (2016) for Ibibio and Letsholo and Safir (2019) for Ikalanga; D&K use this type of argument to claim that the erstwhile C really is a verb in Kipsigis). But in Ibibio it is not that easy, because the inability to bear tense, aspect, and negation morphology is a general property of the second verb in an SVC, attributable to its VP-conjunction-like analysis in (116). The similarities of putative C-agreement structures and SVCs in Ibibio also extend to certain quirky morphological details of agreement. For example, the special *i-* form of third person agreement that is triggered by logophoric pronouns and traces of *wh*-movement shows up not only on the main/first verb, but also on the second verb of the SVC and on the putative agreeing C (see Torrence 2016, ex (32), (19)). Similarly, negation conditions some special allomorphs of agreement. For example, second person singular subject agreement is normally *a-* but shows up in negative clauses as *u-*. This *u-* form also appears on both the second verb of an SVC and on the putative agreeing C. Third, when T is infinitival *edi-*, it attaches to the first V of an SVC. In that case, the second verb of the SVC bears a special dummy prefix *N-* in the agreement slot, as shown in (120a). This special *N-* form also appears on the agreeing C when the CP-selecting verb is an infinitive, as shown in (120b) (see also (i) in note 58).

- (120) a. Okon a-ma-a-yem edi-dep udia **n-nə** eka ọmọ. (SVC)
 Okon 3SG-PST-3SG-want INF-buy yams X.AGR-give mother his
 'Okon wants to buy yams and give them to his mother.'
- b. Okon a-ma-a-nwana edi-dökkọ Emem **m-bo**/*a-bo/*edi-bo ke Ekpe a-ya a-di.

Okon 3SG-PST-3SG-try INF-tell Emem X.AGR-C/*3SG-C/*INF-C that Ekpe 3SG-FUT-3SG-come
 ‘Okon tried to tell Emem that Ekpe will come.’

The SVC analysis also easily accounts for some obvious surface facts about the construction: the fact that *bo* and *te* cooccur with ordinary Cs like *ke*, rather than being alternatives to the ordinary C, the fact that they are always optional, and the fact that the agreeing C comes before the ordinary C. If *Agr-bo* and *Agr-te* are really verbs meaning ‘say’, they take a CP headed by *ke* as a complement, just as when they are the only verb, and it is expected that the verb ‘say’ comes before the C head of its CP complement in this head initial language.

I have no doubt that these similarities are nonaccidental, and that agreeing Cs in Ibibio evolved out of an SVC construction. But there are ample reasons to say that it has evolved, such that it is not (any longer) literally ‘say’ in a quasi-coordination construction. I present six such reasons.

The first reason to say this is simply that there is no literal ‘say’ meaning in many examples. This is hard to tell when the matrix/first verb is ‘say’, ‘tell’, ‘ask’, etc., because the meaning of ‘say’ is redundant in this context. However, *bo* and *te* can appear with a much wider range of verbs than that. For example, they can also appear with verbs of cognition, like ‘think’ and ‘know’, as shown in (121a). The grammaticalization literature is used to explaining these away by saying that they express a kind of inner speech in such examples. For instance, (121a) can (sort of) be glossed as “Okon thought, *saying to himself* that Eno likes him”. But it gets harder to say that there is any kind of ‘saying’ meaning associated with the presence of *a-bo* and/or *a-te* over a full range of examples. For instance, these elements are possible with the verb ‘hear’, as in (121b). There is no sense here that the subject hears the news and then repeats it to others; only that he himself hears it. Nor do the agreeing Cs add the sense that the hearer accepts the news as true, which could be a possible reconstruction of what it would mean to add that he is saying it to himself. *Agr-bo* and *Agr-te* are even fine with the verb ‘forget’, as in (121c), and they do not change its meaning in any way that I was able to detect. Even inner speech seems out here, since Okon is not saying, even to himself, that Ima stole the book; that is the point. This verb implies that the subject no longer represents the information mentally.

- (121) a. Okon ikpọ̀ọ̀ng a-kere a-bo a-te ke Enọ́ i-ma imọ́
 Okon only 3SG-think 3SG-C 3SG-C that Enọ́ 3SG.3.LOG.O-like LOG
 ‘Only Okon thinks that Enọ́ likes him.’
- b. Okon a-ma-a-kop (a-bo) (a-te) ke Emem a-ma-a-due.
 Okon 3SG-PST-3SG-hear 3SG-C 3SG-C that Emem 3SG-PST-3SG-sin
 ‘Okon heard that Emem is guilty (but he doesn’t believe it).’
- c. Okon a-ma-a-fre (a-bo) (a-te) ke Ima a-ma-a-yip ngwet.
 Okon 3SG-PST-3SG-forget 3SG-C 3SG-C that Ima 3SG-PST-3SG-steal book
 ‘Okon forgot that Ima stole the book.’

In general, *Agr-bo* and/or *Agr-te* are possible with a large range of CP-selecting type verbs in Ibibio, and they rarely if ever contribute anything detectable to the meaning of the sentence. In this respect, their meanings in this context are more like the meaning of *that* in English than like the meaning of *say*.

There are, however, certain classes of verbs that *Agr-bo* and *Agr-te* are not compatible with, and this can be spun as a second argument that they are Cs rather than verbs. In particular, they cannot be used with factive verbs of emotion, as discussed in section 2.2.3; see (28) and (122).

- (122) M̀mè ámámbré é-mà-é-nèm é̀sìt (?*e-bo/?*e-te) ké mbíómbré ómmó

PL fan 3PL-PST-3PL-sweet heart ?*3PL-C/?*3PL-C that team their
 é-mà-é-kítùné
 3PL-PST-3PL-succeed
 ‘Fans were happy that their team was successful. (CCQ)

If *Agr-bo* and *Agr-te* were routinely possible as second verbs in an SVC construction, it is not at all clear why examples like this should not be possible. Then (122) should have a literally gloss along the lines of ‘The fans were happy, saying [to themselves/to everyone] that their team was successful.’ This seems like a perfectly reasonable thing to say. I see no obvious way to distinguish factive emotion verbs from cognitive verbs like ‘think’ in these terms. In contrast, the agreeing C hypothesis can account for the deviance of (122), since agreeing Cs are known to be incompatible with factive verbs of emotion in Lubukusu and other languages, which do not have productive SVC constructions to cloud the issue. If we analyze *a-bo* and *a-te* as agreeing Cs of the same sort in Ibibio, then the explanation of this fact in Lubukusu carries over to Ibibio. In particular, I explained this restriction in terms of the semantics of SoK, the ghostly DP that Eval agrees with. SoK denotes the person who is uniquely responsible for the content of the TP complement of C, and this semantics does not fit with factive constructions, where the content of the TP is in the common ground, not the special responsibility of one participant in the situation. This explanation works for (122) as well, if *Agr-bo* and *Agr-te* are Eval heads rather than verbs.

A potential third argument for the C status of *Agr-bo* and *Agr-te* comes from the fact that when both of them appear with a complement clause, their order is fixed; *Agr-bo* can come before *Agr-te*, but the reverse order is infelicitous, as shown in (123).

(123) ??M-beeje n-te m-bo yak a-do ke Ima a-ma-a-kot ηwet.
 1SG-beg 1SG-C 1SG-C that 3SG-be that Ima 3SG-PST-3SG-read book
 ‘I hope that Ima read a book.’ (OK is ... *m-bo n-te* ...)

If *bo* and *te* are both verbs with the same meaning ‘say’, there is no good reason why this restriction should hold; both versions should have the same meaning and the same structure along the lines of ‘I hope and say and say that X.’ In contrast, if *bo* and *te* are different C-like functional heads in the same extended projection, we expect them to be rigidly ordered, as functional heads usually are. However, to flesh out this argument, it would be desirable to know exactly what *bo* and *te* are (Force? Fin? Eval?...), and I am not in position to do that.

A fourth argument can be constructed by comparing sentences with putative agreeing Cs like (113) with what we know about order and argument sharing in SVCs in general. Consider the ordinary example with ‘tell’ + *Agr-bo* in (124).

(124) M-ma-n-dokko Okon m-bo ke Koko a-ma-a-bere usong.
 1SG-PST-1SG-tell Okon 1SG-C that Koko 3SG-PST-3SG-open door
 ‘I told Okon that Koko opened the door.’

Considered as an SVC, (124) would be a combination of a triadic verb (‘tell’) with a dyadic verb (‘say’), in which the triadic verb comes first and the dyadic verb comes second, the shared theme argument appearing (overtly) with the dyadic verb. We can compare this to ordinary SVCs that have a dyadic verb together with a triadic verb like ‘give’ that selects two NP objects. There is a robust generalization across many African languages with SVCs that the triadic verb in this sort of SVC cannot come first, but must come second (see Baker (1989) for documentation and a (dated) explanation in terms of the Projection

Principle). This is true in Ibibio too: (125) shows that the combination ‘give’ - ‘sell’ is bad, whereas the combination ‘sell’ - ‘give’ is good (see also (115c)).

- (125) a. *Ami n-nò Okon p-pam ebót.
 I 1SG-give Okon 1SG-sell goat
 ‘I sold a goat to Okon.’
- b. Ami p-pam ebót n-nò Okon.
 I 1SG-sell goat 1SG-give Okon
 ‘I sold a goat to Okon.’

Some robust principle of ordering and argument sharing in SVC rules out (125a). All things being equal, that principle should also rule out (124), if that is only an SVC, because (124) has the same order and argument sharing pattern as (125a) does. But (124) is fine, and many others like it. That suggests that it is not an SVC, but has a different analysis—one involving an agreeing C.⁶²

A fifth argument that *Agr-bo* and *Agr-te* are C-like heads is that they are transparent for selection. If *bo* and *te* are verbs meaning ‘say’ in examples like (113), then the CP headed by *ke* ‘that’ is the complement of ‘say’ for purposes of selection, not the complement of the first verb. In contrast, if *bo* and *te* are heads inside the extended C-space, then the extended CP as a whole is the complement of the first verb for purposes of selection. Now as it happens, *bo* and *te* as main verbs can select a CP with any C: *ke* declarative, *mme* interrogative, or *yak* subjunctive. This is not too surprising, given the very general meaning of these verbs. (114) above showed both verbs of saying with a declarative *ke* complement; (126) shows that *bo* can also take an interrogative complement headed by *mme* and a subjunctive complement headed by *yak*; (127) shows the same for *te*.

- (126) a. Emem a-ke-bo mme Okon a-ma-i-kid ímò.
 Emem 3SG-PST-3SG-say whether Okon 3SG-PST-3SG-see LOG
 ‘Emem said whether Okon saw him.’
- b. Ruth a-bo yak òditò e-nwam ímò.
 Ruth 3SG-say that SBJV children 3PL-help LOG
 ‘Ruth asked for the boys to help her.’
- (127) a. Okon a-te mme Koko a-ya-a-dia fufu.
 Okon 3SG-say whether Koko 3SG-FUT-3SG-eat fufu
 ‘Okon said whether Koko will eat fufu.’
- b. Okon a-te yak a-do ke Ima a-ma-a-kot ñwet.
 Okon 3SG-say that.SBJV 3SG-be that Ima 3SG-PST-3SG-read book
 ‘Okon says that Ima (might have?) read a book.’

⁶² The heaviness of the CP could be a factor, penalizing the form ‘X say that TP tell Y.’ But if that is the only factor, one would think it could just be repaired by extraposing CP to get ‘X say - tell Y that TP’, but that is not what we observe either. Iconicity is known to influence the order of verbs in an SVC. But that is not too relevant to these examples, since the saying and the telling would refer to the same event, so they are simultaneous, as are the selling and the giving in (125). Principles other than the sequence of events must then determine V-order in these types of SVC (see Baker 1989 for discussion)

With this in mind, consider main/first verbs in Ibibio that are relatively selective about what kind of CP can be their complement. For example, the verb ‘ask’ in Ibibio selects interrogative *mme*, but not declarative *ke*, like its English counterpart:

- (128) a. Emem a-ke-bip mme Okon a-ma-i-kid ímò.
 Emem 3SG-PST-ask whether Okon 3SG-PST-3.LOG.O-see LOG
 ‘Emem asked whether Okon saw him.’
- b. *Okon a-ma-a-bip ke Ekpe a-ma-a-dep ngwet.
 Okon 3SG-PST-3SG-ask that Ekpe 3SG-PST-3SG-buy book
 (‘Okon asked that Ekpe bought a book.’)

Now crucially the contrast between (128a) and (128b) is unchanged if agreeing *bo* or agreeing *te* is included in the structure as well: ‘ask *bo mme*...’ and ‘ask *te mme*...’ are possible, but ‘ask *bo ke*...’ and ‘ask *te ke*...’ are not, as shown in (129).

- (129) a. Emem a-ke-bip a-bo/a-te mme Okon a-ma-i-kid ímò
 Emem 3SG-PST-ask 3SG-C/3SG-C whether Okon 3SG-PST-3.LOG.O-see LOG
 ‘Emem asked whether Okon saw him.’
- b. *Okon a-ma-a-bip a-bo/a-te ke Ekpe a-ma-a-dep ngwet.
 Okon 3SG-PST-3SG-ask 3SG-C/3SG-C that Ekpe 3SG-PST-3SG-buy book
 (‘Okon asked that Ekpe bought a book.’)

If the *ke* clause in (129b) was semantically the complement of ‘say’, we would wrongly expect the example to be good, as the examples in (114) are. In contrast, if the *ke* clause in (129b) is semantically the complement of ‘ask’, with *Agr-bo* and *Agr-te* just relatively meaningless heads in the same extended projection, then we correctly expect (129b) to be bad, as (128b) is. The second prediction is the correct one. Similarly, the verb ‘beg/hope’ in Ibibio selects for a CP with a subjunctive complementizer *yak*, not the declarative complementizer *ke*, as shown in (130).

- (130) a. M-beenge yak a-do ke Ima a-ma-a-kot ngwet.
 1SG-beg that SBJV 3SG-be that Ima 3SG-PST-3SG-read book
 ‘I hope that Ima read a book.’
- b. *M-beenge ke a-do ke Ima a-ma-a-kot ngwet.
 1SG-beg that 3SG-be that Ima 3SG-PST-3SG-read book
 (‘I hope that Ima read a book.’)

Again, this selectional restriction is unchanged if agreeing *bo* or *te* is included, as shown for *bo* in (131). If *bo* were ‘say’ here it should be able to select a CP headed by *ke*, but it cannot. Rather, ‘beg’ selects *yak* across *bo*.

- (131) a. M-beenge m-bo yak a-do ke Ima a-ma-a-kot ngwet.
 1SG-beg 1SG-C that SBJV 3SG-be that Ima 3SG-PST-3SG-read book
 ‘I hope that Ima read the book.’
- b. *M-beenge m-bo ke a-do ke Ima a-ma-a-kot ngwet.
 1SG-beg 1SG-C that 3SG-be that Ima 3SG-PST-3SG-read book

‘I hope that Ima read a book.’

We see, then, that *bo* and *te* are inert for purposes of selection. This is not expected if they are full-fledged verbs in their own right. However, it is expected if they are part of the extended project of the CP headed by the nonagreeing C (*ke*, *mme* or *yak*) in Grimshaw’s (1991) sense. Tentatively we can say that *ke* is [declarative], *mme* is [interrogative] and *yak* is [subjunctive], and these features are inherited upward, throughout the extended projection of CP, allowing the verb to select locally for the kind of complement it needs whether additional heads are present or not. (Semantically oriented analogs of this idea should be feasible as well, for those who believe that syntactic selection largely reduces to semantic selection.)

My sixth and final argument that *Agr-bo* and *Agr-te* are C-like heads in Ibibio is that they are possible in noun-complement constructions, as we saw in section 2.3.3, following Diercks’s (2013) observation about Lubukusu. Two examples of this are repeated in (132).

- (132) a. Emem a-me-kop [mbak [(a-bo) ke Okon a-ma-a-due]]
 Emem 3SG-PERF-hear News 3SG-C that Okon 3SG-PST-3SG-sin
 ‘Emem heard the news that Okon was guilty.’
- b. Emem a-ma-a-dokko Ekpe [mbak [(a-bo) ke Okon a-ma-a-due]].
 Emem 3SG-PST-3SG-tell Ekpe news 3SG-C that Okon 3SG-PST-3SG-sin
 ‘Emem told Ekpe the news that Okon was guilty.’

We also saw evidence that the putative CP here forms a constituent with the noun ‘news’, in that focus fronting can move ‘news’+CP as a unit, but it cannot move ‘news’ stranding CP.

- (133) a. [Mbak ke Okon a-ke-due] ke Emem a-ke-kop/ a-ke-dokko Ima. (=83)
 news that Okon 3SG-PST-guilty FOC Emem 3SG-PST-hear/3SG-PST-tell Ima
 ‘It’s the news that Okon was guilty that Emem heard/told Ima.’
- b. *Mbak ke Emem a-ke-dokko Ima -- [ke Okon a-ma-a-due].
 news FOC Emem 3SG-PST-tell Ima that Okon 3SG-PST-3SG-guilty
 (literally: ‘It’s the news that Emem told Ima that Okon was guilty.’)

If *Agr-bo* is an agreeing C, then there is nothing too remarkable about the examples in (132); they are simply CPs which are complements (or appositive adjuncts) of a noun head. However, these have no plausible parse according to which *bo* is the verb ‘say’ in an SVC. The best try for (132a) would be as a VP conjunction like ‘Emem [heard news] <and> [said that Okon is guilty].’ But this has the wrong meaning, implying that Emem said that Okon is guilty and not strictly asserting that what Emem heard was that Okon was guilty. Moreover, [news + CP] is patently not a constituent on this parse; rather ‘news’ is the object of the first verb ‘hear’ and ‘say’+CP is the second VP in a VP conjunction structure. If *bo* is always a verb, then there is no way that this material should be able to move as a unit. Thus, the analysis that *Agr-bo* is a complementizer fits better here as well.

I conclude that there is ample evidence that *Agr-bo* and *Agr-te* are synchronically agreeing Cs in Ibibio, not just the second verbs in a serial verb construction.⁶³

⁶³ An unsuccessful argument that I attempted was based on trying to front the CP complement of a verb by focus fronting. My prediction was that if *Agr-bo* and *Agr-te* are C-like heads, they would have to be pied-piped along with the rest of the CP, whereas if they are main verbs, they would have to be stranded (Ibibio not having VP-fronting). However, it turned out that even a simple CP without an *Agr-C* cannot undergo focus fronting. Therefore, the test could not be performed. (The examples are bad regardless of whether *Agr-bo* is stranded or pied piped.)

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