

Delayed Valuation*

A reanalysis of “upwards” complementizer agreement and the mechanics of Case

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1 Introduction

1.1 Approaching goal features

Minimalist theory posits a class of morpho-syntactic features that are unvalued and uninterpretable (uFs). uFs are analyzed as *probes* which must acquire values from matching features of a suitably local expression. The search space of a probe α is generally taken to be its c-command domain, comprised of the contents of α 's sister β . This approach to valuation was initially motivated by empirical phenomena like (1) (see Chomsky 2000).

- (1) a. There *is* [a man] in the room.
b. There *are* [two men] in the room.

Epstein (1998) argues that the central role of c-command in syntactic relations has a derivational basis, and his proposals yield a simple, organic account of the downward directionality of probing: at the point of Merge, α has no place to look other than β . It follows automatically that β is where α must seek the valuation that it needs. Thus (2):^{1,2}

(2) MERGE (T_{uPhi} [_{VP} DP_{3S}...]) necessarily \rightarrow [T_{uPhi3S} [_{VP} DP_{3S}...]].

Its explanatory power and elegant design make this idea highly appealing. Many locality properties of the Agree relation are derivable under two additional assumptions similarly

* This paper could not have existed without the illuminating research of Michael Diercks on complementizer agreement in Lubukusu (see Diercks 2010 and to appear b). I thank Lillian Waswa, Aggrey Wasike, Aggrey Wanyonyi, and Justine Sikuku for Lubukusu data in this paper that are not taken from Diercks (to appear b). Thanks also to two anonymous *Syntax* reviewers for helpful comments; and to Mark Baker, Jonathan Bobaljik, Zelko Bošković, Sam Epstein, Martha McGinnis, Juvenal Ndayiragije, Ken Safir, and Susi Wurmbrand for discussions in relation to aspects of this material. A special thanks to Dan Seely for comments on an early draft that helped clarify my thinking about valuation relations.

¹ I abstract away from proposals that T inherits its features from C (Chomsky 2007, 2008; Richards 2007).

² In glosses, <X> means that X moved; ✕ indicates valuation of X. CA= complementizer agreement; SA=subject agreement; PST = past. Cardinal numbers (1-3) denote person features when accompanied by a number specification (s= singular and pl= plural). Arabic numbers 1-17 are noun classes, hence 2SA=subject agreement for noun class 2, but 2sSA is 2nd singular SA. Other abbreviations should be transparent.

rooted in the derivation. The first of these is cyclic Spell-Out, which by purging accumulated content at regular intervals accounts for common depth limits on valuation relations (see the Phase Impenetrability Constraint of Chomsky 2000, 2001; henceforth PIC). The second factor is the assumption (alluded to above) that valuation occurs whenever possible. The default, Minimalist approach is that the probe α cannot delay, arbitrarily ignoring relevant material with which it was merged and instead awaiting the arrival of content added at a later point, higher in the tree.

Familiar syntactic processes attributable to unvalued features show downwards (c-command) sensitivity (among them (1a,b), and see discussion of West Germanic complementizer agreement in §1.2 and §3). So in addition to the virtue of simplicity, the derivational approach has ample motivation in empirical patterns. But questions arise in connection with the features identifying “active” *goals* in Agree relations, such as a DP’s uCase. As uFs that need values, they meet the definition of probes. If probing cannot be delayed, the very existence of goal features is puzzling. Why is it licit for goal features to lack valuation until a probe finds them? Why do they not probe their own c-command domains and, if a match is absent there, cause the derivation that contains them to fail?³

In this paper I argue that there is no separate species of goal features. Rather I propose that every uF probes its sister upon Merge as described above. If a uF γ fails to be valued before phasal Transfer, the result is a PF crash due to unclarity as to how γ should be pronounced (see Epstein, Kitahara & Seely 2010 and Carstens 2010 on this conception of

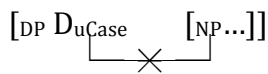
³ Bošković 2007, 2011; Epstein & Seely 2006 argue that goals must raise to probe; see discussion below.

uF-induced crashes).⁴ But prior to the fatal point of Transfer, DELAYED VALUATION is possible under limited circumstances (see (3)). Thus the defining property of goal features is that their valuation does not happen right away (see (4), and the preview of this approach to Case sketched in (5)).

(3) **DELAYED VALUATION:** Valuation that is not obtained in a uF's original c-command domain.

(4) **Goal features:** uFs that find no match at the point of first Merge.

(5) Why Case is a goal feature: upon Merge, D's uCase cannot be valued.



Understanding this much about goal features yields some new insights into atypical valuations relations including apparent upwards agreement phenomena (see Baker 2008, Diercks 2010, to appear a, to appear b) and downwards Case-checking (Bobaljik & Wurmbrand 2005; Wurmbrand 2004/2006). And exploration of such instances of DELAYED VALUATION gives us important information regarding how it comes about.

1.2 Preview of complementizer agreement and DELAYED VALUATION

1.2.1 Overview

The empirical core of this paper is a difference between West Germanic and Lubukusu complementizer agreement (CA). uPhi on a West Germanic complementizer is valued by the embedded subject, under closest-command at first Merge of C (Carstens 2003; Haegeman & van Koppen 2012). I argue that this is because the West Germanic agreeing complementizer is merged low in the left periphery; in the cartography of Rizzi 1997, it is Fin(ite)⁰ – the bottom head in the articulated CP domain (see (6)). In contrast, the agreeing

⁴ Preminger 2011 argues persuasively that while agreement must always be attempted, uPhi can licitly go unvalued if a source of valuation is lacking. On this view, the Lubukusu CA facts seem to suggest that expectations for those attempts can be quite demanding, as a lazier grammar might be content to settle for default CA when a match is unavailable in the c-command domain (see §3.2 on CA in expletive constructions). I leave exploration of this intriguing issue and its implications to future research.

Lubukusu complementizer is a higher C, which I analyze as Rizzi's Force⁰, merged above the phase head that triggers transfer of the embedded clause to Spell Out (see (7); transferred material here and subsequently is shaded).⁵ For this reason, Lubukusu's agreeing C cannot be valued by the embedded subject (SU). A successful derivation including this C therefore relies on DELAYED VALUATION.⁶

- (6) a. Kvinden **dan** die boeken te diere zyn [West Flemish; Haegeman 1992]
 I-find that-PL the books too expensive are
 'I find those books too expensive.'

b. *Mechanics of West Germanic complementizer agreement: at Merge, uPhi of Fin successfully probes the embedded subject*

Fin_{uPhi} [TP SU T [vP <SU> v [VP ...]]]

- (7) a. N-enya **n-di** Barack Obama a-khil-e [Lubukusu; Diercks to appear b]
 1sSA-want 1s-that 1Barack.Obama 1S-win-SBJ
 'I want Barack Obama to succeed.'

b. *Mechanics of Lubukusu complementizer agreement: uPhi of Force cannot probe the transferred subject of an embedded clause.*

[ForceP Force_{uPhi} ... [FinP Fin [TP SU ...]]]

While Diercks (2010 and to appear b) proposes that Lubukusu C agrees with a subject-oriented null anaphor base-generated in its Spec, I argue in §3.2 that this conclusion is unwarranted, and that a unified account of the two languages is both possible and desirable. Also, Carstens & Diercks's (to appear) exploration of Lubukusu agreeing 'how' shows that at least some Lubukusu uPhi probe downwards. Only the DELAYED VALUATION

⁵ Putnam & van Koppen (2011) also argue that Cs at different heights in the articulated left periphery have different agreement properties. In their analysis however, the Force-level C of the English *alls* construction and the low C of West Germanic CA both agree with the embedded subject.

⁶ Through a timing paradox and an oversight my analysis of Lubukusu vs. West Germanic CA made an unattributed first appearance in a draft of Diercks, Putnam, & van Koppen 2011. A point of divergence arises in that they propose Lubukusu C is an anaphor with unvalued but interpretable phi-features, explaining some semantic restrictions on CA reported in Diercks to appear b (see also Diercks, Putnam, and van Koppen 2012). I provide a different perspective in §3.2, arguing that there is no anaphor involved.

analysis of agreeing C gives a unified account of both the difference between Lubukusu and West Germanic CA on the one hand, and the apparent asymmetry in the directionality of valuation for uPhi of agreeing C and agreeing ‘how’ on the other. Last but not least, only the analysis I develop here treats CA as a subcase of the very common phenomenon of Bantu multiple subject agreement (SA), for which an anaphoric operator account is unmotivated (see (8), (9), and Carstens 2001; 2011). The analysis accomplishes these goals by means of a small set of principles and assumptions shared across all the phenomena in question.

(8) a-kha-be ne-a-khola siina?
 1SA-FUT-be NE-1SA-do 7what
 ‘What will s/he be doing?’

(9) Ba-ba-ana **ba**-kha-kule bi-tabu **ba**-rie(ena)?
 2-2-children 2SA-FUT-buy 8-book 2-how
 ‘How will the children buy books?’

One reason why Diercks does not pursue a standard Agree analysis of Lubukusu CA is that indirect objects (IOs) cannot value uPhi of agreeing C in Lubukusu, nor does their presence give rise to intervention effects (see (10)).

(10) Ewe w-abol-el-a Nelsoni *a-/o-li ba-keni ba-rekukha.
 you 2SSA-say-APPL-FV 1Nelson 1/2s-that 2-guests 2SA-left
 ‘You told Nelson that the guests left.’

But I argue in §3.5 that IOs are Case-licensed dative in situ by the applicative head which surfaces as a bound morpheme on the verb; and hence IOs are inactive for Agree relations with any other probe. The evidence of multiple SA in cases like (8) and (9) shows that in contrast, Lubukusu subjects are active in iterating probe-goal relationships prior to occupying Spec, TP (and perhaps beyond). I explore the reasons for this in §3.5.3.

1.2.2 Sketch of the mechanics of DELAYED VALUATION

On the face of it, an example like (7a) (repeated below) seems compatible with several potential hypotheses for DELAYED VALUATION of C’s uPhi once the lower clause has

evidence that the uCase of a VP-internal German DP can be valued nominative by T if the domain is small enough (a simplex clause or a restructuring complement to a modal or raising verb; see (13) and (14)). The preferred low scope reading for the nominative DP in (13) (unavailable for a DP in Spec, TP) supports this, as will be detailed in §4.2.

- (13) weil mindestens einem Kritiker jeder Film gefallen sollte
 since at.least one.DAT critic every.NOM film please should
 ‘Since at least one critic should like every movie’



Putting together the evidence of Lubukusu CA with Bobaljik & Wurmbrand’s proposals for German, I will argue that (12) should be broadened as shown in (15).⁹

(15) **Mechanics of Delayed Valuation version #2**

uF with no match in its c-command domain can be valued:

- (i) Ex situ, by raising to c-command a matching feature in a higher phase, *OR*
- (ii) In situ, by a matching feature within the same phase.

The approach I will adopt to motivating movement is sketched in (16).¹⁰

- (16) Why there is movement: the edge feature of a head H removes uF from within the complement of H.

(16) is intended as an implementation of Bošković’s 2007, 2011 proposal that features of the moving item drive movement. And (15) is only a slight modification of Bobaljik &

⁹ Henceforth I will assume that being *closest* is prerequisite to any successful matching/valuation relation, and restrict attention in definitions to the hierarchical and phasal aspects of the relations.

¹⁰ I will assume Merge-over-Move (Chomsky 1995; 2001) and that (16) generally creates an outer specifier; hence the edge feature of v* raises XP bearing unvalued uF to a position c-commanding the thematic subject. Following Bobaljik & Wurmbrand, German T has optional EPP (=edge feature); see §4 for details.

Wurmbrand's 2005 proposal for what they call *agreement domains*, extended to both Case and the novel facts of Lubukusu CA. In §5 I will present a speculative proposal that (15) is unnecessarily restrictive: DELAYED VALUATION may be less about establishing a specific directionality than about matching features being made local, though the operation of (16) obscures this fact in many cases. There is some reason to think that when an edge feature is not available c-commanding a potential source of valuation β , moving of $uF \alpha$ to be closest c-commandee of β may suffice; this is the mechanism for licensing of accusative by the prepositional complementizer *for* in an English example such as [*For [him to be invited t]*] *would surprise me* (see §5.2).¹¹ Hence the revised (15R).

(15R) Directionality-Free Mechanics of Delayed Valuation

uF with no match in its c-command domain can be valued:

- (i) Ex situ, by raising into locality with a matching feature *OR*
- (ii) In situ, by the closest matching feature within the same phase.

Thus while the analysis is not compatible with “upwards” agreement as a parametric choice (Baker 2008, Diercks 2011a) or as a universal (Zijlstra 2012; Wurmbrand 2011), my investigation results in a suggestion that something resembling “upwards”-looking valuation processes is in principle available in all languages when first Merge provides no results (see Bejar & Rezac 2009 for a similar proposal based on the phenomenon of *agreement displacement*, to be discussed in §6). Any intrinsic directionality to valuation relations is illusory, and so perhaps is any actual process of “probing”, on this view (cf. Dan Seely personal communication; and see Preminger 2011 for a different perspective).

¹¹ Zeller (2006) argues that raising a DP to be closest c-commandee is the basis for accusative valuation in Kinyarwanda locative applicatives, strengthening the case for (15R).

1.3 uF of X become uF of XP

The approach to goal features and upwards agreement phenomena that I advocate here leads inevitably to rejection of the view that unvalued features on X abort XP or make it impossible for XP to Merge with Y (Chomsky 2000; Adger 2003). Chomsky 2000:132 writes, “Properties of the probe [...] must be exhausted before new elements of the lexical subarray are accessed to drive further operations.” But a DP bearing unvalued uCase is licit in syntactic relations with other expressions, including Merge with a selecting head (Merge (H, DP_{uCase})), and Merge of a higher probe that can value its uCase. Given that “active goal features” meet the definition of probes and that in my own and several other analyses they *are* probes (see Bošković 2007, 2011; Epstein & Seely 2006) the hypothesis expressed in Chomsky’s quote is untenable. Throughout this paper I accordingly assume that XP inherits the features of X, because its label is a copy of X. Any unvalued features of X thus become properties of XP and can probe the c-command domain of XP (see also Bejar & Rezac 2009 for a different implementation of this idea). I return to the issue of XP probing in §7, arguing that concord on APs and agreement on the Luyia adjunct ‘how’ are additional cases in which unvalued features of X obtain value in relations (Agree (XP_{uPhi} Y(P))).

1.4 Structure of the paper

This paper consists of nine sections. In §2 I propose the approach to goal features in terms of DELAYED VALUATION that is the theoretical premise upon which subsequent sections rely. In §3 I explore the properties of Lubukusu complementizer agreement and its implications for how DELAYED VALUATION works. §4 considers DELAYED VALUATION of Case, focusing on Bobaljik & Wurmbrand’s treatment of nominative in German restructuring contexts. §5 addresses the question of how and when movement occurs, and proposes that raising to be

closest c-commandee can suffice to permit valuation. §6 looks at agreement displacement phenomena discussed in Bejar & Rezac 2009 in light of my findings. §7 provides independent evidence from a range of additional phenomena that uF of X can be valued through probing by XP into its c-command domain. §8 sketches out an extension of the approach to valuation of tense features on V. §9 concludes.

2 Goal features

Consider the partial derivation of (17a) presented in (17b,c) below. (17b) indicates that when v merges with VP, VP contains a DP direct object bearing unvalued Case. Under fairly standard Minimalist assumptions, the interaction of this DP's uCase with v's uPhi permits both to be valued as shown in (17c).

(17) a. I will see him.

b. MERGE ($v_{u\Phi i}$ [$VP DP_{3S, uCase...}$])

c. [$v_{u\Phi i3S}$ [$VP DP_{3S, uCaseAcc...}$]]

The process is repeated in subsequent stages of the derivation presented in (18) below.

The subject is merged bearing a uCase feature (18a). Then vP is merged with T, which bears a uPhi probe (18b). Only after this step can uCase of the subject DP be valued (18c).

(18) a. MERGE ($DP_{1S, uCase}$ [$vP...$])

b. MERGE ($T_{u\Phi i}$ [$vP DP_{1S, uCase}$ [$v' V...$]]])

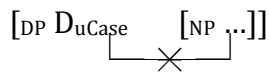
c. $T_{u\Phi i3S}$ [$vP DP_{1S, uCaseNom...}$]]

(17) and (18) represent the mechanics of Case-valuation in Chomsky 2000, 2001. The state of affairs sketched out here is at odds with the assumption that uFs must find values, where possible, in their c-command domains.

My proposal is to extend to goal features like uCase the approach that successfully accounts for probe uFs, that is, the assumption that valuation is automatically attempted at

first Merge. Appearances to the contrary arise by virtue of an independently motivated claim that it is possible for matching of a uF α to initially fail and the derivation to converge nonetheless as the syntactic object that contains α is expanded to include additional material (Bejar 2003, Rezac 2003, Bejar & Rezac 2009). I propose that D bears a uCase feature which is not valued in its c-command domain (= NP) because there is simply nothing suitable there (see (5), repeated below).¹² Note that if uCase is assumed to be a property of N rather than D, greater technical difficulties face the problem's resolution since N is not the head of DP; hence DP does not automatically inherit its features (see Carstens 2010, 2011 for arguments that only N-to-D adjunction gives rise to "percolation" of N's morpho-syntactic features to D).

(5) Why Case is a goal feature: upon Merge, D's uCase cannot be valued



There are in principle at least 3 ways in which a syntactic object that contains a stranded uF like D's uCase in (5) might be hypothesized to progress towards a convergent derivation. I summarize in (19), where α represents any uF in such a circumstance.

(19) Hypotheses for DELAYED VALUATION of uF α

- (i) α raises to probe a possible valuer β under closest c-command (perhaps pied piping the XP bearing α and thus yielding common Spec, head configurations and relations; cf. Epstein et al 1998; Epstein & Seely 2006; Bošković 2007, 2011).

¹² I take DP to be a cover term for a set of functional projections, as Rizzi (1997) has argued for CP. When there is a genitive phrase within DP, as in *John's mother*, I assume the genitive-licensing head is lower than the highest D, bearer of the DP's overall uCase. Thanks to Mark Baker for bringing this issue to my attention. Relatedly, an anonymous reviewer asks why, in a case like *His attempt to win*, the pronoun cannot probe downwards and obtain a Case value from the verb (*win* having the potential to value accusative). For one thing, a genitive Case-valuer would appear to be closer. For another, I assume pronouns have internal structure like full DPs; usually their person features are properties of D, their number features originate in the Num head of NumP, and in languages with grammatical gender, their genders come from N. The c-command domain of D is hence NP even in this case. Dechaine & Wiltschko (2002) identify 3 types of pronouns in natural language. One variety lacks internal structure, but it functions only as a predicate.

(ii) α can be valued by iF of a higher expression in a limited domain without moving, as the syntactic object that includes it is expanded to include some β with matching features (Rezac 2003; Bejar & Rezac 2009).¹³

(iii) α is valued if a probe β , Merged higher in the same phase, takes it as goal in an Agree relation.

Though I have set out the problem of DELAYED VALUATION in relation to English Case, both raising and in situ analyses have been proposed for it in the syntactic literature as noted above. Choosing the best among these analyses is not an easy task due to the confounding issue of whether there is an independent catalyst for DP-movement in English -- the EPP. My strategy in this paper is therefore to evaluate the possibilities in (19i-iii) in relation to several different classes of phenomena that I think are more conclusive, beginning with the two varieties of complementizer agreement I have already introduced: the direct, downward-valued variety found in West Germanic, and the apparently upward-probing variety found in Lubukusu (cf. Baker 2008; Diercks to appear b). As noted in the introduction, I analyze the latter as DELAYED VALUATION resulting from the absence of $iPhi$ in the c-command domain of Lubukusu C's $uPhi$ at the point of Merge, because Lubukusu C is high in the left periphery. By the time it enters the syntax, cyclic transfer has removed the subject. Successful valuation is a subcase of (19i). But §4 and §5 present evidence that (19ii-iii) are also options employed in natural language for providing DELAYED VALUATION of uFs , with the choice among mechanisms based primarily on locality. I will argue that (19ii) and (19iii) can be collapsed, hence the two-point conclusion in (15/15R).

Before we begin, a clarification is in order regarding my approach to Case.

Throughout the paper I will assume versions of both the traditional Case filter and the

¹³ Rezac 2003 and Bejar & Rezac 2009 treat this as second-cycle probing. I will argue for a more neutral conceptualization under which it is simply Match and valuation in a larger domain; see §6 for discussion.

“Inverse Case Filter” (see Boskovic 2002 among others). Thus DPs have uCase features that require values, and certain heads have corresponding uCase features that must interact with DPs (though perhaps these come from the lexicon with a value; thus T bears uNom, and v uAcc, accounting for common correlations between structural locations and Case-values that DPs acquire in them (Boskovic 2011).¹⁴ For much of the paper this particular approach to Case is irrelevant, but it plays a role in §4.2.

3. Evidence from “upward” complementizer agreement.

3.1 The empirical issue

I argued in §2 that there is no species of uF that fails to probe downwards upon Merge, for reasons rooted in the derivation. Goal features heretofore seemed a notable exception to this rule. The proposal in §2 eliminates them as an obstacle to a unitary conception of uFs, arguing that goals are simply uFs that cannot obtain values on first Merge.

The idea that probes must search in their sisters has been challenged recently in Baker 2008, Diercks 2011a and to appear b, Zeijlstra 2012, Wurmbrand 2011 among others. Baker (op cit) proposes that upwards/downwards probing (henceforth U/D) is a parametric choice. One piece of evidence he cites is the existence of agreement in certain languages between a complementizer and the subject of the immediately higher clause. I illustrate with data from Lubukusu since it will be explored in detail here (CA is bolded in (20) and (21), from Diercks to appear b).

(20) Khw-aulile **khu**-li ba-limi ba-funaka- ma-indi. [Lubukusu]
 1plSA-heard 1pl-that 2-farmers 2S-harvested 6-6-maize
 ‘We heard that the farmers harvested the maize.’

¹⁴ Contra Pesetsky & Torrego 2004 and Zeijlstra 2012 I do not adopt Brody’s 1997 *Thesis of Radical Interpretability* and the conceptually related proposal that uCase on DP is uT. Carstens 2008a; 2010, Boskovic to appear, and Zamparelli 2008 argue that grammatical gender is strictly uninterpretable: on N it is uninterpretable but valued; on agreeing categories it is uninterpretable and unvalued. A valuation relation (T, DP_{uT}) is in principle possible however under the directionality free approach in (15R); see §8.

- (21) Sammy ka-bol-el-wa a-li ba-keni b-ola.
 1Sammy 1SA-say-APPL-PASS 1-that2-guests 2SA-arrived
 ‘Sammy was told that the guests arrived.’

Diercks provides two important arguments that Lubukusu CA is not simply subject agreement copied onto it from the higher T (a possibility that is in any case at odds with phase theory, for reasons that will become clear in §3.4.2). In subject extraction contexts, T can only agree in number and gender (see also Kinyalolo 1991 on Kilega). Diercks calls this the Alternative Agreement Effect, thus AAE below. In contrast, agreeing C exhibits full features of gender, number, and person (see (22)). And in imperatives, there are no explicit subject agreement features on the verb; but C bears second person singular or plural (23a,b). Hence it appears that Lubukusu C has independent uPhi features that are valued by the subject (assuming with Diercks that in imperatives like (23a,b) there is a silent second person subject).¹⁵

- (22) Naanu **o**-manyile a-li (***o**-li) Alfred a-l-ola?
 who AAE-knows 1-that (*AAE-that) 1Alfred 1SA-FUT-arrive
 ‘Who knows that Alfred will arrive?’

- (23) a. Suubisye **o**-li o-kh-eche muchuli.
 promise 2s-that 2SSA-FUT-come tomorrow
 ‘Promise me that you (sg) will come tomorrow.’

- b. Loma **mu**-li orio muno.
 say 2pl-that thank you very much (pl)
 ‘Say thank you very much.’

¹⁵ Ndayiragije (personal communication) suggests that Lubukusu agreeing C is not a C at all but a verb agreeing with a controlled *pro* subject (hence perhaps a kind of small clause hypothesis). Agreeing C is homophonous with ‘be’ and it seems reasonable to suppose that it is a repurposed ‘light’ verb in the way that the English *C for* appears related to a P. But a control analysis faces severe problems. §3.4 shows that a matrix IO/causee cannot value uPhi of Lubukusu C and explains this with the proposal that IOs/causees have Case-licensing from Appl/Caus and hence are inactive for Agree. Case-valued expressions are always licit controllers, so the approach cannot be modified to suit a controlled *pro* account. We could stipulate that every Lubukusu matrix verb with a ForceP complement functions like *promise*, but this lacks any principled basis. Lastly, it seems undesirable for the categorial realization of clauses to be CP in one language and VP in the next language (or the next construction within the same language) without strong independent motivation.

The Lubukusu pattern resembles that of CA in the better-documented West Germanic (WG) languages in being demonstrably independent of SA. But the two contrast crucially in that WG CA reflects features of the embedded SU (see (24)). Carstens 2003, Haegeman & van Koppen 2012 argue that West Germanic C has uPhi distinct from that of T, and each uPhi is valued by SU independently as seems to be the case in Lubukusu. Among the evidence provided by Haegeman & van Koppen (op cit) is the fact that WG C can agree with the left member of a conjoined subject, while T must agree with the whole:¹⁶

- (24) Ich dink de-s [toow en Marie] kump. [Lumburgian]
 I think that-2s you(s) and Marie come.pl
 'I think that you and Marie will come'

3.2 Is agreeing C evidential or anaphoric?

Diercks (2010 and to appear b) demonstrates that there are a number of complementizers in Lubukusu which can introduce declarative clauses including the agreeing C, two invariant Cs *mbo* and *bali*, and a null C (null counterparts to more than one of the overt Cs seems a logical possibility). Differences in the distribution of agreeing C and *bali* lead Diercks to propose the restrictions on agreeing C summarized in (25).

- (25) Conditions on complementizer agreement (Diercks to appear b):
 a. Controller of agreement must be a subject.
 b. Controller of agreement can establish a "point of view" (i.e. has a mind to report).

(26) illustrates one source of motivation for (25b): inanimate DPs were judged by Diercks's speakers to be infelicitous controllers of CA (see (26a)) unless they included an animate possessor (26b). And the speakers Diercks consulted preferred *bali* when either the

¹⁶ Some but not all conjoined DPs allow mismatches between SA and CA in Lubukusu, depending partly on noun class. I have yet to determine a general pattern. Lubukusu conjoined DPs exhibit puzzling behavior in other respects, suggesting that they originate conjoined and can then separate (see Baker & Safir 2012a) and/or perhaps originate separate and move to conjoin. Person hierarchies also seem to influence agreement with conjoined DPs. Pending insight into their syntax I defer discussion of their interaction with CA to future research.

speaker or the subject doubts the contents of the embedded clause (see (27)).¹⁷ (26)-(27)

are factors that lead Diercks (to appear b) to argue that agreeing C has evidential properties, and that a null anaphoric operator is always paired with agreeing C.¹⁸

- (26) a. E-barua y-ekesya mbo (??e-li) Nelsoni a-sangaala
9-letter 9SA-showed that (??9-that) Nelson 1SA-is.happy
'The letter said that Nelson is happy.'
- b. E-barua y-a Nelsoni y-ekesie e-/*a-li ka-sangaala
9-letter 9-of 1Nelson 9SA-show 9-/*1-that 1SA-is.happy
'Nelson's letter showed that he is happy.'
- (27) Mosesi a-ul-ile a-li /bali Sammy k-eba chi-rupia
1Moses 1SA -hear-PST 1-C/BALI 1Sammy 1SA-stole 10-money
'Moses heard that Sammy stole the money.'
[a-li: Moses and the speaker believe it.]
[bali: Moses doesn't believe it or the speaker doubts it.]

But Diercks also provides examples of CA with expletive subjects (see (28a-c), = (73), (74), and (97) from Diercks to appear b). Diercks argues, following Bowers (2002), that an expletive is merged in Spec, vP (and the null anaphor is apparently bound by it). These examples are hard to reconcile with (25b), the requirement that the agreed-with subject have a "mind to report" or a "point of view."

- (28) a. Ka-lolekana ka-li Tegani ka-a-kwa
6SA-seems 6-that 6SA-PST-fall
'It seems that Tegan fell'
- b. Li-lolekana li-li Sammy a-likho a-lwala
5SA-seems 5-that 1SA-PROG 1SA-be.sick
'It seems that Sammy is sick'
- c. Mu-sooko li-a-lom-w-a li-li o-mu-khoongo a-li-rura-yo
18-market 5SA-PST-sayPASS-FV 5-that 1-1-boss 1SA- FUT-get.out-16L
'In the market it was said that the boss will leave the place'

¹⁷Bali is homophonous with agreeing C for 3pl/Class 2, a fact consistent with its 'hearsay' usage.

¹⁸ As pointed out in note 6, Diercks, van Koppen, & Putnam (2011, 2012) propose that Lubukusu agreeing C is itself the anaphoric element. It has unvalued but interpretable phi-features, like a reflexive in the framework of Rooryck & Vanden Wyngaerd (2011). This section's arguments against the presence of an anaphor apply. In contrast, multiple agreement with subjects is independently motivated.

The absence of a thematic role for the matrix subject position in (28a-c) might make covert raising of the embedded subject seem a possible account of these facts consistent with the point-of-view requirement in (25b). But covert raising, if it happens in such contexts, does not generally license anaphora. This is clear from the fact that a subject embedded under a raising verb cannot antecede a matrix reflexive in a case like (29).

(29) *It seems to himself [that John is sick/John to be sick].

Based on (28) I conclude that the controller of agreeing C does **not** have to have a mind to report contra Diercks (2010 and to appear b), and accordingly that there is insufficient basis for eschewing an analysis in terms of the universal mechanism of uPhi-valuation under Agree – something that quite commonly yields expletive values, absent a thematic element for uPhi to agree with. I suggest that the nuances of complementizer choice reduce not to anaphora but to specific lexico-semantic properties of the several varieties of C.

A full account of the properties of Lubukusu’s various complementizers lies outside this paper’s scope; complicating the task, the four speakers that I worked with do not have the usage restrictions exemplified in (27) at all, and Diercks (personal communication) informs me that the division of labor among Cs varies considerably across close geographic regions. But (30) seems a good start on accounting for the judgments reported in (27) without positing the presence of an anaphor.

(30) Complementizers selected by verbs of locution, perception, and thought:

| | |
|------------------------|-----------|
| <i>Bali:</i> | Hearsay |
| Agreeing C, mbo, or ø: | Elsewhere |

As for (26), it might suffice to assume that for speakers who have these judgments, agreeing C is only selected by verbs with animate subjects, rather like the fact that English *surprise* must have a perceptual source subject and an animate object. The four speakers I

worked with did not share the judgments in (26), and this fact might have a dialectal basis or be connected with variability regarding pairing of the verb ‘show’ with a CP complement. One speaker initially judged it infelicitous to combine ‘show’ with any CP, but subsequently accepted a number of such examples on other occasions. Apart from this instance, the four speakers consistently allowed the combination of ‘show’ with agreeing C, including cases like (31a) wherein the subject is the inanimate noun ‘letter’. Comparable examples involving other verbs such as ‘promise’ and ‘surprise’ (31b,c) were also acceptable to all four of the speakers I worked with.

- (31) a. Ebarua y-ø-eke-sy-a eli Nelson omusangafu
 9letter 9SA-PST-see-CAUS-FV 9-that 1Nelson 1happy
 ‘The letter showed that Nelson was happy’
- b. Ebarua y-a-suubi-sy-a eli bakeni bacha
 9letter 9SA-PST-believe-CAUS-FV 9-that 2guests 2SA-leave
 ‘The letter promised that the guests would leave’
- c. Ebarua y-a-sindu-sy-a babana eli bakeni khe-beecha
 9letter 9SA-PST-surprise-CAUS-FV 2-children 9-that 2guests 2SA-come-FV
 ‘The letter made the children surprised that the guests were coming’

Summing up, CA with expletive subjects as in (28) argues strongly against the claim that agreeing C has evidential properties or that its controller must have a mind to report, and (31) provides further support. (30) attributes restrictions on the distribution of CA (for those speakers who agree with (27)) to matters of selection, rooted in the lexico-semantic properties of the various Lubukusu Cs. Assuming Diercks’s claim that the judgments in (26) are because some speakers only accept agreeing C in the complement to verbs with animate subjects, this state of affairs can also be explained by a selectional restriction.

The conclusion which emerges is that the phi-features of Lubukusu agreeing C are simply unvalued uPhi like those of West Germanic, though the complementizers that bear them differ slightly in usage in the two languages. Usage restrictions are commonly

attributed to lexical meaning and selection; factors that seem to suffice here. The approach permits us to adopt the strongest and most interesting hypothesis about agreement phenomena, namely that a unitary theoretical approach to it is possible. I pursue this hypothesis in the rest of this paper.

3.3 Against analysis of Lubukusu as an upwards-agreeing language

I argued above that Lubukusu agreeing C is not evidential. I also showed that the agreeing Cs of West Germanic and Lubukusu both have uPhi features independent of the ones giving rise to subject agreement on the verb; but the values they acquire are drawn from quite different domains – the higher versus the lower clause. I proposed that a unitary approach to the two is theoretically desirable.

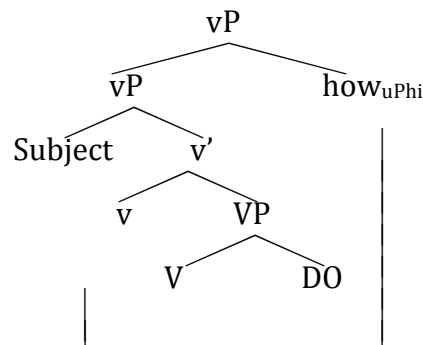
As I noted in §3.1, Baker op cit and Diercks 2010 view the contrast between West Germanic and Lubukusu CA as at least partially explained by a U/D parameter. But a very fruitful approach to parameters attributes them to properties of lexical items (Borer 1984, Chomsky 1995). As Baker (op cit) acknowledges, U/D is probably not implementable in these terms. It is hard to imagine a potential feature of LIs, save perhaps a fanciful designation such as “novelty seeker,” that could encode the upwards value of the U/D parameter, causing an unvalued feature to spurn valuation available to it in a feature-match at Merge. It seems to me that a less constrained and predictive grammar results from the admission of representation-based parameters like U/D.

In addition to this derivationalist and parameter-theoretic argument, there is also strong empirical evidence that agreement in Lubukusu does not in general look upward for

valuation.¹⁹ Carstens & Diercks (to appear a) argue that the Lubukusu *wh*-expression ‘how’ is a right adjunct to vP bearing uPhi features which are valued by probing the subject downward in its Merge position (see (32) and (33)).

- (32) A-li-le e-nyama a-riena /*e-riena?
 1SA-eat-PST 9-meat 1-how/9-how
 ‘How did he eat the meat?’

- (33) *uPhi of Lubukusu agreeing ‘how’ probes SU in its base position*



Viewed in isolation, (32) might seem compatible with several alternative analyses, among them (i) upwards agreement, where uPhi of ‘how’ is valued by the subject in Spec, TP; or (ii) downwards control, where the matrix subject controls a hypothetical *pro* subject in a HowP that it c-commands. But only the analysis in (33) explains agreement on ‘how’ in an A-movement type of locative inversion (LI) construction, restricted to locatives selected as arguments of an unaccusative verb. In this construction the locative DP (DP_{loc}) raises to Spec, TP, leaving the thematic subject *in situ* (see (34), adapted from Diercks 2011a). T agrees with the inverted DP_{loc} while ‘how’ agrees with the *in situ* subject (35a). Carstens & Diercks (op cit) propose that DP_{loc} escapes VP via Spec of the locative clitic that is obligatory in such constructions; this clitic is sensitive only to locatives. ‘How’ probes

¹⁹ This is partly obscured by frequent pairing of uPhi and edge features; see Carstens 2005; Collins 2004.

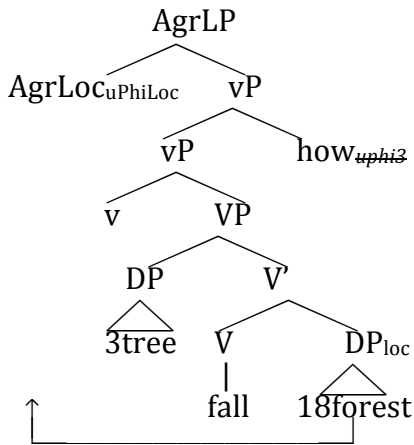
unselectively downwards as shown in (35b), and must agree with whatever DP is closest; hence with the thematic subject.

- (34) **Repeated agreement LI (RALI):** *selected DP_{loc} raises to Spec, TP; thematic subject surfaces in situ* (Diercks 2011a)

[_{TP} DP_{loc} v-V-T... [_{VP} <v> [_{VP} SUBJ <V> <DP_{loc}>]]]

- (35) a. **Mu-mu-siiru mw-a-kwa-mo ku-mu-saala ku-rie?** RALI
 18-3-forest 18SA-PST-fall-18L 3-3-tree 3-how
 'How did a tree fall in the forest?' (Lit: In the forest fell a tree how?)

- b. *uPhi of 'how' probes the unaccusative SU, merged higher than the selected locative uPhi of AgrLoc probes and raises only locatives, bringing DP_{loc} to a position accessible to probing by T* (Carstens & Diercks 2011).



Agreeing 'how' is thus powerful evidence that Lubukusu uPhi probes its c-command domain at first Merge, as the derivationalist view of syntax predicts. It provides empirical arguments against upwards Agree in Lubukusu, either as a matter of parametric choice (Baker op cit and Diercks 2011a) or as a universal, as in Zieljstra 2012. While it is conceivable that uPhi of different categories probe in different directions in Lubukusu, this attributes a sort of arbitrariness to syntactic behavior that is difficult to reconcile with Minimalist principles. A unified analysis seems vastly preferable. In §3.4 I provide an approach under which, despite surface appearances, Lubukusu CA also probes downwards,

both at first Merge and in the relation that ultimately values its features. This brings Lubukusu's agreeing C into line with both agreeing 'how' and a number of well-motivated approaches to Case valuation mentioned in this paper; and I take these to be strengths of the proposal. I will nonetheless conclude in §4 that valuation relations are not intrinsically directional. They rely only upon sufficiently local feature matching.

3.4 The DELAYED VALUATION approach

I turn to the account of WG and Lubukusu CA illustrated in (6a) and (7a), repeated below.

- (6) a. Kvinden **dan** die boeken te diere zyn [West Flemish; Haegeman 1992]
 I-find that-PL the books too expensive are
 'I find those books too expensive.'
- (7) a. N-enya **n-di** Barack Obama a-khil-e [Lubukusu; Diercks to appear b]
 1SSA-want 1s-that 1Barack Obama 1SA -win-SBJ
 'I want Barack Obama to succeed.'

I propose that, like the difference between probe and goal features, the contrasting properties of CA in the two languages are due to whether valuation is available for the relevant uFs in their Merge locations. The analysis rests on interaction among a few independently motivated factors: (i) the Phase Impenetrability Condition of Chomsky 2000; (ii) an articulated left edge as in Rizzi 1997, 1999 allowing differences in the height of agreeing Cs in the 2 cases; and (iii) one of the DELAYED VALUATION mechanisms sketched out in relation to goal features in §2. Relevant aspects of Rizzi's approach to the left periphery are illustrated in (36) (INT = interrogative; FOC = focus). The version of the PIC that I adopt is shown in (37).

(36) *The articulated left periphery: Rizzi 1997, 1999*

...[ForceP FORCE [FocP FOC [IntP INT [FinP FIN [TP SU T...]]]]]

(37) In a phase α with head H, the domain of H is inaccessible to operations outside α , only H and its edge are.²⁰

Since West Germanic C clearly has access to the contents of the embedded TP I propose that it is the lowest complementizer, Rizzi's Fin. When uPhi of Fin probes its sister upon Merge, SU is accessible under the PIC (see (38)). Hence Fin's uPhi can find a match in the phi-features of SU within its c-command domain at first Merge:

(38) *West Germanic complementizer agreement: uPhi of Fin successfully probe the subject*

a. $\text{Fin}_{u\Phi} [\text{TP } \text{SU } \text{T} [\text{VP} \langle \text{SU} \rangle \text{v} [\text{VP} \dots]]]$

b. $\text{Fin}_{u\Phi} [\text{TP } \text{SU } \text{T} [\text{VP} \langle \text{SU} \rangle \text{v} [\text{VP} \dots]]]$

In contrast Lubukusu's agreeing C is closer to the matrix clause – I will assume it is Rizzi's Force. Suppose Fin is a phase head; then by the time Force merges, phasal transfer has taken place and the subject is already gone. Thus like a goal feature, uPhi of agreeing C cannot be valued until and unless Merge of additional material expands the possibilities.

(39) *Lubukusu complementizer agreement: Force_{uPhi} cannot probe transferred SU*

$[\text{ForceP } \text{Force}_{u\Phi} \dots [\text{FinP } \text{Fin} [\text{TP } \text{SU} \dots]]]$

But there is reason to think the phase head of the CP-domain is instead intermediate between ForceP and FinP. Carstens & Diercks (to appear b) argue from the existence of reconstructed readings for examples like (40a) that there is HYPER-RAISING in Lubukusu -- raising out of tensed clauses ((40a,b) = Diercks 2011: (76) and (78)). While the agreeing C is not possible in a HYPER-RAISING construction, HYPER-RAISING is licit across a non-agreeing complementizer *mbo* as these examples demonstrate.

²⁰ The version of the PIC in Chomsky 2001 (see below) can capture the delay in Lubukusu CA valuation if both ForceP and FinP are strong phases, so Force cannot reach across Fin into TP, and if the analysis of hyper-raising constructions is slightly altered (see discussion of (40) ahead). I leave this aside.

(i) Given phases ZP and HP, the domain of H is inaccessible to operations at ZP, only H and its edge are.

- (40) a. Michael a-lolekhana mbo (*a-li) a-si-kona
 Michael 1SA-appear that (*1-that) 1SA-still-sleep
 'Michael appears to be still sleeping'
- b. O-mu-keni ka-suubil-wa mbo (*a-li) k-ola
 1-1-guest 1SA-believe-PASS that (*1-that) 1SA-arrive
 'The guest was believed to have arrived.'

Following Carstens & Diercks (to appear b) I identify *mbo* as Lubukusu's low C Fin. The simplest approach to the permeability of clauses introduced by *mbo* is to assume with Carstens & Diercks (to appear b) that *mbo* is not a phase head.²¹ Hence cyclic transfer must be triggered by a null head located between *mbo* and agreeing C.²² Rizzi 1999 posits a C intermediate between Fin and Force, where overt interrogative (Int) complementizers appear in some languages. I will assume that there are positive and negative values for Int and that the CP it heads (IntP) is selected by Force. A raising verb selects a bare FinP headed by *mbo*, out of which A-movement is possible (and see note 21 on long-distance agreement); other verbs of speech, perception, and thought usually select ForceP,²³ containing the intermediate, phasal CP. Thus *mbo* clauses are permeable, and uPhi of the agreeing C cannot be valued by an embedded subject – all the desired results are obtained.

²¹ Bošković 2007 reviews evidence from Chuckchee and Blackfoot from Stepanovic & Takahashi (2001) and Legate 2005 suggesting that Agree can reach into an embedded clause. He argues that only Move is subject to the PIC. Given the evidence that Lubukusu cross-clausal agreement fails, I suggest instead that the relevant C in Chuckchee and Blackfoot is the low non-phasal C Fin, so that long-distance Agree in these languages relies on the same embedded clause permeability as Lubukusu hyper-raising across *mbo*. See also Bhatt 2005, Bobaljik & Wurmbrand 2005 for analyses of some long-distance agreement in terms of restructuring, and Polinsky & Potsdam 2001 for arguments that long-distance agreement in Tsez is mediated by a null topic in Spec of the embedded CP.

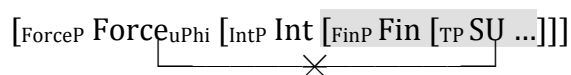
²² Embedded topicalization can only target a position to the right of agreeing C – it cannot precede agreeing C and is impossible in an *mbo* clause. C cannot agree with the topic (see (i)). These factors suggest (ii) where TopP is below both ForceP and phasal Int. Since *mbo* cannot surface, its location relative to TopP is unclear.

(i) John a-loma a-/*li-li litunda, Nolu ka-kula /John a-loma (*mbo) litunda (*mbo) Nolu ka-kula
 John 1SA-say 1/*5-that 5fruit 1SA-bought/ 1 SA-say (*that) 5fruit (*that) 1SA-bought
 'John said that the fruit, Nolu bought'

(ii) [_{ForceP} CuPhi [_{IntP} Int [_{TopP} fruit...]]]

²³ Both Fin and Force appear to have null variants that I will not consider here. See Diercks to appear b for discussion of C choices and properties of their selecting verbs; and see my brief discussion in §3.2.

(41) *An intermediate C (Int) triggers phasal transfer, blocking CA with embedded SU*



The situation for uPhi of Force at the point in (39/41) is parallel to that of D's uCase in (5).

In line with the possibilities in (19), there seem to be three ways in which valuation might be hypothesized to take place here. Force might raise to c-command an expression bearing iPhi (with or without pied-piping surrounding material). Alternatively, Force might probe upwards as the syntactic object containing it is expanded. Lastly, Force might be able to obtain valuation without doing anything at all, when a higher expression is merged that bears some relevant probe feature and/or matching iPhi. Teasing out the best among these options is the next task. (12) (repeated below) would predict that ForceP must move to outer Spec, vP where its uPhi can probe the subject downwards, and given that v* has a phasal edge feature this derivation is always a possibility. In the sections that follow I will provide evidence that ForceP must raise out of VP in double object constructions (DOCs).

(12) a. **Mechanics of Delayed Valuation version #1:** uF with no match in its c-command domain can be valued ex-situ, by raising to closest c-command a matching feature.

b. Probing is triggered exclusively by (re-)Merge.

3.5 The subject orientation and its implications

3.5.1 The empirical problem

The evidence that Force(P) must move in DOCs lies in the identity of the expression that ultimately values its uPhi. Diercks (to appear b) demonstrates that only the subject of the immediately superordinate clause can value uPhi of Lubukusu C. C cannot agree with a more remote subject (see (42)); nor with an indirect object (IO) or causee (see (43); (42) and (43a) from Diercks (to appear b); thanks to Lillian Waswa for (43b)).

(42) Alfredi ka-a-loma a-li ba-ba-andu ba-mwekesia *a-/ba-li o-mu-keni k-ola
 1Alfred 1SA -PST-say 1-that 2-2-people 2SA-revealed *1-/2-that 1-1-guest 1S-arrived
 'Alfred said people revealed that the guest arrived.'

(43) a. Ewe w-abol-el-a Nelsoni *a-/o-li ba-keni ba-rekukha.
 you 2SSA-say-APPL-FV 1Nelson 1/2s-that 2-guests 2SA-left
 'You told Nelson that the guests left.'

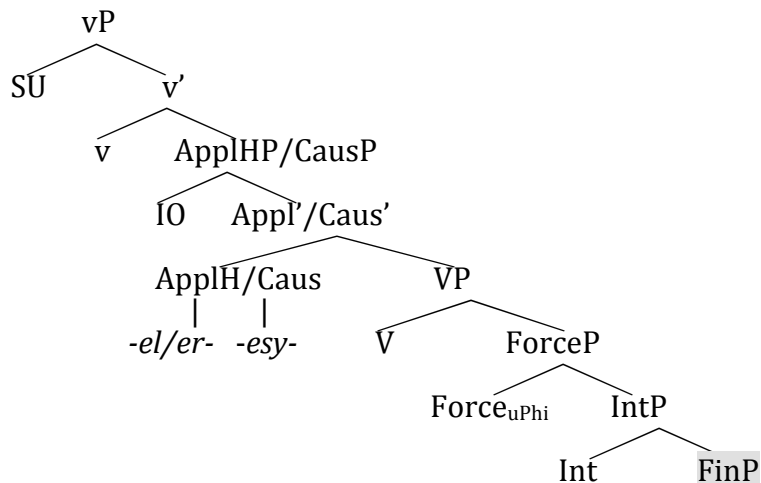
b. N-ok-esy-a Wekesa ndi /(*ali) ba-keni ba-rekhukha.
 1SSA-see-CAUS-FV 1Wekesa 1s-that (*1-that) 2-guests 2SA-left
 'I showed Wekesa that the guests had left.'

(42) shows that the relation valuing Lubukusu CA is local, as Diercks (to appear b) points out. Given this, (43a,b) present a puzzle. Following Marantz 1993 and McGinnis 2001 I assume that IOs in Bantu languages merge in Spec of a 'high' Appl(icative)P located between vP and VP (see also Pytkkanen 2002, 2008, for whom the external argument is merged in Spec of VoiceP where VoiceP>ApplHP>vP>VP; this differences is not significant here). Anticipating discussion of (49) and (50) in §3.5.3 and additional binding evidence in §3.7, I claim that Lubukusu causative and applicative constructions have roughly parallel syntax and treat them alike.²⁴ Hence the schematic structure of (43a,b) is (44). Evidence that IO asymmetrically c-commands DO is presented in (45), supporting this analysis (I follow Barss & Lasnik 1986; Marantz 1993 on this binding diagnostic).²⁵ Hence the Merge positions of the subject and agreeing C are not at all local.

²⁴ See however Baker & Safir 2012b on some differences related to first and second person objects that will not be relevant here, and for a proposal that the category responsible for raising DO over IO is head of LinkP.

²⁵ Binding relations in Lubukusu double object constructions (DOCs) are more complex than this, as will be detailed §3.7. I assume that the more rigid word order and binding pattern when both objects are human reveal the underlying hierarchical relations; based in part upon prior works on DOCs cited in this section.

(44)



Merge locations of SU, IO, and C

- (45) a. Na-a-rer-er-a buli may_i omwana wewe_i
 1SSA-PAST-bring-APPL-FV every 1mother 1child 1POSS1
 'I brought each mother_i her_i child' (OK with bound variable reading)
- b. *Na-a-rer-er-a mayi w-ewe_i buli omusoleli_i
 1SSA-PAST-bring-APPL-FV 1mother 1-POSS-1 every 1boy
 *I brought his_i mother each boy_i' (OK only without bound reading)

Thus whether Force(P) is hypothesized to raise, to probe upwards, or to be valued by a feature of T or the subject interacting with it downwards, the IO or causee would seem to be in the way. This is in large part why Diercks (2010 and to appear b) argues that C agrees with a logophoric null operator in its Spec.²⁶ The subject orientation is thereby reduced to that of long distance anaphors which, following Safir 2004, raise and adjoin to T (see the partial schematics in (46), adapted from Diercks to appear b; see Diercks 2011a and Carstens & Diercks (to appear) for arguments that Lubukusu V raises to T).

- (46) a. [TP You say+APPL+T [AppIP Alfred <APPL> [VP <V>[CP OP_{uPhi} C_{uPhi} TP]]]] →
 b. [TP₁ You OP_{uPhi}+say+APPL+T [AppIP Alfred <APPL> [VP <V> [CP <OP> C_{uPhi} TP₂]]]] →
 c. [TP₁ You OP_{uPhi2s}+say+APPL+T [AppIP Alfred <APPL> [VP <V> [CP <OP_{uPhi2s}> C_{uPhi2s} TP₂]]]]

But as I noted in §3.2, Lubukusu agreeing C does not have a reflexive or bound pronominal meaning; and the contrasting directionality of probing by agreeing 'how' and C is

²⁶ Two additional empirical issues relevant to this question will be addressed in §3.8: CPs within complex NPs and Raising-to-Object, which appears to cross agreeing C without altering the subject-orientation.

mysterious under this account. Given that ‘how’ probes downwards (see §3.3), an explanation is needed for why and how $u\Phi$ of C can wait to agree until the operator is merged, instead of probing its c-command domain at the point of Merge like $u\Phi$ of ‘how.’ The DELAYED VALUATION approach provides this. It remains only to uncover the precise mechanism involved and the basis for non-intervention by the IO or causee.

3.5.2 Datives and intervention

As mentioned in the introduction, I propose that IOs and causees in Lubukusu are Case-licensed in situ by Appl/Caus so they are not active to Agree with C (since Appl/Caus incorporate with the verb and raise out of vP, the directionality of this relation is an open question). A reasonable first hypothesis is that their dative Case value makes IOs wholly irrelevant for valuation of CA. Once the subject is merged in Spec, vP, it can Agree with $u\Phi$ of C across the intervening IO or causee because SU is not yet Case-valued (see §3.5.4).

There is some initial support for such an approach in the behavior of datives in German. As I noted in the introduction, B&W argue that T can value a VP-internal nominative if the domain is small enough (see (13) and (14), repeated below); and this valuation relation can ignore a structurally intervening dative argument.

- (13) weil mindestens einem Kritiker jeder Film gefallen sollte
 since at.least one.DAT critic every.NOM film please should
 ‘Since at least one critic should like every movie’

- (14)  *In situ valuation for DP_{nom} across DP_{dat}*

German datives differ from Lubukusu IOs and causees in significant respects, however. It is well-established that as an inherent Case, German dative retains its identity even when it is borne by the object of a passive verb. And unlike an accusative, the dative object in a passive cannot interact with T to value its $u\Phi$ (see (47), adapted from McFadden (2006)).

(47) a. *Under passivization, Accusative OB becomes Nominative and values $u\Phi$ of T*

| | | | |
|---------------------------|---------------|-----------|--------|
| Meine Bruder | sind/*ist | geschoben | worden |
| my brothers(NOM) | be.PL/be.SING | pushed | become |
| 'My brothers were pushed' | | | |

b. *Under passivization, Dative OB retains its Case value and cannot value $u\Phi$ of T*

| | | | |
|---------------------------|---------------|----------|--------|
| Meine Brudern | *sind/ist | geholfen | worden |
| my brothers(DAT) | be.PL/be.SING | pushed | become |
| 'My brothers were helped' | | | |

c. *Nominative morphology cannot replace dative on a passivized IO, and SA is impossible*

| | | | |
|----------------------------------------------|---------|-----------------------|---------|
| *[Die Wissenschaftler] | sind/ | Den Wissenschaftlern | ist |
| [the scientists](NOM) | *be.PL/ | [the scientists](DAT) | be.SING |
| | | | |
| [ein großer Auftrag] | gegeben | worden | |
| [a big assignment]NOM | given | become | |
| 'The scientists were given a big assignment' | | | |

In contrast, passivized Lubukusu IOs behave like other subjects, raising to Spec, TP and valuing SA. Compare the Lubukusu (21) (repeated below) with the German (47b,c). The contrast suggests that the Case of Lubukusu IOs is structural, and that they are therefore not systematically inert for Agree.

(21) Sammy ka-bol-el-wa a-li ba-keni b-ola.
 1Sammy 1SA-say-APPL-PASS 1-that2-guests 2SA-arrived
 'Sammy was told that the guests arrived.'

The final and greatest reason for caution about positing that Lubukusu IOs do not count in the calculus of closeness is that even inherent datives, which cannot value SA themselves and do not block Case valuation in circumstances like (13)/(14), nonetheless function as *defective interveners* in ϕ -relations. I demonstrate with an Icelandic example from Holmberg

& Hróarsdóttir (2003).²⁷ As in German, T appears able to value nominative on a VP-internal DP across an intervening dative. But SA of T with DP_{Nom} is impossible in this configuration. If the dative raises out of the way, however, the Agree relation can proceed.

- (48) a. það finnst/*finnast [einhverjum stúdent]DAT [SC tölvurnar ljótar]
 there find.SG/*find.PL some student.SG.DAT the.computers.PL.NOM ugly
 'Some student finds the computers ugly'
- b. [Einhverjum stúdent]1 finnst t1[SC tölvurnar ljótar]
 some student.SG.DAT find.PL the.computers.PL.NOM ugly
 'Some student finds the computers ugly'

Thus a number of factors would lead one to expect IOs to block a valuation relationship between SU and in situ uPhi of Lubukusu Force. In the next section I present evidence that DOCs are “symmetrical” in Lubukusu, and discuss a proposal of McGinnis (2001) that in such languages Appl is a phase head. Like the defective intervention possibility discussed above, this analysis suggests that if ForceP remained in situ its features could not interact with the subject and it would transfer to Spell Out with uPhi of Force unvalued. On the other hand, the approach also provides an independently motivated mechanism for raising ForceP into locality with the subject, overcoming both the potential phase-theoretic and defective intervention problems at the same time.

3.5.3 A move-and-Agree account

Lubukusu has what are called “symmetrical” double object constructions: either DO or IO can generally be realized as an object pronoun, or move to Spec, TP in a passive (see also Baker & Safir 2012b). McGinnis 2001 argues that in such languages, Appl is a phase head with an edge (= EPP) feature²⁸ permitting direct object raising across indirect objects,

²⁷ See also Preminger 2011 for helpful discussion.

²⁸Chomsky 2008 defines an A' position as one created by an edge feature of a phase head, raising questions about the A/A'-status of pronominalization and passivization under this analysis. I discuss this in §3.7.

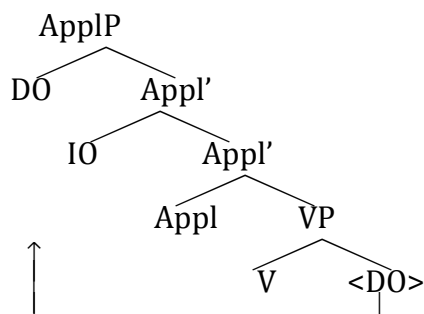
feeding passivization and pronominalization. The examples in (49) demonstrate this symmetry, and (50) shows that causatives are also symmetrical (thanks to Aggrey Wasike for (49); (50) is from Baker & Safir 2012b). I illustrate McGinnis's approach in (51).

- (49) a. Khu-rer-er-e o-mu-soleli bi-tabu
 1plSA-bring-APPL-PAST 1-1-boy 8-book
 'We brought the boy books'
- b. Khu-**mu**-rer-er-e bi-tabu
 1plSA-1OM-bring-APPL-PAST 8book
 'We brought him books'
- c. Khu-**vi**-rer-er-e o-mu-soleli
 1plSA-8OM-bring-APPL-PAST 1-1-boy
 'We brought them (to) the boy'
- d. Omusoleli a-rer-er-w-e bi-tabu
 1boy 1SA-bring-APPL-PASS-PAST 8-book
 'The boy was brought books'
- e. Bi-tabu bi-rer-er-w-e o-mu-soleli
 8-book 8SA-bring-APPL-PASS-PAST 1-1-boy
 'The books were brought (to) the boy'

- (50) a. Si-tabu sy-ok-esy-ebw-a Wekesa.
 7book 7SA-see-CAUS-PASS Wekesa
 'The book was shown to Wekesa.'

- b. Wekesa o-ok-esy-ebw-a si-tabu.
 Wekesa 1SA-see-CAUS-PASS 7-book
 'Wekesa was shown the book.'

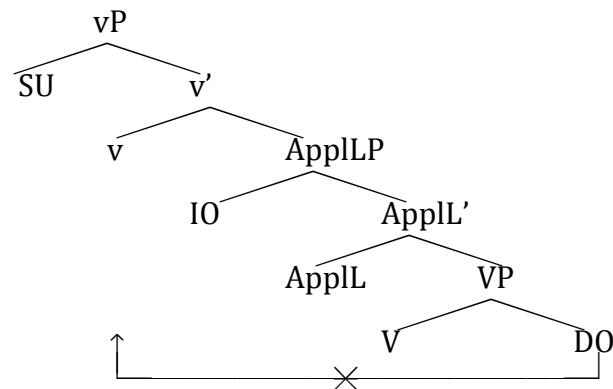
- (51) Raising DO in a "symmetrical" language – Appl is a phase-head head with an edge feature (cf. McGinnis 2001).



In contrast, only the IO can passivize or pronominalize in an "asymmetrical" applied construction (many of which are "low" applicatives in Pylkannen 2002, 2008; but see

McGinnis 2005 for some exceptions). McGinnis argues that when double object constructions are asymmetrical, Appl is not a phase head. It hence has no edge feature, so the DO is trapped below the IO (unless it A'-moves to Spec, CP; presumably via Spec, vP).

- (52) a. *A book was given the children
 b. *We gave it the children (out with DO reading for the pronoun)
 c. *In an “asymmetrical” language, Appl is not a phase head so DO cannot raise (cf. McGinnis 2001).*



McGinnis’s successful analysis of the two varieties of applicatives extends nicely to the symmetrical double object constructions of Lubukusu. Interestingly for our purposes, it is incompatible with an approach to Lubukusu CA in terms of in situ valuation of Force_{uPhi}. This is because by the time the subject is merged, the complement to the Appl/Caus phase head including ForceP will have been spelled out:

- (53) *If Lubukusu Appl is a phase head, an in situ approach to valuing CA must fail*



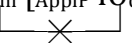
On the other hand, McGinnis’s proposal that an edge feature of phasal Appl can raise the DO yields a straightforward movement analysis for valuing Force_{uPhi}. Since ForceP is the direct object, the possibility of raising it is automatically available under McGinnis’s approach.²⁹

(54) [ApplP ForceP_{uPhi} [ApplP IO [Appl’ Appl [VP V <ForceP_{uPhi}>]]]]

As noted above, I propose that the IO or causee receives dative from Appl/Caus and hence is “inactive” for Agree relations with other probes. Hence it cannot value uPhi of Force:

(55) *ForceP raises to outer Spec, Appl but Agree does not occur*

[ApplP ForceP_{uPhi} [ApplP IO_{dative} [Appl’ Appl [VP V <ForceP_{uPhi}>]]]]



As the derivation continues, Merge introduces v and the thematic SU in Spec, vP. Subjects seem never to become comparably “inactive” in Lubukusu, interacting with multiple probes and valuing agreement many times. §3.5.4 addresses the question of why this is so. For present purposes, let us take it as a given. In line with (16), if v* has an edge feature then uPhi of ForceP is successfully valued after ForceP raises once more, to outer Spec, vP (see §3.5.5 and §3.8.1 for further discussion on this point).^{30, 31}

(56) *After ForceP raises again, Agree (ForceP_{uPhi}, SU) succeeds*

[vP ForceP_{uPhi} [vP SU [v’ v [ApplP <ForceP_{uPhi}> [ApplP IO [Appl’ Appl [VP ...]]]]]]]



²⁹ This phase-theoretic problem arises also for the anaphoric operator approach in Diercks to appear b: unless the operator raises to T via Spec, ApplP it will be trapped inside the transferred VP. Unlike the raising of ForceP argued for above, this movement does not fall out as a subcase of raising DO across IO. For Diercks, Putnam, and Van Koppen (op cit), the problem looks slightly different: it would seem that agreeing C must undergo long head-movement across Appl to v.

³⁰ Example (21) demonstrated that C agrees with the derived IO subject when a double object verb with a ForceP complement is passivized. This result can most easily be obtained by assuming that Appl itself can be passivized (see (i)). It does not then dative-mark the IO, which is therefore “active.” ForceP stops in outer Spec, ApplP and probes IO before the IO raises to Spec, TP. This solution is simple and consistent with the approach to movement in (16). Passivized causees can also control CA (see Diercks to appear b); I assume the analysis extends to them.

(i) [TP IO [vP v [PassP Pass [ApplP/CausP ForceP_{uPhi} [ApplP/CausP <IO> [Appl’/Caus’ Appl/Caus [VP ...]]]]]]]

³¹ On why the CP does not precede the IO in linear order, see §3.6.

3.5.4 Multiple probe-goal relations with subjects

In this subsection I consider the phenomenon of multiple agreement with subjects and argue that IOs differ from them in being unable to engage in relations with multiple probes.

In Minimalist theory, activity in A-relations is generally related to Case-licensing (see Chomsky 2000; 2001 among many others). The role of Case in Bantu languages is a topic of some controversy and debate due to widespread full-featured multiple agreement phenomena and a variety of inversion constructions (see among others Baker 2003, Carstens 2001, 2005, 2010, 2011; Carstens & Diercks to appear; Diercks to appear a; Halpert 2011; Harford-Perez 1986; Henderson 2007; Ndayiragije 1999; Zeller 2011). But Carstens (2012) argues on the basis of Xhosa evidence that Bantu languages do have abstract Case, and I adopt this hypothesis here without elaboration for reasons of length. In what follows I will describe multiple subject agreement and suggest that it always tracks the nominative argument, because nominative is valued *ex situ*. I will argue that, in contrast to Lubukusu subjects, IOs and causees cannot interact with multiple probes. I conclude that IOs and causees have a one-to-one relationship *in situ* with a vP-internal Case-licenser, which I analyze as Appl/Caus licensing dative Case.^{32; 33}

³² Halpert 2011 argues from the distribution of polarity items that in Zulu applied constructions, Appl Case-licenses the argument to its right, usually the DO, while a higher licenser Case-licenses IO. My analysis is probably compatible with this view, providing introduction of transitive Appl is always paired with merge of the higher Case-licenser. Mainly for simplicity I will assume that Lubukusu Appl values Case on its own argument (since APPL+V always raises across the IO, the directionality of this relationship is an open question). All that is crucial here is the claim that *in situ* IOs have Case licensing unless Appl is passivized.

³³ In Bantu languages with liberal inversion options (transitive locative inversions and OVS constructions), IOs and causees are exceptional in being consistently inversion-resistant. This seems to support my claim that they have a special immunity to interaction with multiple probes, but details lie outside this paper's scope.

All Lubukusu speakers that I have consulted employ multiple agreement in full phi-features with subjects in certain compound tense constructions and in questions with agreeing ‘how’ (see (7) and (8) repeated below).

(7) a-kha-be ne-a-khola siina?
 1SA-fut-be ne-1SA-do 7what
 ‘What will s/he be doing?’

(8) Ba-ba-ana ba-kha-kule bi-tabu ba-rie(ena)?
 2-2-children 2SA-FUT-buy 8-book 2-how
 ‘How will the children buy books?’

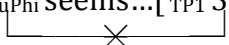
In theory-neutral terms, the fact that uPhi of Lubukusu ForceP agrees only with a subject may be viewed as just one among many indicators that structural subjects in Bantu languages have an unusual capacity to license agreement multiple times. This phenomenon, dubbed “hyper-agreement” in Carstens 2011, is impossible in English (see (57)).

(57) a. *John has is sleepings.
 b. *He seems __ has left.

Chomsky (2000, 2001) addresses (57b), attributing it in part to a strict relationship between agreement and Case-valuation. He argues that Agree with a “phi-complete” probe (in (57b))/(58a,b), the lower T) values a DP’s uCase. This prohibits the embedded subject from Agreeing with the matrix T (see 58c). Chomsky (2001:6) writes, “Once the Case value is determined, N no longer enters into agreement relations and is ‘frozen in place.’”

(58) *In (57b), agreement/movement of 3S is blocked after Case-valuation in the lower clause*

a. [TP₁ T1_{uPhi} 3S_{uCase} have left] →
 b. [TP₁ T1_{uPhi} 3S_{uNom} have left]
 c. *[TP₂ T2_{uPhi} seems...[TP₁ 3S_{uNom} T1...]]



I pointed out in Carstens 2001 that subjects in Bantu languages typically do not exhibit the expected “frozen in place” property, analyzing cases like (7) as in (59). I provide a

makes uGen of Bantu nouns accessible to clause level probes, so all clause level agreement includes gender and iterates, in the manner of concord.

Summarizing, I have argued that Bantu DPs can interact with multiple probes until and unless they obtain Case values. To account for why subjects but not IOs and causees can value uPhi of Force we need only assume that valuation of a subject's uCase happens when it raises to Spec, TP as argued for English by Boskovic (op cit) and Epstein & Seely (op cit): Lubukusu T always has an edge (EPP) feature that can and therefore must raise the subject – the closest expression to it bearing a uF (see (16)). In contrast, Appl and Caus heads confer Case-licensing on their IO and causee arguments in situ, which I will hypothesize to be dative, rendering them inactive for further Agree relations (see discussion of (57) and (58)). Given that IOs and causees *can* value SA and raise to Spec, TP in passives, it is clear that their Case is not like German dative, which renders its bearer wholly inactive even under passivization (see among others McFadden 2006). It seems that passive can eliminate the case of Lubukusu IOs/causees in the same way that it removes English accusative case.

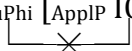
3.5.5 What happens next: Raising ForceP

I return to the analysis of Lubukusu's agreeing C. We have established that IOs and causees are generally "inactive" for relations with probes other than Appl/Caus in active clauses.

Force_{uPhi} therefore cannot be valued by the IO in Spec, Appl in (see (55), repeated below).³⁵

(55) *ForceP raises to outer Spec, Appl but Agree does not occur*

[_{AppIP} ForceP_{uPhi} [_{AppIP} IO [_{AppI'} Appl [_{VP} V <ForceP_{uPhi}>]]]]



³⁵On the mechanics by which passivized IO/causee values uPhi of Force, see note 30.

Now a point of indeterminacy arises. Once SU is merged, it is possible that a local match relation could be established between SU and ForceP in Spec, ApplP (see (61)): at the edge of ApplP, ForceP is visible in relations at the next phase (Chomsky 2000). But given the existence of an edge feature on the higher phase head v^* , nothing prevents a derivation in which ForceP moves to an outer Spec, vP to c-command SU as in (56), repeated below.

(61) *Hypothesis #1: Match with iPhi c-commanding uPhi*

[_{vP} SU [_{v'} v [_{ApplP} ForceP_{uPhi} [_{ApplP} IO [_{Appl'} Appl [_{VP} ...]]]]]]

(56) *Hypothesis #2: Match with uPhi c-commanding iPhi*

[_{vP} ForceP_{uPhi} [_{VP} SU [_{v'} v [_{ApplP} <ForceP_{uPhi}> [_{ApplP} IO [_{Appl'} Appl [_{VP} ...]]]]]]]]

The choice among these analytical options is not obvious (assuming CPs typically extrapose, as I will argue in §3.6 below). On the one hand, the facts so far have been consonant with the view that “imperfections” of an expression force its movement from a position in which they do not have immediate local remedy via valuation, whenever such movement is possible (see Bošković 2007, 2011;³⁶ Epstein & Seely 2006; my (16), and discussion to come in §5). This approach supports (56) and, in clauses without IOs, (62a) below. On the other hand, §4 will present evidence from Bobaljik & Wurmbrand’s analysis of German that raising for Agree purposes is predictable only when an edge feature is available and its exclusion yields non-convergence. Hence (61) and (62b) could in principle be licit, if v can sometimes lack an edge feature.

(62) a. [_{vP} ForceP_{uPhi} [_{VP} SU [_{v'} v [_{VP} V <ForceP_{uPhi}>]]]]]

³⁶ In Bošković 2007 movement to what he calls a “cyclic Spec” like (61) is explicitly ruled out by a c-command requirement on probing. See §5 for discussion of an alternative view.

$$b. \left[{}_{vP} \left[{}_{vP} SU \left[{}_{v'} v \left[{}_{vP} V < ForceP_{uPhi} > \right] \right] \right] \right]$$

§3.8 will present evidence from CA in complex NPs which argues that ForceP always raises to c-command the subject; hence (62a) is correct. This result suggests that strong v^* always has the phasal edge feature (see also Roberts 2010 for some discussion favoring this conclusion). In §3.6 and §3.7 I complete the analysis of CA in ditransitives before moving on to present the evidence of these additional constructions.

3.6 Summary and a word order question

I argued in §3.5 for an analysis of Lubukusu CA in which ForceP raises around an indirect object or causee to agree with the in situ subject. I present a derivational history in (63), including head movements of V to Appl, V+Appl to v, and V+Appl+v to the middle field of the clause (for simplicity I represent adjunction to T, though a lower landing site for Bantu inflected verbs has been persuasively argued for; see among others Julien 2002). (63a-g) show the Merge operations building from embedded ForceP upwards to the vP level, and indicate transferred material with shading. After merge of Appl and the IO in steps (63c-d), ForceP raises to outer Spec, ApplP (63e). Then v is merged in (63f). Merge operations take precedence over Move (see Chomsky 1995, 2001), so the subject is added next yielding (63g). In a case where v^* has a phasal edge feature, ForceP then raises to outer Spec, vP and its uPhi are valued by the in situ subject (63h). Once T is merged (63i), and the subject raises to its Spec, (63j) results.³⁷

$$(63) \quad a. \left[{}_{ForceP} Force_{uPhi} \left[{}_{IntP} Int \left[{}_{FinP} \dots \right] \right] \right] \rightarrow$$

$$b. \left[{}_{vP} V \left[{}_{ForceP} Force_{uPhi} \left[{}_{IntP} Int \left[{}_{FinP} \dots \right] \right] \right] \right] \rightarrow$$

³⁷ The absence of an intervention effect by uPhi of Force when T probes SU in (63i,j) supports a proposal in Carstens 2010; Carstens & Diercks to appear that only intrinsic Phi can value uPhi. Hence even after valuation, one uPhi is invisible to another and cannot go on to serve as goal in Agree.

- c. [Appl' Appl [VP V [ForceP Force_{uPhi} [IntP Int [FinP...]]]]] →
- d. [ApplP IO [Appl' V+Appl [VP <V> [ForceP Force_{uPhi} [IntP Int [FinP...]]]]]] →
- e. [ApplP ForceP_{uPhi} [ApplP IO [Appl' V+Appl [VP ...]]]] →
- f. [_{v'} v [ApplP ForceP_{uPhi} [ApplP IO [Appl' <Appl> [VP ...]]]]] →
- g. [_{VP} SU [_{v'} V+Appl+v [ApplP ForceP_{uPhi} [ApplP IO [Appl' <Appl> [VP ...]]]]]] →
- h. [_{VP} ForceP_{uPhi} [_{VP} SU [_{v'} V+Appl+v [ApplP...]]]]] →
- i. V+Appl+v+T [_{VP} ForceP_{uPhi} [_{VP} SU [_{v'} <V+Appl+v> [ApplP ...]]]] →
- j. [_{TP} SU V+Appl+v+T [_{VP} ForceP_{uPhi} [_{VP} <SU> [_{v'} v [ApplP ...]]]]]

As noted above, this analysis converges to some extent with proposals in Epstein et al 1998, Epstein & Seely 2006, and Bošković 2007, 2011 to motivating syntactic movement. Though there are some differences in implementation among these works, each argues that an item bearing uF must move to a position where it c-commands a source of valuation. But the approach seems to suggest that agreeing CP should precede the IO, contrary to fact (see (64)). Note that the word order problem arises whether or not ForceP raises all the way to outer Spec, vP. Even in (61) (repeated below), ForceP crucially crosses the IO.

(61) *Hypothesis #1: Match with iPhi c-commanding uPhi*

[_{VP} SU [_{v'} v [ApplP ForceP_{uPhi} [ApplP IO [Appl' Appl [VP ...]]]]]]

(64) *Neither CP (64a) nor C alone (64b) can precede the indirect object*

a.* Ewe w-abol-el-a [_{CP} o-li ba-keni ba-rekukha] [_{IO} Nelsoni]
 you 2SSA-say-APPL-FV 2SSA-that 2-guests 2SA-left 1Nelson

b.* Ewe w-abol-el-a o-lic [_{IO} Nelsoni] ba-keni ba-rekukha
 you 2SSA-say-APPL-FV 2SSA-that 1Nelson 2-guests 2SA-left

Intended: 'You told Nelson that the guests left.'

CPs have a well-known propensity to seek clause-peripheral positions that is likely at work here (cf. Stowell 1981; Emonds 1976). The contrast between (65) and (66) demonstrates

that English CPs cannot surface in the canonical position of direct objects. Instead they appear at the right edge of the clause. Sentential subjects are similarly resistant to being “hemmed in” to the canonical subject position (see (67) and (68)).³⁸

- (65) a. John said [_{DP} his name] loudly.
 b. *John said loudly [_{DP} his name].
- (66) a. *John said [_{CP} that he was leaving] loudly.
 b. John said loudly [_{CP} that he was leaving].
- (67) a. Did [_{DP} John’s departure] upset Mary?
 b. *Did [_{CP} that John left] upset Mary?
- (68) a. *I think that [_{CP} that John left] upset Mary.
 b. I think that [_{DP} John’s departure] upset Mary.

I propose that the CP headed by Lubuku’s agreeing C = Force must surface at the right edge like the English CP in (66b).³⁹ Thus word order does not conflict with a raising approach to delayed valuation of Lubukusu CA. Given this, and the advantages of the raising approach to overcoming phase-theoretic problems that confront in situ valuation of Force_{uPhi}, I conclude that it is the best analysis of the facts.

³⁸ There is evidence that this varies across languages; see e.g. Rakowski & Richards 2005 on Case-bearing CPs in Tagalog. An anonymous reviewer points out that in the analysis of Barbiers 2000, asymmetries of DP/CP positions exist because CPs don’t always raise to enter predication relations like DPs. Barbiers’s evidence is that direct quote CPs can occupy object positions otherwise restricted to DPs. It is not clear to me how the analysis extends to subjects in (67) and (68), and the idea that material is not merged in its thematic location is controversial, as is the proposal that peripheral CPs don’t participate in predication like DPs (see *It bothers me that Bill left* vs. *Bill’s departure bothers me*; the predication relations seem the same). I leave this aside.

³⁹ Under the copy theory of movement perhaps the low in situ copy of ForceP must be the one spelled out. An anonymous reviewer suggests that this might be required because the lower part (= the contents) of ForceP is already spelled out before the higher part moves, which seems a plausible alternative.

3.7 Excursus on binding and the edge feature of Appl/Caus

§3 has developed an analysis of how $\mu\Phi$ of Force is valued, based upon the approach to ‘high’ symmetrical applicative constructions in McGinnis 2001. Following McGinnis, I have argued that ApplP (and by extension CausP) has an edge feature that raises the DO across the IO in a language with symmetrical double object constructions. McGinnis argues that this edge feature indicates that Appl is a phase head.

Chomsky 2008 proposes that an A’ position is one created by the edge feature of a phase head. As I noted in footnote 28, questions accordingly arise about the nature of raising of the DO across the IO, mediated by Appl/Caus. Given that this movement feeds pronominalization and passive, should these be viewed as A’ processes in Lubukusu? Alternatively, should the status of Appl/Caus as a phase head be reassessed? Or is Chomsky’s biconditional linkage between phasal edge features and A’ positions too rigid?

My investigation uncovered novel evidence that raising of the DO across the IO is in fact A-movement. We saw in §3.5.3 that DO and IO are symmetrical for pronominalization and that DO can raise across IO en route to Spec, TP in a passive. Many applied or causative verbs also allow symmetrical ordering and binding possibilities among the two post-verbal objects. I show this in (69) and (70). When the IO precedes the DO as in (69a), a universal quantifier in the former can bind a pronoun in the latter as expected (see (69b) and (70a)). But when the DO precedes the IO as in (69c), a universal quantifier in the DO can bind a pronoun in the IO (see (69d) and (70b)). McGinnis 2010 argues that binding relationships are irreversibly established as each phase is completed. Under this assumption, and given

that the ApplP phase is not completed until the DO raises to outer Spec, Appl, the change in binders is correctly predicted to be licit.

- (69) a. Khu-rer-er-e o-mu-loleli bi-tabu
 1plSA-bring-APPL-PAST 1-1-boy 8book
 'We brought the boy books'
- b. Khu-rere-re buli mu-soleli si-tabu si-e-we
 1plSA -bring-APPL-PAST every 1-boy 7-book 7-POSS-1
 'We brought every boy his (own) book'
- c. Khu-rer-er-e bi-tabu o-mu-soleli.
 1plSA -bring-APPL-PAST 8-book 1boy
 'We brought the boy books' [Lit: We brought books the boy]
- d. Khu-rere-re buli si-tabu o-mw-ene-syo
 1plSA -bring-APPL-PAST every 7book 1-1-owner-7
 'We brought every book (to) its owner'
- (70) a. E-som-el-e buli o-mw-andiki si-tabu sy-e-we
 1SSA-read- APPL-PAST every 1author 7-book 7-POSS-1
 'I read each author his book'
- b. Esom-el-e buli sitabu o-mw-andiki w-a-syo
 1SSA-read- APPL-PAST every 7book 1-1-author 1-POSS-7
 'I read every book (to) its author'
- (71) a. ...[_{VP} SU v+Appl+read [_{ApplP} every author [_{Appl'} <Appl>[_{VP} V his book]]]] = (70a)
 b. ...[_{VP} SU v+Appl+read [_{ApplP} every book [_{ApplP} its author [_{Appl'} <Appl> [_{VP} ...]]]] = (70b)

If raising of the DO across the IO were A'-movement, we would expect (69d) and (70b) to be unacceptable. Recall that in the order [V IO DO], a pronoun in the IO cannot be bound by a quantifier in the DO (see (46), repeated below). (72) shows that this is true also in cases where the DO is inanimate and the order [V DO IO] is possible. The degraded status of such an example does not seem to arise from a "backwards pronominalization" problem. (73) shows that backwards pronominalization is acceptable when a pronoun is within the subject and its logical antecedent is an object.⁴⁰ More marginally, but not entirely excluded, is backwards pronominalization in a double object construction like (74). Hence the

⁴⁰ Thanks to Ken Safir for pointing this out to me.

standard approach seems best – that the quantifier cannot bind a pronoun that it does not c-command. A'-movement would not be expected to have an impact; the bound reading is infelicitous in **Every paycheck, I gave its owner* just as in **I gave its owner every paycheck*.

(46) a. Na-a-rer-er-a buli mayi omwana w-e-we_i
 1SSA-PAST-bring-APPL-FV every 1mother 1child 1-POSS-1
 'I brought each mother_i her_i child' (OK with bound variable reading)

 b. *Na-a-rer-er-a mayi w-e-we buli o-mu-soleli_i
 1SSA-PAST-bring-APPL-FV 1mother 1-POSS-1 every 1-1-boy
 'I brought his_i mother each boy_i' (OK without bound reading)

(72) *N-ok-esy-a o-mw-enyesyo buli ku-mu-pira
 1SSA-see-CAUS-FV 1-1-owner every 3-3-ball
 'I showed its owner every ball'

(73) John ka-sim-a e-ng'-enyi. Mayi wewe a-tekh-el-anga John
 1SA-like-FV 9-9-fish. 1mom 1POSS 1SA-cook-APPL

 e-ng'-enyi buli nyanga.
 9-9-fish every 9day

 'John likes fish. His mother cooks John fish every day'.

(74) ?N-ok-esy-a o-mw-enyesyo kumupira
 1SSA-see-CAUS-FV 1-1owner 3-3-ball
 'I showed its owner the ball'

Summing up, raising of the DO over the IO patterns as A-movement with respect to binding.

It also feeds passivization and pronominalization, both of which are typically part of A

rather than A' relations. Hence one of three things must be true:

- (75) Hypotheses consistent with A-movement of DO over IO in high Appl constructions
- Appl has an extra edge feature but it is not a phase head.
 - A position created by the edge feature of a phase head is not always an A' position, contra Chomsky (2008).
 - 'High' applicative constructions are always surrounded by an invisible layer of structure including a Spec position into which the DO A-moves across the IO; hence A-movement is not to an outer Spec, Appl contra McGinnis (2001).

Among these options (75b) seems the most promising. Arguing against (75a) is the fact that multiple edge features are consistent properties of v and C, and not available in every kind of XP. The problem with (75c) is that the IO in Spec, ApplP should intervene to block

single step A-movement of the DO from VP to any Spec external to ApplP, so the desired results are unobtainable. An OVS construction referred to as Subject-Object-Reversal (SOR) in the Bantu linguistics literature is also relevant to the question of edge features and A'-positions (see the Kilega (76a) from Kinyalolo 1991). It has been argued in Ndayiragije 1999, Kinyalolo 1991 that the inverted object in Kirundi and Kilega SOR constructions lands in the canonical subject position. To account for the fact that the thematic subject in Spec, vP does not block raising of the DO in the Kilega (76a), Carstens (2005, 2010) proposes that the DO first moves to an outer Spec, vP (see (76b)). If outer Spec, vP were always and only an A' position, A-movement through it to Spec, TP would be impossible.

- (76) a. Maku ta-ma-ku-sol-ag-a mutu weneene.
 6beer NEG-6SA-PROG-drink-HAB-FV 1person 1alone
 'No one usually drinks beer alone'
 [Lit: Beer doesn't usually drink a person alone]

b. *SOR: Agree (T, OB) is possible after OB raises to outer Spec, vP*

$$T \left[\text{VP OB} \left[\text{VP SU} \left[\text{v' v} \left[\text{VP V} \langle \text{OB} \rangle \right] \right] \right] \right] \rightarrow \left[\text{TP OB T} \left[\text{VP} \langle \text{OB} \rangle \left[\text{VP SU} \left[\text{v' v} \left[\text{VP V} \langle \text{OB} \rangle \right] \right] \right] \right] \right]$$

I conclude that (75b) is correct.⁴¹ The A/A' distinction must be otherwise derived, perhaps by defining an A' position as one to which an expression with an operator feature moves (see Carstens & Diercks to appear b for recent discussion in relation to Lubukusu inversion constructions).

3.8 Complex NPs and RTO: delay and A'-opacity

3.8.1 Introduction

This section takes a brief look at Lubukusu CA in two further constructions: complex NPs (CNPCs) containing agreeing C, and Raising-to-Object (RTO). CNPCs argue that DELAYED

⁴¹ In §3.3 I argued that Fin is non-phasal to account for raising from tensed clauses headed by *mbo*. Adoption of (75b) makes an alternative interpretation possible: we might instead suppose that *mbo* = Fin IS a phase head, but one whose Spec is not an A' position. I leave the decision among these options to future research.

VALUATION processes are not initiated until the level of the next higher phase, at which point an edge feature of *v* always raises Lubukusu ForceP to outer Spec, *v*P under the theory of movement sketched in (16). Movement across agreeing C in Lubukusu is limited to a variety of RTO that I argue to be A'-movement, following a proposal of Bruening 2001. As a result, the RTO expression is opaque to A-probing (see Rezac 2003 and additional citations in §3.8.3).

3.8.2 CA in Complex NPs

Diercks 2011b demonstrates that a CP within a CNPC agrees not with the head noun but with the subject of the matrix clause.

- (77) n-a-ulila li-khuwa nd-/*li-li Sammy ka-a-kula li-tunda
 1SSA-PST-hear 5-word 1SSA/*5SA-that 1Sammy 1SSA-PST-buy 5-fruit
 'I heard the rumor that Sammy bought the fruit.'

The pattern is puzzling for any syntactic analysis of the subject orientation. For Diercks 2011b it entails that the null operator must raise out of the complex NP to get to T, and for Diercks, Putnam, & van Koppen (2011/2012) C itself must so raise.⁴² For my own account to work, ForceP must move out of the complex NP. Questions arise as to how and why this happens.

I assume crucially that neither N nor D in Lubukusu has a phasal edge feature.⁴³ Given this, (77) is not problematical for (12), my initial hypothesis for the mechanics of DELAYED VALUATION. (12) predicts that *uPhi* of Force, Lacking a match in its c-command domain due to transfer of the embedded clause, cannot be valued without raising to c-

⁴² This seems the trickiest approach to implement since N and D are heads intervening between C and *v*; hence they might be expected to create intervention effects. I will not pursue this here.

⁴³ It is possible that the absence of a DP-phase is not universal and connected with the lack of articles (assuming with Boskovic 2008 that nominal expressions can vary in size; though much evidence suggests that in Bantu languages they are not as small as bare NPs. See Carstens 2011a,b on Bantu DPs, and note 12).

command a potential source of valuation. The edge feature of v^* presents the first opportunity for this to happen.

(12) a. **Mechanics of Delayed Valuation version #1:** uF with no match in its c-command domain can be valued ex-situ, by raising to closest c-command a matching feature.

b. Probing is triggered exclusively by (re-)Merge.

(77) is however a challenge for (15) and (15R), since they permit downward valuation by material merged higher within the same phase; and we will see in §4 and §5.2 that, in addition to its conceptual merits, this kind of valuation is well-motivated by patterns of English and German Case. The question then arises as to why uPhi of agreeing C cannot be valued downwards, in situ, by the head noun *likhuwa* – ‘word’ in (77).

I interpret this pattern as a strong indication that DELAYED VALUATION processes are not immediate but rather initiated at the level of the next phase. At the vP phase, an edge feature of v is always available to raise ForceP and it therefore always does so, under the theory of movement sketched out in (16), repeated below:

(16) Why there is movement: The edge feature of a head H removes any visible uF from within the complement of H.

(15)/(15R) allow for in situ valuation when an edge feature is unavailable, and I will argue in §4 that some TPs in German lack the EPP edge feature of T giving rise to the option of in situ valuation for Nominative Case in simple clauses. But apparently the same is never true of vPs: they always have edge features (see Roberts 2010 for discussion). Were this not the case, there seems to be no reason why ForceP could not remain in situ and be valued by the gender and number features of N as illustrated in (78a). It is compatible with a directionality-free approach to attribute the failure of (78a) to phase-level initiation of DELAYED VALUATION, and the “kicking in” of v ’s phasal edge feature as shown in (78b).

(78) a. *In a directionality-free system, why could N not value in situ uPhi of Force?*

$[_{VP} V [_{VP} V [_{DP} D \dots [_{NP} N [_{ForceP} Force_{uPhi} \dots]]]]]$

a potential match under locality

b. *What happens instead: nothing until v* is merged; then raising ForceP.*

$[_{VP} [_{ForceP} Force_{uPhi} [_{VP} SU v [_{VP} V [_{DP} D [_{NP} N <[_{ForceP} Force_{uPhi} \dots]>]]]]]]$

There are admittedly many interesting issues related to these facts, their account, and the hypothesized non-phasal status of D, but they lie outside the scope of this paper; for reasons of length, I leave them to future research.

3.8.3 CA, Raising to Object, and A' opacity

A similar issue arises in connection with RTO constructions. Diercks to appear b presents some facts suggesting that there is RTO across agreeing C – a possibility that appears to be at odds with my analysis. (79) shows that the thematic subject of a lower clause can appear to the left of agreeing C, which nonetheless takes its features from the more distant matrix subject. Assuming that the lower clause transfers before agreeing C is merged, RTO is unexpected and the subject orientation's persistence in this construction is mysterious. The phenomenon is also puzzling given evidence that raising-to-subject is possible only out of clauses headed by the non-agreeing C *mbo* (see §3.4 and (40), repeated below).

(79) N-enya Baraka Obama n-di a-khil-e
 1SSA-want 1S-that 1SA-win-SUBJ
 'I want Barak Obama to win'

(40) a. Michael a-lolekhana mbo (*a-li) a-si-kona
 Michael 1SA-appear that (*1-that) 1SA-still-sleep
 'Michael appears to be still sleeping'

b. O-mu-keni ka-suubil-wa mbo (*a-li) k-ola
 1-1-guest 1SA-believe-PASS that (*1-that) 1SA-arrive
 'The guest was believed to have arrived.'

The problem has two parts: (i) how the embedded subject can escape the lower finite clause to matrix object (but not subject) position; and (ii) how it comes about that C nonetheless agrees only with the subject, not the RTO expression.

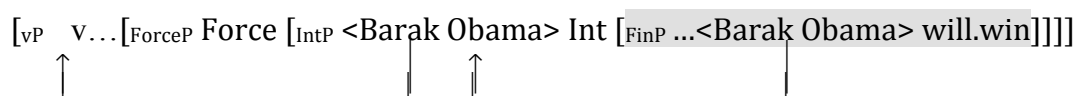
Bruening (2001) argues persuasively that RTO cannot actually A-move out of (phasal) CPs. He proposes that there are two distinct varieties of RTO, depending on how this problem is circumvented. One variety is constructed by merging the apparent object at the left-peripheral phase-edge and A-moving it into the higher clause. This kind of RTO can feed subsequent A-processes including passive.⁴⁴ The second variety of RTO involves A'-movement of the RTO expression from within the source clause to the CP phase edge. This kind does not feed subsequent A-movement.

Since Lubukusu disallows A-movement across agreeing C to subject position, I assume RTO in cases like (79) is of this latter, A' movement variety. I proposed in section §3.4 that the left-peripheral phase head is Int, a head intermediate between Force and Finite. Thus under Bruening's approach, the Lubukusu RTO expression in (79) lands in outer Spec, IntP (see (80a)). Under the standard assumption that outer Spec, vP serves as an A'-position (though perhaps not always; see discussion of Kilega in §3.7), we account for the ability of RTO to move from Spec, Int to Spec, vP where the raised object precedes agreeing C.⁴⁵ In contrast, movement from the embedded clause to to Spec, TP via Spec, Int can only be illicit "improper movement", deriving the infelicity of (40a,b). This is precisely the kind of asymmetry that Bruening's approach is designed to capture.

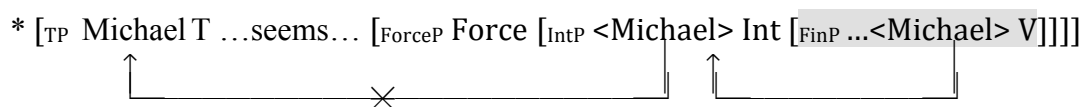
⁴⁴ Following Carstens & Diercks (to appear b) I assume that there are also non-phasal CPs, as noted in §3.4; in Lubukusu, these are *mbo* clauses out of which A-movement can proceed. I review this below.

⁴⁵ If the RTO expression remained in Spec, Int the result would resemble embedded topicalization, with the order [Agreeing C-Object-SU...]. This order is possible; see note 22.

(80) a. *RTO expression is A'-moved to Spec, IntP (Bruening 2001); thence to Spec, vP:*



b. *A-movement across ForceP to matrix Spec, TP is illicit "improper movement":*



In contrast, A-movement from a clause headed by the non-agreeing complementizer *mbo* does not cross a phase boundary, so it can licitly land in Spec, TP (see note 44).

I turn now to the question of how uPhi of ForceP can be valued by the matrix subject and not by the RTO expression. This pattern calls to mind the widely noted fact that T can probe and raise a subject across an intervening operator in Spec, vP. Rezac (2003) refers to this phenomenon as A'-opacity. Svenonius 2000 provides a range of evidence that the expression "no rock" in (81) is an A'-operator. As indicated, the subject "the boys" raises to preverbal subject position across it (see also Carstens & Diercks to appear for evidence of A'-opacity effects in Lubukusu and discussion of their significance).

(81) Strákarnir₂ höfðu [engu grjóti]₁ [vP t₂ [VP hent t₂ í bílana]].
the-boys had no rock thrown in the-cars
'The boys had thrown no rocks at the cars.' (Svenonius 2000)

Under the analysis of Bruening 2001 adopted here, the Lubukusu RTO expression is an A'-element. uPhi of Force is clearly part of the system of A-relations, given its sensitivity to subjects. This fact is in itself perhaps a little surprising -- I have argued that ForceP typically probes from an outer Spec, vP. Hence ForceP itself might seem to qualify as an A'-expression. But accepting at face value the fact that uPhi of Force probes arguments, it is to be expected that RTO expressions are ignored, under Bruening's assumptions about the

derivation of RTO. I return to this curious aspect of ForceP's syntax shortly, before this subsection ends.

So far I have proposed an account of why the RTO expression does not value agreeing C. I turn now to how the subject does so. There are two logical possibilities. Since the RTO expression precedes agreeing C, I assume that it moves from the CP area to an outer Spec, vP in the matrix clause as noted above. If matrix v also raises the remnant ForceP, it will c-command and Agree with the matrix subject in inner Spec vP across the raised A'-object (see (82a)). Alternatively, if v has only one phasal edge feature, it is in principle possible that ForceP remains in situ in this case, and its uPhi features are valued there (see (82b), and §4 and §5 on such "Reverse Agree" relations). Absent word order evidence (see §3.6) or clear theoretical motivation in either direction, I leave this possibility open. In neither case is the RTO expression relevant given it's status as an A'-element.

(82) *Whether or not remnant ForceP raises to a second outer Spec, vP it will ignore the A' RTO expression and agree with the "active" DP SU.*

a. *Downwards Agree if v has 2 phasal edge features*

[_{vP} [_{ForceP} Force_{uPhi}]] [_{vP} Barak Obama [_{vP} SU v [_{VP} want <[_{ForceP} Force_{uPhi}]>]]]] *OR*

b. *"Reverse agree" if v has only one phasal edge feature; see §4 and §5*

[_{vP} Barak Obama [_{vP} SU v [_{VP} want <[_{ForceP} Force_{uPhi}]>]]]]

I turn last to the final question raised by this exploration of Lubukusu RTO: why uPhi of ForceP is sensitive to A- and not A'- expressions. Agreement with operators in Bantu is typically found on the heads that can be thought of as triggering A'-movement (see (83a) from Carstens & Diercks to appear; (83b) from Cartens 2008b).

(83) a. *Agreement with operators in Lubukusu clefts*

lw-a-ba [CP **lu**-u-saala ni-**lwo** [TP ba-ba-ana ba-a-funa <lu-u-saala>]]]
 11SA-PST-be 11-11-stick COMP-11 2-2-child 2SA -PST-break
 'It was a stick that the children broke'

b. *Agreement with operators in Kilega wh-movement constructions*

[CP Bikí **bi**- [TP pro_i **b**-á-ténd-ílé [CP t **bi**- [TP pro_j **b**-á-gúl-ílé <bikí>]]]]]
 8what 8CA- 2SA -ASP-say-PERF 8CA - 2SA-ASP-buy- PERF
 'What did they say they had bought? (i = j or i ≠ j)

Given this, I suggest that the feature sensitivities of probes are determined by their intrinsic properties and Merge positions, not by the nature of positions to which movement may take them. Thus perhaps only the phase head involved in moving operators can be expected to agree with them (Int, or Focus).

3.9 Summary

Based on the anomalous notion of goal features like uCase, §2 proposed that uFs with no sources of valuation in their c-command domains at Merge get a second chance: DELAYED VALUATION. This section has argued that the mechanics of DELAYED VALUATION make possible a unified account of complementizer agreement in Lubukusu and West Germanic, once cyclic Spell Out and the articulated left periphery are taken into account. Based on the evidence of complex NPs in §3.8.2 argued that DELAYED VALUATION is not attempted right away as new material is merged but rather awaits the next higher phase, at which point an edge feature can impact the results (assuming the approach to movement sketched in (16)). The absence of valuation for uPhi of Force by the RTO expression follows from the fact that, to move across agreeing C, this expression must first undergo A'-movement to the phase edge. This renders it invisible to uPhi of Force.

In §4 I return to exploration of uCase. While I have argued that the mechanics in (12) suffice for the analysis of Lubukusu CA, I show in §4 that Case phenomena motivate the broader mechanics in (15)/(15R).

4. Mechanisms of delayed Case valuation

4.1 Introduction

§3 argued that agreement can obtain DELAYED VALUATION by raising to c-command an “active” expression which bears intrinsic phi-features. In this section I broaden the investigation by turning to the issue of how uCase obtains DELAYED VALUATION.

As I pointed out in the introduction, treatment of this topic is complicated by the consistency with which a DP must occupy Spec, TP in many languages including English. Attempts have been made to reduce this to Case (see Grohman, Drury, & Castillo 2000; Martin 1999; Bošković 1997, 2002, 2007, 2011); but consensus remains elusive.

However Bobaljik & Wurmbrand (2005; henceforth B&W) presents an illuminating study of two ways that nominative can be valued in German, a language which Wurmbrand (2004/2006) argues convincingly lacks any general requirement that Spec, TP be filled. German also has Case morphology, and subject-verb agreement tracks the nominative DP. These three properties make investigation of German Case especially instructive. The relevant patterns will be exemplified and discussed in §4.2; here I present a brief summary of what is to come.

B&W show that nominative case can be valued in situ on a VP-internal DP in two environments: (i) when it is the theme argument in the VP of a simple passive; or (ii) when it is the theme argument within the complement to a passive non-lexical restructuring modal or ‘seem’ (see also Wurmbrand 2004/2006). On the other hand, B&W also show that a nominative DP must raise to Spec, TP if its Merge location is too distant from T – outside

of what they refer to as a single *agreement domain*, that is, the domain in which Case or agreement features are potentially valued (B&W: (4)). This circumstance arises when restructuring involves two lexical verbs, each of which creates an *agreement domain* in B&W's terms. In the interests of creating a unified account I will treat the VP2 complement to lexical V1 in these constructions as a Spell Out unit (see also §5.1 and footnote 47). B&W's analysis argues that uCase can drive raising of DP just as we saw uPhi driving raising of ForceP in Lubukusu, and hence supports (15i) and the approaches to Case in Bošković 2007, 2011; Epstein & Seely 2006. But the existence of in situ nominative valuation strongly motivates (15ii) as well (15) is repeated below). I conclude with B&W that both possibilities are part of natural language.

(15) **Mechanics of Delayed Valuation**

uF with no match in its c-command domain can be valued:

- (i) Ex situ, by raising to c-command a matching feature in a higher phase *OR*
- (ii) In situ, by a matching feature within the same phase.

4.2 German nominative in Bobaljik & Wurmbrand 2005

B&W demonstrate that in German restructuring contexts, the case of an embedded object is dependent on the matrix verb. If the verb is active, the embedded object is accusative (84). If the matrix verb is passive as in (85), the object of the restructuring infinitival verb must be nominative even though this verb bears no passive morphology itself.

- (84) a. weil er den /*der Traktor versucht hat [t_{OBJ} zu reparieren]
 since he the.ACC/*the.NOM tractor tried has t_{OBJ} to repair
 'Since he tried to repair the tractor' *active*
- b. weil er jeden/*jeder Brief vergessen hat [t_{OBJ} zu öffnen]
 since he every.ACC/*every.NOM letter forgotten has t_{OBJ} to open
 'Since he forgot to open every letter' *active*
- (85) weil der Traktor zu reparieren versucht wurde
 since the.NOM tractor to repair tried was.SG
 'Since they tried to repair the tractor' *passive*

B&W go on to provide evidence from scope interactions that nominative DPs in restructuring infinitives are not uniform in location. In (86), the nominative must be interpreted as having wide scope over the verb ‘forget’. Thus the interpretation cannot be one where the implicit agent remembered to close some but not all windows; rather, (86) means that no windows were remembered to be closed. In contrast, in the simple passive (87) and in (88) where the restructuring verb is a modal, a narrow scope reading is preferred for the nominative, though a wide scope reading is marginally possible.

(86) weil alle Fenster zu schließen vergessen wurden
 since all windows(NOM) to close forgotten were
 ‘Since they forgot to close all the windows’ $\forall \gg \text{forget}; * \text{forget} \gg \forall$

(87) weil mindestens einem Kind jede Übung gelungen ist
 since at.least one.DAT child every.NOM exercise managed AUX
 ‘Since at least one child managed to do every exercise’ $E \gg \forall / ? \forall \gg E$

(88) weil mindestens einem Kritiker jeder Film gefallen sollte
 since at.least one.DAT critic every.NOM film please should
 ‘Since at least one critic should like every movie’ $E \gg \forall / ? \forall \gg E$

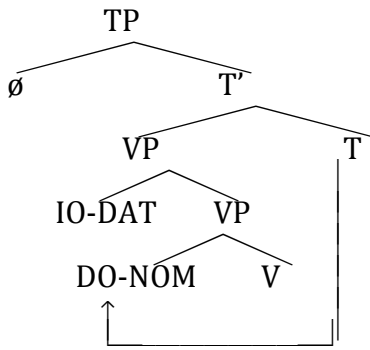
B&W argue for the generalizations in (89) and (90) (and Cable to appear supports (90) with evidence from Luo, another language that lacks obligatory EPP of T). I reproduce their analysis of (87) and (88) in (91) and their analysis of (86) in (92).⁴⁶

(89) A DP may not be interpreted (for scope and binding) in a position lower than the domain in which it undergoes Case/agreement-checking = its *agreement domain*.

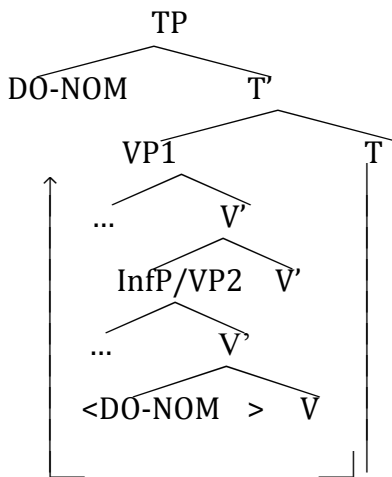
(90) Case/agreement-checking may occur without DP-movement but only within a single *agreement domain*.

(91) *Representation of (87) and (88): in situ valuation for DP_{nom}*

⁴⁶ As noted in §3.4.4 German datives are unlike Bantu IOs: they cannot be agreed with or raised to Spec, TP even in passives (see among others McFadden 2006). I assume they therefore do not count in the calculation of *closeness* for the Case-valuing relation (Agree (T, DP_{uCase})) in (91) and (15ii). For reasons of length I leave aside the curious contrast between this transparency and defective intervention effects described in §3.4.4.



(92) Representation of (86): Case driven movement and *ex situ* valuation of DP_{nom}



B&W thus provide a strong and persuasive argument that successful valuation of a DP's $uNom$ does not entail raising of DP to c-command T in all cases, contra Bošković 2007, 2011 and Epstein & Seely 2006. But *in situ* valuation of $uCase$ can happen only when T and the relevant DP are within the same *agreement domain*. It follows inevitably from the theory of cyclic Transfer that the full inventory of *agreement domains* must include the phases v^*P and ForceP. Phasal transfer also potentially provides an excellent explanation for why a DP within VP2 cannot be valued nominative by the matrix T. Given this, and in the interests of forging a general account under one rubric, I suggest (as mentioned in §4.1)

that the VP complement to a lexical restructuring verb in German be viewed as a phase in the sense of a Spell Out unit.⁴⁷

5. Case and agreement viewed together: motivating A-movement

5.1 The proposal

At this point I turn to an important question facing any approach to DELAYED VALUATION – how to predict movement. As noted in the introduction, my answer is a version of the view that movement is driven by features of the moving item (see Bošković 2007, 2011).

(16) Why there is movement: The edge feature of a head H removes any visible uF from within the complement of H.

(16) is intended to ensure that ForceP will raise across the Lubukusu indirect object to a location where it can be valued. It also captures the fact that in restructuring contexts, uCase of a German DP merged within an infinitival complement to a lexical verb can (in fact must) move to Spec, TP to be valued nominative, as in B&W's analysis. And it is formulated so as to predict obligatory raising of the nominative argument in languages like English that have EPP features in all clauses, as argued in Bošković 2007, 2011 and Epstein & Seely 2006 (one might otherwise expect in situ Case valuation, and expletive insertion to satisfy EPP). But in German, where T's EPP feature is arguably optional, nominative subjects will only optionally raise (see Cable to appear for arguments that optional raising to Spec, TP relies on optional EPP-features). In (87) and (88)/(91), the absence of an EPP feature does not cause any problem because in situ valuation is possible. In (86)/(92), because in situ

⁴⁷ Bobaljik & Wurmbrand argue that VP2 does not include an edge feature in part to account for the absence of reconstructed readings for the raised DP (see discussion in B&W:30, their (41)). Hence it arguably has some but not all features of a strong phase. They also claim that VP1 cannot have an edge feature either, for movement theoretic reasons, but given (16) and anticipating discussion of (15R), I see no reason in principle to rule out the option that the nominative may surface in a Spec of VP1 if German T happens to have no EPP feature in a given sentence, and VP1 does. Scope phenomena motivating their analysis will still be captured.

valuation is impossible, a derivation including the optional EPP feature of T is arguably the only one that can converge (though see note 45 and discussion to come in §5.2).

Note that the analysis rests on the assumption that valuation does not precede raising, when the same head triggers both processes, so that there is no contradiction in the fact that T raises DP with uCase while also serving as its source of valuation.

Together (16) and (15) (repeated below) account for all the instances of A-movement and in situ valuation we have observed.

(15) Mechanics of Delayed Valuation

uF with no match in its c-command domain can be valued:

- (i) Ex situ, by raising to c-command a matching feature in a higher phase *OR*
- (ii) In situ, by a local matching feature within the same phase.

5.2 A speculation: could raising to be closest c-commandee be enough?

Consider a possible addition to (15), adding a second hypothetical option for successful valuation via movement:

(93) uF can obtain valuation from features of a distant expression by:

- (i) raising to closest c-command it, *OR*
- (ii) raising to be its closest c-commandee.

(93) is an initial attempt to suggest that only locality between two features matters for Match and Agree to proceed. If we determine that (93ii) is viable, and define locality as closest c-command, we can collapse (i) and (ii) as the revised condition (i) in (15R).

(15R) Directionality-Free Mechanics of Delayed Valuation

uF with no match in its c-command domain can be valued:

- (i) Ex situ, by raising into locality with a matching feature *OR*
- (ii) In situ, by a matching feature within the same phase.

I argued in §3 that Lubukusu ForceP will continue to raise after v is Merged as long as v has an edge feature, as is consistent with (16), hence rejecting the valuation scenario in (61) in favor of (56) (both are reproduced below). The argument was based on the fact that v has

an edge feature, and motivated by the “imperfection-driven” approach stated in (16). This analysis was consistent with (15i).

(61) *Hypothesis #1: Match with iPhi c-commanding uPhi*

[_{VP} SU [_{v'} v [_{AppIP} ForceP_{uPhi} [_{AppIP} IO [_{AppI'} Appl [_{VP} ...]]]]]]

(56) *After ForceP raises again, Agree (ForceP_{uPhi}, SU) succeeds*

[_{VP} ForceP_{uPhi} [_{VP} SU [_{v'} v [_{AppIP} <ForceP_{uPhi}> [_{AppIP} IO [_{AppI'} Appl [_{VP} ...]]]]]]]]

But consider a hypothetical case such as (94) in which an edge feature is not available to raise uF all the way to Spec, XP. B&W’s account of in situ nominatives in simple restructuring clauses argues that valuation is really a matter of two uFs establishing a matching relation under locality (15Rii). Given this, a natural question arises as to why (94) should be ruled out. Bošković 2007 labels Spec, YP in (94) a *cyclic Spec* and argues that raising of an expression bearing uF cannot stop here. This is in part due to standard Minimalist assumptions that valuation relies upon probing, and probing requires that a uF closest c-command its goal. But, following a suggestion of Dan Seely (personal communication), suppose that probing is just a metaphor. One feature does not in reality probe another; rather valuation is possible in a sufficiently local domain whenever a feature-match obtains. Assuming also the Activity Requirement of Chomsky 2000, thus that both members in an Agree relation must have a uF, then what can be wrong with (94)?⁴⁸

(94) *Valuation following movement of uF2 to the position closest c-commanded by uF1*

[XP X_{uF1} [_{YP} Z_{uF2} [_{Y'} Y [_{WP} <Z>_{uF2} ...]]]]

⁴⁸ An anonymous reviewer correctly points out that this is the configuration of West Germanic complementizer agreement, since C agrees with SU raised from Spec, vP to Spec, TP. What is not clear in WG CA is what “goal” feature of the subject interacts with the complementizer. Perhaps it is Nominative Case, able to remain active until completion of the CP phase (see discussion of (97) on accusative valued by Arabic C). I leave this question about WG CA aside for future research.

I suggest that (94) might be precisely the situation under which a subject's Case is valued in English [*for...to*] infinitives such as (95) and (96). It is well known that the presence of *for* on the left edge of an infinitival clause correlates positively with the possibility of a lexical subject appearing in an infinitive. Pronominalization shows that the lexical subject bears accusative Case, leading to the proposal in Chomsky 1981 that *for* is a prepositional complementizer, assigning accusative to the subject of its infinitival complement.⁴⁹ (95) demonstrates with a pronominal theme argument of a passive verb raising to Spec of the infinitival TP where *for* values its Case as accusative. (96) illustrates the analysis for a transitive verb with an agent subject.

- (95) a. For him to be arrested would surprise me.
 b. [TP 3S_{uCase} to be [vP v [VP arrested <3S_{uCase}>]]]...
 c. [CP For_{uAcc} [TP 3S_{uCase} to be [vP v [VP arrested <3S_{uCase}>]]]]...
 d. [CP For_{uAcc} [TP 3S_{uCaseAcc} to be [vP v [VP arrested <3S_{uCase}>]]]]...
 (96) a. For Mary to invite John is typical.
 b. [TP Mary_{uCase} to [vP <Mary_{uCase}> v [VP invite John]]]...
 c. [CP For_{uAcc} [TP Mary_{uCase} to [vP <Mary_{uCase}> v [VP invite John]]]]...
 d. [CP For_{uAcc} [TP Mary_{uCaseAcc} to [vP <Mary_{uCase}> v [VP invite John]]]]

(95) and (96) argue that raising to be closest c-commandee as in (94) is licit; hence the more liberal wording of (15Ri) should be preferred over that in (15i). We need only suppose that it is impossible for a lexical DP to occupy [Spec, *for*] to account for the pattern of facts, perhaps because that DP is a non-operator.⁵⁰ With respect to the Activity

⁴⁹ In more recent literature attention has turned away from the correlation of *for* with accusative, focusing on its incompatibility with subject extraction **Who do you want for _ to visit?* See Pesetsky 1991, Bošković & Lasnik 2003, Kim 2008 for proposals that English null C is an affix; its overt counterparts showing up when affixation is impossible. I will assume that solution to the overt versus null issue is not in principle incompatible with an account under which *for* values accusative Case (and see my suggestion above).

⁵⁰ Alternatively because *for* has no edge feature (hence the **[for t]* effect described above might reduce to the impossibility of [_{<wh>} *for*]) It is unexpected, however, for *Who do you want for John to visit?* to be licit under this approach.

Requirement, I further assume that *for* has uPhi agreeing abstractly with the infinitival subject, the same as English *v* agrees abstractly with the DP that it Case-licenses.

Melebari & Seely 2011 provide evidence similar to the English [*for...to*] construction that Case-valuation is possible under raising of a DP to be the closest c-commandee of a head with a Case-“assigning” feature. They demonstrate that the Arabic complementizer *ʔanna* licenses accusative Case on a DP that follows it; hence the contrast between the nominative subject in (97a) and the accusative subject in (97b). Melebari & Seely analyze this as re-valuation of the subject’s uCase from nominative to accusative (see Bejar & Massam 1999 on this phenomenon), so it does not disprove the narrow claim that unvalued features must raise to probe their valuers as in Bošković 2007, 2011 and my (15) and (19i). It does however strongly suggest that valuation is not contingent upon the valuee’s c-commanding the valuer, hence weakening the motivation to reject (94).⁵¹

- (97) a. *ʔal-ʔawlad-u qaraʔ-u d-dars-a* *Main clause SU is NOM*
 the-boys-NOM read-3PL.MASC the-lesson-ACC
 ‘The boys read the lesson.’
 b. *ʔanna al-ʔawlad-a ʔakal-u T-Taʕaam-a yusʕidu-ni* *ʔanna values SU as ACC*
 that the-boys-ACC ate-3PL.MASC the-food-ACC pleases 3PL.MASC-me
 ‘That the boys ate the food pleases me.’

I conclude that there are ample grounds to doubt whether features unvalued in situ must raise to a position c-commanding the valuer, and that this doubt means we should take seriously the more permissive, less directionally rigid (15R). As noted in §1.1, the fact that α probes its c-command domain for valuation has a clear derivational basis at the point of

⁵¹ In Arabic, it is well-known that when a lexical subject is post-verbal, number agreement on the verb is invariantly singular. Melebari & Seely (op cit) among others have argued that a null singular expletive is probed by T and raises to occupy Spec TP in VS constructions. I find the proposal particularly persuasive given that person agreement is more often lost than number in agreement “impoverishment” situations (see Baker 2006 for an account). This analysis refutes Zeijlstra’s (2012) claim that Arabic supports universal “Reverse Agree”.

first Merge. But in DELAYED VALUATION, there is no obvious reason why this downward bias should persist.

Bošković (2007) discusses two cases that provide apparent counter-examples to the hypothesis of valuation in (93ii) and (94) which, as noted above, he calls raising to a *cyclic* Spec. He first argues that sentences involving the English verbs *conjecture* and *remark* do not license accusative, and that this causes the unacceptability of (98a). He next concludes from the ill-formedness of (98b) that raising the object of *conjecture* or *remark* to Spec of a CP embedded under an accusative Case-licenser such as *know* does not remedy the problem (see (98c)).

- (98) a. *John conjectured/remarked something.
b. *I know what John remarked/conjectured.

c. *I [_{VP} \bar{Y} [_{VP} know [_{CP} what [_{TP} John remarked <what>]]]]

Case-valuation fails

Bošković also argues that the unacceptability of (99a) is due to the fact that ECM-type Case-licensing is unavailable with such verbs as *wager*. *Wh*-movement of the embedded subject yields an improved result (see (99b)), and Bošković proposes that this is because Case-valuation can only be obtained if the relevant DP raises to c-command the potential Case-licenser – in this case, though A-movement of the subject into the higher clause seems not to be available, *who* can obtain Case-licensing through A'-movement to the higher Spec, vP en route to Spec, CP (see (99c)).

- (99) a. *John wagered Mary to be smart.
b. Who did John wager to be smart?

c. [_{VP} <who_{uCase}> v_{uNom} [_{VP} wager [_{CP} <who> [_{TP} __ to be smart]]]]



No Case-valuation from 1st move
2nd move yields success: (Agree (who_{uCase}, v))

These are persuasive arguments, but it seems to me that it is a high cost to conclude from them that the relationship for ex situ valuation is narrowly directional rather than purely

local. As I pointed out above, first Merge of $uF\ \alpha$ with a sister β leads naturally to “downwards” valuation relations where α searches in β . But for cases of DELAYED VALUATION, this rationale is lacking. While a full treatment of these issues lies outside this paper’s scope, I will sketch out some related issues that might lead to alternative solutions.

First, note that Bošković’s account of (98) and (99) seems to predict that (100) will be well-formed, contrary to fact. The degraded status of (100) suggests that *remark* and *conjecture* simply do not c-select DP complements. If so, then no strategy for Case-valuation of a DP complement can overcome this problem, and the verbs are therefore irrelevant to the issues at hand.

(100) *What did John remark/conjecture?

Second, as for *wager*-class verbs, Postal (1974), Pesetsky (1992), Ura (1993) and Bošković (1997) show that they have a cluster of curious properties beyond the simple contrast in (99a,b). Like ECM verbs, they allow passivization and pronominalization of the subject of their infinitival complement (see (101a,b). And a full DP subject is much more felicitous in the infinitive if it bears some thematic relation to the higher *wager*-class verb (101c).

(101a-c) indicate my own judgments, which are at the conservative end of the spectrum. I add to this collection of prior observations my own judgment that an *in situ wh*-subject is also an improvement on a name (compare (101d) with (99a)).

- (101) a. ?Mary was wagered to be smart.
b. ?We wagered him to be the winner.
c. We wagered Mary’s weight to be 120 pounds.
d. Who wagered who to be smart?

The approach to (99b) sketched in (99c) has nothing to say about these quirks of licensing for subjects embedded under *wager*-class verbs. I leave a full account for future research,

concluding merely that the additional facts seem to me to weaken Bošković's case against downwards Case-valuation relations. Their complexity suggests other factors are at play.

Summing up, the facts I have examined in connection with Case and agreement converge on one general conclusion: the distinction between unvalued probe and goal features is illusory. The two function identically; all that is necessary for valuation is establishing a local match between relevant features. There is ample evidence that, when valuation is not available to a uF at the point of first Merge, DELAYED VALUATION can take place if uF moves to a location where it closest c-commands a potential valuer. More speculatively, this section has argued that DELAYED VALUATION might also be possible even if uF can only raise to be closest c-commandee of the potential valuer. Apart from Boskovic (op cit) I am not aware of many studies looking into this possibility (Zeller 2006 is a notable exception; see note 11), and accordingly leave it as a question that should ultimately be decided on the basis of further empirical work on a range of languages.

6. Agreement displacement and delayed valuation: Bejar & Rezac 2009

Something very like the concept of DELAYED VALUATION was developed independently in the work of Bejar & Rezac 2009 based on the phenomenon of "agreement displacement" (see also Bejar 2003; Rezac 2003). Bejar & Rezac explore several languages in which they argue that person feature hierarchies play a crucial role in determining whether agreement is valued by the internal or the external argument. If the internal argument is first or second person, the verb agrees with it (see (102a-c)); following their conventions the relevant agreement morpheme is underlined, as is its controller in the translation). But third person is low on the hierarchy (in fact underspecified) and therefore if the object of the verb is third person and the subject is first or second person, the verb's uPhi agrees with the

subject (102d). For Bejar & Rezac, this indicates a second cycle of probing under *cyclic expansion* (see (103)). Simplifying somewhat the technical details, this is possible because the unvalued features of *v* are inherited by projections of *v*, and can initiate a continuation of the search.⁵² Bejar & Rezac’s analysis provides important and compelling evidence that the absence of a match in the c-command domain of a *uF* is not fatal to the derivation.

- (102) a. ikusi z-in-t-u-da-n [Basque]
 seen 2-X-PL-have-1-PST
 ‘I saw you.’
 b. ikusi n-ind-u-en
 seen 1-X-have- PST
 ‘He saw me.’
 c. ikusi n-ind-u-zu-n
 seen 1-X-have-2- PST
 ‘You saw me.’
 d. ikusi n-u-en
 seen 1-have- PST
 ‘I saw him.’
- (103) a. [_{VP} EA [_{v-Agr} [_{VP} V IA]]] Agree cycle 1
 b. [_{VP} EA [_{v-Agr} [_{VP} V IA]]] Agree cycle 2

Bejar and Rezac’s analysis provides evidence that there is “upwards” valuation upon Merge of the external argument without movement of the *uPhi* probe. In terms of my DELAYED VALUATION account, agreement displacement is an instance of (19ii) (see below).

(19) Hypotheses for delayed valuation of *uF* α

- (i) α raises to probe a possible valuer β under closest c-command (perhaps pied piping the XP bearing α and thus yielding common Spec, head configurations and relations; cf. Epstein et al 1998; Epstein & Seely 2006; Bošković 2007, 2011).
 (ii) α can be valued by *iF* of a higher expression in a limited domain without moving, as the syntactic object that includes it is expanded to include some β with matching features

⁵² See Nevins 2011 for an approach in terms of simultaneous Multiple Agree. Absent clear constraints or a principled account of where Multiple Agree is possible, I prefer to avoid it (see Haegeman & Londahl 2009 for a persuasive argument against its involvement in licensing of multiple negative expressions).

(Rezac 2003; Bejar & Rezac 2009).⁵³

(iii) α is valued if a probe β , Merged higher in the same phase, takes it as goal in an Agree relation.

I propose however that there is no real difference between (19ii) and (19iii). Given cross-linguistic evidence that an expression must have a uF to be “active” in agree relations, the DPs that can value the uPhi probe qualify as probes themselves as I have argued previously in this paper. Basque and other agreement displacement languages provide supporting evidence that the would-be probe need not c-command the would-be goal; their positions can be reversed. Thus agreement displacement converges with Bobaljik & Wurmbrand’s treatment of in situ Nominative valuation, in which there is “downwards” valuation of DP’s uCase without its undergoing raising. This convergence argues for reducing the three points in (19) to the two-point (15) (or the more liberal (15R)).

(15) **Mechanics of Delayed Valuation**

uF with no match in its c-command domain can be valued:

- (i) Ex situ, by raising into locality with a matching feature in a higher phase *OR*
- (ii) In situ, by a matching feature within the same phase.

I suggest that it is preferable to analyze agreement displacement along the same lines as German in situ nominative, that is, as an instance of (8’ii), than to suppose that vP can search material that it dominates. A model that dispenses with the probe-goal distinction has no need for this assumption.

⁵³ Rezac 2003 and Bejar & Rezac 2009 treat this as second-cycle probing. I assume instead that it is simply Match and valuation in a larger domain as in (19ii/iii).

7. XPs as probes

7.1 Introduction

As noted in §1.3, it is sometimes suggested that XP cannot be completed or XP Merged with another element so long as X has unvalued features (Chomsky 2000; Adger 2003).

Chomsky (2000:132) writes,

“Properties of the probe [...] must be exhausted before new elements of the lexical subarray are accessed to drive further operations.”

A common corollary assumption is that only heads can probe; in fact, Chomsky (2007, 2008) argues that only phase heads have probe features.

I pointed out in §1.3 that it is anomalous, in this connection, for DP with uCase to be licit in syntactic relations with other expressions including the relation Merge with a selecting head (Merge (H, DP_{uCase})), prior to its valuation. As an unvalued uF, uCase of DP meets the definition of a probe. Yet no problem seems to arise for the participation of DPs in syntactic relations prior to valuation of their uCase. Bošković (2007, 2011) and Epstein & Seely (2006) argue convincingly that DPs must be able to probe when they raise to c-command T or v; and as we have seen, sometimes this is the only way uCase can get valued (recall from §4.2 the facts of German restructuring constructions with two lexical verbs, in which a nominative DP must raise from embedded VP to Spec, TP). Thus (104) is common and well-motivated cross-linguistically:

(104) *Match and valuation where DP's uCase is the “probe”*

$$[TP \text{ DP}_{uCase} [T' \text{ T}_{uNom} \dots]]$$

In addition, we have seen that a unified account is possible for Case and valuation of Force_{uPhi} under the assumption that ForceP raises and probes (see (56), repeated below).

(56) *After ForceP raises to outer Spec, vP, Agree (ForceP_{uPhi}, SU) succeeds*

[_{vP} ForceP_{uPhi} [_{vP} SU [_v v [_{ApplP} <ForceP_{uPhi}> [_{ApplP} IO [_{Appl} Appl [_{VP} ...]]]]]]]

§7.2-3 provide more evidence that XPs probe, from agreeing APs and Luyia agreeing ‘how’.

7.2 Concord on APs as probing by XP

In languages with grammatical gender, it is common for adjectival modifiers to show “concord” in gender and number features. Under the traditional analysis of adjectives as heading AP adjuncts⁵⁴ to NP (or nP), concord entails that XPs can probe (see (105-106)).⁵⁵ Building on Carstens 2000, 2008, 2010, 2011 I propose (107) (raising N(P) derives surface word orders).

(105) a. kitabu [_{AP} kizuri sana] [Swahili]
 7book 7good very
 ‘a very good book’

b. mzigo [_{AP} mzito mno]
 3load 3heavy too
 ‘too heavy a load’

(106) a. la muchacha [_{AP} muy bonita] [Spanish]
 the.fem girl.fem very pretty.fem
 ‘the very pretty girl’

b. une voiture [_{AP} plus vite] [French]
 a.fem car.fem more fast.fem
 ‘a faster car’

(107) a. *AP contains no source of valuation for A’s uPhi*

[_{AP} A_{uPhi} ...]

⁵⁴ There is controversy on this issue. See Cinque 2005 and Shlonsky 2004 for an alternative view, and Carstens 2011b for a rejoinder, analyzing adnominal modifiers as XPs. Note also the absence of “deactivation” since agreement here does not involve Case features; see §3.5.4 and Carstens 2010, 2011.

⁵⁵ Recall from §3.5.4 that the grammatical gender of nouns is an “activity” feature, valued but uninterpretable. As such, like valued uNom of T or uAcc of v, it comes into the syntax with a value and hence need not be Agreed with but it can participate in probe-goal relations, conferring values on items with unvalued uGen.

b. *uPhi* of *A* become features of *AP* and probe *N*

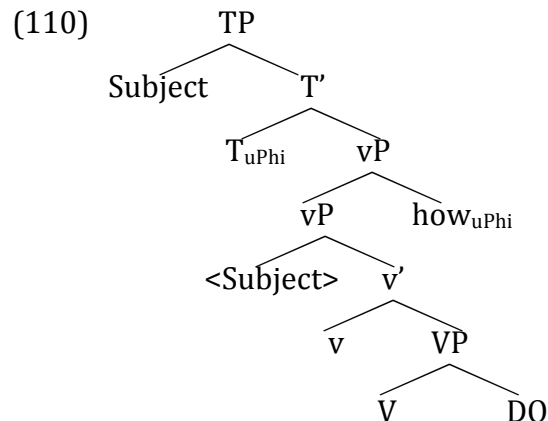
$[NP AP_{uPhi} [NP N_{iPhi}]]$

7.3 Agreeing ‘how’ as XP probing

As noted in §3.2, Carstens & Diercks 2011 argue that ‘how’ in Lubukusu is a *vP*-adjunct with *uPhi* that agrees with the subject in *Spec, vP* under closest *c*-command. An analysis of ‘how’ as head of a clause-level functional projection is ruled out on the basis of word order: Lubukusu is left-headed, and ‘how’ appears on the right edge of the clause. The subject with which it agrees is separated from it as shown in (108), arguing against any *Spec*, head sort of approach (see (109)). Carstens & Diercks 2011 propose (110), where ‘how’ is an *XP* adjunct to *vP*. Their analysis of agreeing ‘how’ provides one more argument that *XPs* can function as probes in Agree relations.

(108) Baba-ana ba-kha-kule bi-tabu ba-rie(ena)?
 2-children 2SA-FUT-buy 8-book 2-how
 ‘How will the children buy books?’

(109) * $[TP \text{ children } [T' \text{ FUT } [_{HowP} <\text{children}> [_{How'} \text{ how } [_{vP} <\text{children}> \text{ buy the books}]]]]]$



8. A note on Tense features and “Reverse Agree”

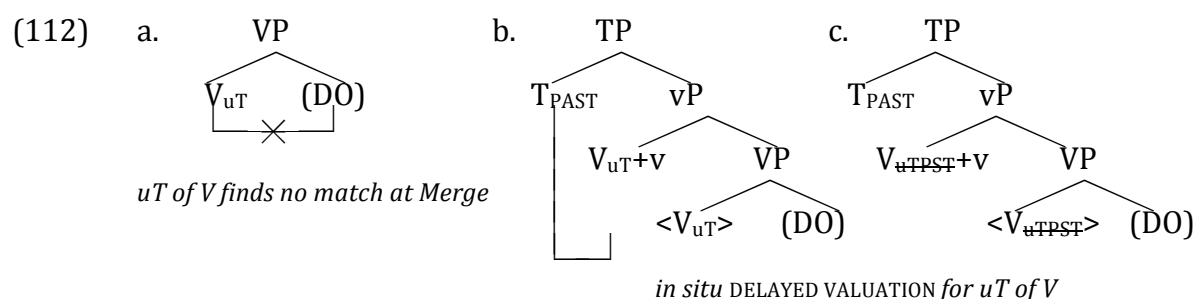
Following Pesetsky & Torrego 2007, Wurmbrand 2011 and Zeilstra 2012 argue that tense features on English verbs are uninterpretable, and must be valued by the interpretable

features of T. Partly on this basis Wurmbrand op cit and Zeijlstra op cit argue that the Minimalist “downwards’ probing approach to Agree should be rejected in favor of its inverse, “Reverse Agree.”

- (111) a. $T_{i...}V_{uT} \rightarrow T...V_{uT}$
 b. Reverse Agree: universally, valuation obtains when iF closest c-commands uF (adapted from Wurmbrand 2011, Zeijlstra 2012)

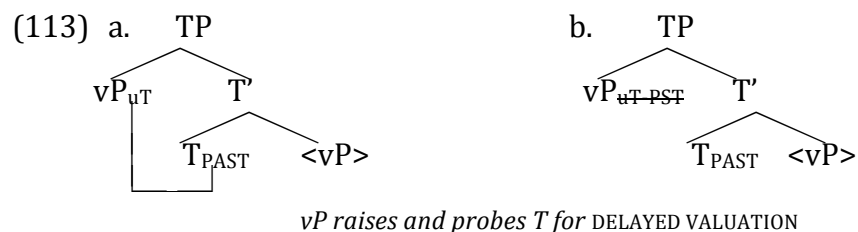
I have argued that uF of X must probe the c-command domain of X upon Merge. If there is no source of valuation, X may be valued in situ or XP may raise and probe. The choice depends upon whether an edge feature is available and, if one is absent, whether a source of valuation is located in the same phase as uF’s in situ position.

The general approach is compatible with “Reverse Agree” valuation for uT on a verb: lacking valued T-features within its c-command domain and in the same phase, V’s uT must obtain DELAYED VALUATION if the derivation that contains it is to converge. Assuming V always raises to v, it is in the same phase as T and hence can be valued downwards in situ.



My two-point mechanics for DELAYED VALUATION, coupled with the approach to motivating movement in (16), argue that if there is an available edge feature in some language, we might see vP/VP raise into locality with T as an alternative to in situ valuation of V’s uTense feature. Assume that VP inherits unvalued features from its head as I proposed for all XPs

in §7; and that *v* and hence *vP* also inherit these features, as a consequence of V-to-*v* adjunction. Then we predict that some languages might value *V*'s *uCase* as in (113):



In fact, a proposal rather like this is made in Travis 2006 for “snowballing” movement in Malagasy. Travis argues that Malagasy DPs check their features by incorporation of *D* into relevant heads, leaving Spec positions open. Travis proposes that predicate movement checks the same kinds of features in Malagasy that head-movement checks in a language like English. I suggest that valuation of *uT* is involved in motivating predicate movement. The fact that DPs remain in situ paves the way for edge features to raise *vPs*, since they bear the *uF* of unvalued tense. Hence like valuation of *uCase* on DP, valuation of *uTense* on *V* can be valued in situ or by raising of *vP*.

An interesting question arises as to whether languages privilege DP-movement over *vP* movement, and if so why. But for reasons of space, I leave this and further exploration of *uTense* valuation to future research.

9. Conclusion

In this paper I have argued that it is licit for *uF* of *X* to remain unvalued at and beyond the point where *XP* is merged with *Y*, and that this routinely happens if a value for *uF* of *X* is lacking in *X*'s sister. *uF* of *X* can obtain DELAYED VALUATION either in situ or by raising of *XP*. In situ valuation occurs under closest c-command by an expression merged prior to any head with an edge feature (thus within the same phase). This is how DELAYED VALUATION of nominative Case works in passives of German simple clauses and simplex restructurings,

and how agreement displacement works in a language like Basque. DELAYED VALUATION is also possible under movement of XP to c-command an expression with matching features, as in Lubukusu complementizer agreement, or German nominative valuation in more complex restructuring constructions; or whenever an edge/EPP feature c-commands the source of Case valuation as it always does in English TP.

The anomalous concept of “active” goal features receives a principled account under this analysis, yielding a simpler theory: goal features are simply uFs that find no match in their c-command domains at first Merge, and obtain valuation in situ when a matching feature is merged higher in the tree. Some apparently upward-oriented uFs fall out from the approach, coupled with independently motivated factors including cyclic transfer and the articulated left-periphery.

I have also made a speculative proposal that valuation is not inherently directional. Though downwards probing of the c-command domain is automatic, when it fails the role of DELAYED VALUATION mechanisms is to establish sufficient locality between valued and unvalued features. This does not logically entail a specific directionality. The upshot is that raising to be the potential valuer’s c-commandee is a licit option. The approach explains Case-valuation in English [*for...to*] infinitives.

In the final few sections of the paper I sketched out how my approach can be extended to explain concord, agreement on a vP-level XP adjunct, and valuation of tense features on verbs.

I conclude that there is no upwards/downwards agreement parameter, contra Baker 2008 and Diercks 2011a; and no basis for rejecting the downwards probing model of valuation, contra Zeijlstra 2012 and Wurmbrand 2011. Empirical phenomena robustly

support the existence of Agree relations in which the probe c-commands the goal, some of which I have detailed here; they include SA with post-verbal subjects; West Germanic complementizer agreement; and agreement of the Lubukusu vP-adjunct 'how' with an in situ subject. See also Preminger 2012 for additional arguments including the existence of agreement between material in an embedded clause with a head in a higher clause, touched on in my footnote 21.

But some of the evidence the above-cited works present does indeed warrant a "Reverse Agree" type of analysis. I have argued that this is entirely due to match failures in the c-command domain of a uF at the point of first Merge, and the ensuing processes of DELAYED VALUATION.

References

- Adger, D. 2003. *Core Syntax*. 2003. New York and Oxford: Oxford University Press.
- Baker, M. 2003. Agreement, Dislocation, and Partial Configurationality, in A. Carnie, H. Harley, E. Jelinek, and M. Willie (eds.), *Formal Approaches to Function in Grammar*, John Benjamins, Amsterdam, pp. 107-132.
- Baker, M. 2008. *The Syntax of Agreement and Concord*. Cambridge and New York: Cambridge UP.
- Baker, M. & K. Safir. 2012a. Comitatives in Lubukusu. Ms in preparation, Rutgers University.
- Baker, M. & Safir, K. 2012b. Sources of symmetry in Bantu double object constructions. Ms in preparation, Rutgers University.
- Barss, A. & H. Lasnik. 1986. A note on anaphora and double objects. *Linguistic Inquiry* 17, 347-354.
- Belletti, A. 1988. The Case of unaccusatives. *Linguistic Inquiry* 19: 1-35.

- Bejar, S. 2003. Phi-syntax: A theory of agreement. Doctoral dissertation, University of Toronto, Ontario.
- Bejar, S. and D. Massam. 1999. Multiple Case-checking *Syntax* 2.2: 65-79.
- Bejar, S. & M. Rezac. 2009. Cyclic Agree. *Linguistic Inquiry* 40.1: 35-73.
- Bhatt, R. 2005. Long-distance agreement in Hindi-Urdu. *Natural Language and Linguistic Theory* 23:757-807.
- Bobaljik, J. & S. Wurmbrand. 2005. The Domain of Agreement. *Natural Language and Linguistic Theory* 23:809-865.
- Borer, H. 1994. *Parametric Syntax: Case Studies in Semitic and Romance Languages*. Dordrecht: Foris Publications.
- Bošković, Željko. 1997. *The Syntax of Non-Finite Complementation*. Cambridge, MA: MIT Press.
- Bošković, Željko. 2002. A-movement and the EPP. *Syntax* 5: 167-218.
- Bošković, Željko. 2007. On the locality and motivation of Move and Agree: An even more minimal theory. *Linguistic Inquiry* 38: 589-644.
- Bošković, Željko. 2008. What will you have, DP or NP? In *Proceedings of NELS 37*, Emily Elfner and Martin Walko (eds). Amherst, Mass: GSLA, pp. 101-114.
- Bošković, Željko. 2011. Last Resort with Move and Agree in derivations and representations. In *The Oxford Handbook of Linguistic Minimalism*, ed. Cedric Boeckx, 327-353. New York and Oxford: Oxford University Press.
- Bošković, Željko and Howard Lasnik. 2003. On the distribution of null complementizers. *Linguistic Inquiry* 34:527 – 541.
- Bruening, B. 2001. Raising to object and proper movement. Unpublished ms., University of Delaware.

- Cable, S. To appear. The optionality of movement and EPP in Dholuo. Forthcoming in *Natural Language and Linguistic Inquiry*.
- Carstens, V. 2011a. Hyperactivity and Hyperagreement in Bantu. *Lingua* 121.5:721-741.
- Carstens, V. 2011b. Head-movement in Bantu DPs. Paper presented at the 41st meeting of the North East Linguistics Society, Philadelphia, PA.
- Carstens, V. 2010. Grammatical gender and the theory of uninterpretable features. In *Exploring Crash Proof Grammars*. M. Putnam (ed), 31-57. Amsterdam: John Benjamins.
- Carstens, V. 2008a. DP in Bantu and Romance. In *The Bantu-Romance Connection; a comparative investigation of verbal agreement, DPs, and information structure*. In De Cat, C. and K. Demuth (eds), 131-166. Amsterdam: John Benjamins.
- Carstens, V. 2008b. Feature Inheritance in Bantu. Ms., University of Missouri.
- Carstens, V. 2005. Agree and EPP in Bantu. *Natural Language and Linguistic Theory* 23:219-279.
- Carstens, V. 2003. Rethinking complementizer agreement. *Linguistic Inquiry* 34.3:393-412.
- Carstens, V. 2001. Multiple agreement and Case deletion. *Syntax* 4.3:147-163.
- Carstens, V. & M. Diercks. To appear a. Agreeing How? *Linguistic Inquiry* 44.2 (also LingBuzz/001389).
- Carstens, V & M. Diercks. To appear b. Parameterizing Case and Activity: Hyper-raising in Bantu. In *Proceedings of the 40th Annual Meeting of the North East Linguistic Society*.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.
- Chomsky, N. 2000. Minimalist inquiries: The framework. In *Step by step: Essays in honor of Howard Lasnik*, edited by R. Martin et al, 89-155. Cambridge, MIT Press.

- Chomsky, N. 2001. Derivation by phase. In *Kan Hale: A life in language*, edited by M. Kenstowicz, 1-52. Cambridge: MIT Press.
- Chomsky, Noam. 2007. Approaching UG from below. In *Interfaces + Recursion = Language?*, ed. by U. Sauerland and H.-M. Gartner, 1-29. Berlin: Mouton de Gruyter.
- Chomsky Noam. 2008. On Phases. In *Foundational Issues in Linguistic Theory*, ed. by Robert Freidin, Carlos P. Otero and Maria Luisa Zubizarreta, 133-166. Cambridge, MA: MIT Press.
- Cinque, G. 1999. *Adverbs and Functional Heads: A Cross-Linguistic Perspective*. Oxford: Oxford University Press.
- Cinque, G. 2005. On deriving Greenberg's Universal 20. *LI* 36.3: 315-332.
- Collins, C. 1994. *Local Economy*. Cambridge, MA: MIT Press.
- Diercks, Michael. 2009. Subject extraction and (so-called) anti-agreement effects in Bukusu: A Criterial Freezing approach. Presentation made at the 45th Annual Meeting of the Chicago Linguistics Society. April 16-18, University of Chicago.
- Diercks, M. 2010. *Agreement with Subjects in Lubukusu*. PhD diss, Georgetown U.
- Diercks, M. 2011a. The morphosyntax of Lubukusu locative inversion and the parameterization of Agree. *Lingua* 121.5: 702-720.
- Diercks, M. 2011b. Against feature inheritance: phase heads are not defined by unvalued features. lingBuzz/001342.
- Diercks, M and J. Sikuku. 2012. Lubukusu object marking as pronominal incorporation. Ms., Pomona College and Moi University.
- Diercks, M. to appear a. Parameterizing Case: Evidence from Bantu. *Syntax*.

Diercks M. to appear b. Lubukusu complementizer agreement as a logophoric relation.

Forthcoming in *Natural Language and Linguistic Theory*.

Diercks, M., M. Putnam, & M. van Koppen. 2011/2012. The directionality of Agree: can a universal feature valuation operation be established? Paper delivered at *The Minimalist Program: Quo Vadis?* Potsdam, Germany, and manuscript in progress.

Emonds, Joseph. 1976. *A Transformational Approach to English Syntax*. New York: Academic Press.

Epstein, S. 1998. In S. Epstein, E. Groat, R. Kawashima, and H. Kitahara, *A Derivational Approach to Syntactic Relations*. Oxford University Press: Oxford.

Epstein, S. 1999. Unprincipled syntax: the derivation of syntactic relations. In *Working Minimalism*, ed by S. Epstein & N. Hornstein.

Epstein, S., Kitahara, H., & T.D. Seely. 2010. Uninterpretable features: what are they, and what do they do? In *Exploring Crash-Proof Grammars*, ed. by Michael Putnam, 125-142. Amsterdam: John Benjamins.

Epstein, S. & T.D. Seely. 1999. SPEC-ifying the GF subject: Eliminating A-chains and the EPP within a derivational model. Ms, University of Michigan and Eastern Michigan University.

Epstein, S. & T.D. Seely. 2006. *Derivations in Minimalism*. Cambridge: Cambridge UP.

Grohman, K., Drury, J. and Castillo, C. 2000. No more EPP. In *WCCFL 19 Proceedings*, ed. Billery and Lillehaugen, pp. 153-166. Somerville, MA: Cascadia Press.

Halpert, Claire. 2011. Argument Licensing in Zulu. LingBuzz/001400.

Haegeman, L. 1992. Some speculations on argument shift, clitics and crossing in West Flemish. Ms., University of Geneva.

- Haegeman, L. & T. Lodahl. 2009. Negative concord and (multiple) agree: a case study in West Flemish. *LingBuzz*/000739.
- Haegeman, L. & M. van Koppen. 2010. Complementizer agreement and the relationship between T and C. *LingBuzz*/001181.
- Harford Perez, Carolyn. 1985. Aspects of complementation in three Bantu languages. Madison, WI: University of Wisconsin dissertation.
- Henderson, Brent. To appear. Anti-Agreement: Locality of Movement or Agreement? In the *Proceedings of the Chicago Linguistics Society* 2009.
- Henderson, Brent. 2007. Multiple agreement and inversion in Bantu. *Syntax* 9.3: 275-289.
- Holmberg, Anders & Þorbjörg Hróarsdóttir. 2003. Agreement and movement in Icelandic raising constructions. *Lingua* 113:997–1019, doi: 10.1016/S0024-3841(02)00162-6
- Julien, Marit. 2002. *Syntactic Heads and Word Formation*, Oxford University Press, NY.
- Kandybowicz, J. 2011. On the incompatibility of Feature Inheritance and the PIC. Ms, Swarthmore College.
- Kim, K. 2008. English C moves downward as well as upward: an extension of Bošković & Lasnik's (2003) approach. *Linguistic Inquiry* 39.2: 295-307.
- Kinyalolo, K.K.W. 1991. *Kilega and the Spec, head agreement hypothesis*. UCLA PhD dissertation.
- Koopman, Hilda, and Dominique Sportiche. 1989. Pronouns, Logical Variables, and Logophoricity in Abe. *Linguistic Inquiry* 20.4: 555-88.
- Legate, J. 2003. Some interface properties of the phase. *Linguistic Inquiry* 34.3: 506-516.
- Legate, J. 2005. Phases and cyclic agreement. In Martha McGinnis & Norvin Richards (eds.), *Perspectives on Phases*. *MITWPL* 49: 147-156.

- Marantz, A. 1993. Implications of asymmetries in double object constructions. In Sam Mchombo (ed.), *Theoretical aspects of Bantu grammar*. Stanford: CSLI, 113–150.
- Martin, Roger. 1999. Case, the EPP and minimalism. In *Working Minimalism*, eds. Sam Epstein & Norbert Hornstein. Cambridge: MIT Press.
- Matushansky, Ora. 2006. Head-movement in Minimalist theory. *Linguistic Inquiry* 37.1:69-109.
- McFadden, Thomas. 2006. German inherent datives and argument structure. In Hole, D., A. Meinunger, and W. Abraham (eds). *Datives and Other Cases*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
- McGinnis, M. 2001. Variation in the phase structure of applicatives. In *Linguistic Variation Yearbook 1*: 105-146.
- McGinnis, M. 2005. UTAH at Merge: evidence from multiple applicatives. In *MITWPL 49: Perspectives on Phases*, ed. Martha McGinnis and Norvin Richards, 183-200. Cambridge, MA: MIT Working Papers in Linguistics.
- McGinnis, M. 2010. Binding Preservation. Talk delivered at UBC Colloquium.
- Melebari, A. & T. D. Seely. 2011. Agreement without ‘exception’ in Standard Arabic? Paper presented at University of Michigan, Ann Arbor.
- Nevins, Andrew. 2011. Multiple Agree with clitics: person complementarity vs. omnivorous number. *Natural Language and Linguistic Inquiry*
- Nevins, Andrew. 2005. Derivations without the Activity Condition. *MIT Working Papers in Linguistics* 49: 283-306.
- Ndayiragije, Juvenal. 1999. Checking Economy. *Linguistic Inquiry* 30.3: 399-444.
- Obata, M. and S. Epstein. 2011. Feature-Splitting Internal Merge: improper movement,

- intervention and the A/A'-distinction. *Syntax* 14.2: 122-147.
- Pesetsky, D. 1991. *Zero Syntax, vol. 2: Infinitives*. Unpublished manuscript, MIT.
- <http://web.mit.edu/linguistics/www/pesetsky/infins.pdf>.
- Pesetsky, D. & E. Torrego. 2007. The syntax of valuation and the interpretability of features. S. Karimi, V. Samiian and W. Wilkins (eds.), *Phrasal and Clausal Architecture: Syntactic derivation and interpretation*. Amsterdam: John Benjamins. 262-294.
- Pesetsky, D. & E. Torrego. 2004. Tense, Case, and the nature of syntactic categories. In J. Guéron and J. Lecarme (eds.), *The Syntax of Time*. Cambridge, MA: MIT Press. 495-538.
- Polinsky, Maria and Eric Potsdam. 2001. 'Long-Distance Agreement and Topic in Tsez', *Natural Language and Linguistic Theory* 19, 583-646.
- Preminger, Omer. 2012. Reversing agreement is untenable: a reply to Zeijlstra. *lingBuzz* 001442.
- Preminger, Omer. 2011. Agreement as a fallible operation. MIT PhD dissertation.
- Putnam, Mike & Marjo Van Koppen. 2001. All there is to know about the *alls*-construction. *The Journal of Comparative Germanic Linguistics* 14.1: 81-109.
- Pylkkänen, Liina. 2002. *Introducing Arguments*. Doctoral dissertation, MIT, Cambridge, MA.
- Pylkkänen, Liina. 2008. *Introducing Arguments*. Cambridge: MIT Press.
- Rackowski, Andrea & Norvin Richards. 2005. Phase edge and extraction: a Tagalog case study. *Linguistic Inquiry* 36.4: 565-599.
- Rezac, M. 2003. The fine structure of cyclic Agree. *Syntax* 6.2: 156-182.
- Richards, M. 2007. On feature inheritance: an argument from the phase impenetrability condition. *Linguistic Inquiry* 38: 563-572.

- Rizzi, L. 1997. The fine structure of the left periphery. L. Haegeman, ed. *Elements of Grammar*, Kluwer, Dordrecht.
- Rizzi, L. 1999. On the Position “Int(errogative)” in the Left Periphery of the Clause. Ms., University of Siena.
- Roberts, I. 2010. *Agreement and Head Movement: clitics, incorporation, and defective goals*. Cambridge: MIT Press.
- Sikuku, J. 2012. DP positions in Lubukusu Questionnaire Respose version 1, in Ken Safir (ed), *Afranaph Databse*, at URL <http://www.africananaphora.rutgers.edu/>. Retrieved January 20, 2012.
- Shlonsky, U. 2004. The form of Semitic nominals. *Lingua* 114 (12): 1465-1526.
- Stjepanović, Sandra, and Shoichi Takahashi. 2001. Eliminating the Phase Impenetrability Condition. Paper presented at the workshop *Motivating movement: Explaining the displacement property of natural language*, University of Ulster.
- Travis, Lisa. 2006. VP, D⁰-movement languages. In *Crosslinguistic Research in Syntax and Semantics: Negation, Tense, and Clausal Architecture*. Ed by R. Zanuttini, H. Campos, E. Herburger, P. Portner. Georgetown: Georgetown University Press, pp. 127-150.
- Wurmbrand, S. 2004/2006. Licensing Case. Ms, UConn/publication in *Journal of Germanic Linguistics* 18.3: 175-236.
- Zamparelli, R. 2008. On the interpretability of phi-features. In *The Bantu Romance Connection: a comparative investigation of verbal agreement, DPs, and information structure*. In De Cat, Cecile and Katherine Demuth (eds), 167-199. Amsterdam: John Benjamins.

Zeller, J. 2011. Instrument inversion in Zulu. To appear in *Proceedings of the 42nd Meeting of the Annual Conference on African Linguistics*. Somerville, MA: Cascadilla Press.

Zeijlstra, H. 2012. There is only one way to agree. lingBuzz1435.