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 ($T_{u\phi}$ [$_{vP}$ DP$_{3S}$...]) *necessarily* $\rightarrow$ [$T u_{\phi 3S}$ [$_{vP}$ DP$_{3S}$...]].

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[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; X̶ 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.

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 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 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. 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

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

Epstein, Kitahara & Seely 2010 and Carstens 2010 on this conception of uF-induced

crashes).[4] But prior to the fatal point of Transfer, DELAYED VALUATION is possible (see (3)).

Thus the defining property of goal features is that their valuation does not happen right

away (see (4), and the approach to Case sketched in (5)). [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.

   [DP DuCase   [NP...]]
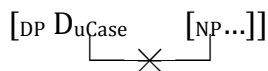
Understanding this much about goal features yields some new insights into atypical

valuations relations including apparent upwards agreement phenomena (see Baker 2008,

Diercks 2010, to appear a, to appear b) and downwards Case-checking (Bobalijk &

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 (WG) and

Lubukusu complementizer agreement (CA). uϕ on a WG complementizer (C) is valued by

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[4] Preminger 2011 argues persuasively that while agreement must always be attempted, uϕ 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 §2.2 on CA in expletive constructions). I leave exploration of this intriguing issue and its implications to future research.
[5] I use DP as a cover term for a set of projections, as Rizzi (1997) has argued for CPs. The bearer of a DP's uCase is higher than the head licensing genitive DP-internally in constructions like *John's mother*. Thanks to NAME for pointing out this issue. Relatedly, an anonymous reviewer asks why, in a case like *His attempt to win*, the pronoun cannot obtain accusative by downward-probing the verb. First, a genitive Case-valuer is closer. Secondly, I assume pronouns have internal structure like full DPs; usually their person features are properties of D, number originates in the Num head of NumP, and grammatical gender is a property of N. The c-command domain of D is hence NP even in a pronoun. Dechaine & Wiltschko (2002) identify 3 types of pronouns in natural language. Only one lacks internal structure, and it functions only as a predicate.

the embedded subject (SU), under closest-command at first Merge of C (Carstens 2003; Haegeman & van Koppen 2012). I argue that this is because WG agreeing C 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 Lubukusu Cis a higher C, which I analyze as Rizzi's Force^0, Merged above the phase head that triggers Transfer of the embedded clause to Spell Out (see (7); Transferred material here and subsequently is shaded).[6] For this reason, Lubukusu's agreeing C cannot be valued by the embedded SU. A successful derivation including this C therefore relies on DELAYED VALUATION.[7]

(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, uϕ of Fin
successfully probes the embedded subject

Fin $_{uϕ}$ [$_{TP}$ 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: uϕ of Force cannot probe the
Transfered subject of an embedded clause.

[$_{ForceP}$ Force $_{uϕ}$...[$_{FinP}$ 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 §2.2 that this conclusion is

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[6] Putnam & van Koppen (2011) also argue that Cs at different heights in the articulated left periphery have contrasting 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.
[7] 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 ϕ-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 §2.2, arguing that there is no anaphor involved.

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 uφ probe downwards. Only the DELAYED VALUATION 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 uφ 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 uφ 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 §2.5 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 §2.5.3.

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 uφ once the lower clause has Transferred,

including raising of C(P),[8] or in situ valuation. The latter might be accomplished through

downwards probing by the matrix subject; or "second cycle"probing by C's uφ in the spirit

of Bejar & Rezac's (2009) approach to agreement displacement (on which see §5). But facts

of applicative constructions argue that DELAYED VALUATION of Lubukusu CA involves raising

ForceP into locality with the subject, across any intervening indirect object or causee. In

particular, the phasal edge feature of v* raises ForceP to outer Spec of matrix vP (see (11)),

suggesting the conclusion in (12).[9]

(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.'

(11)   *Valuation of Lubukusu CA: ForceP raises, and its uφ probes SU.*

         [$_{vP}$ ForceP$_{uφ}$ [$_{vP}$ SU [$_{v'}$ v [$_{VP...}$V <ForceP>]]]

(12) 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.

My proposal for raising of ForceP to probe and value its uφ converges with the analysis of

English nominative valuation in Bošković 2007, 2011 and Epstein & Seely 2006, where it is

argued that English subjects raise to Spec, TP so their uCase features can probe T.

    Bobaljik & Wurmbrand (2005) argue for a similar analysis of nominatives in German

restructuring constructions involving two lexical verbs. But they also present important

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[8] In §1.3 and §6 I argue that unvalued features of X are inherited by XP and probe XP's c-command domain.
[9] An anonymous reviewer asks how ForceP can move to outer Spec, vP when it originates in VP, which should
be spelled out as soon as v is merged. But this is characteristic of any movement from a phase head's
complement, including topicalization of a direct object. More on the mechanics follows in §2.5.3 and §2.8.

evidence that the uCase of a VP-internal DP can be valued nominative by German 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 §3.2.

(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'   ∃»∀/?∀»∃

(14)   TP   *In situ valuation for DP$_{nom}$*

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).[10]

(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).[11]

(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 &

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[10] 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.
[11] 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 §3 for details.

Wurmbrand's 2005 proposal for what they call *agreement domains*, extended to both Case and the novel facts of Lubukusu CA. In §4 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 α 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 §4.2). [12] 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 (Ziejlstra 2012; Wurmbrand 2011), I propose that "upwards" valuation processes are in principle available in all languages when first Merge provides no results (see Bejar & Rezac 2009 for a similar analysis of *agreement displacement,* discussed in §5). Any intrinsic directionality to valuation relations is illusory, and so perhaps is any actual process of "probing", on this view (cf. ATTTRIBUTION personal communication; and see Preminger 2011 for a different perspective).

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

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[12] 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).

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. In §6 I present independent

evidence for this from concord on APs, and see §2.3 on Lubukusu agreeing 'how.'

1.4 Structure of the paper

This paper consists of eight sections. In §2 I explore Lubukusu CA and its implications for

how DELAYED VALUATION works. §3 considers DELAYED VALUATION of Case, focusing on

Bobaljik & Wurmbrand's treatment of German nominative in restructuring contexts. §4

addresses the motivation for movement and proposes that raising to be closest c-

commandee can permit valuation. §5 looks at agreement displacement phenomena from

Bejar & Rezac 2009. §6 provides independent evidence that uF of X can be valued through

probing by XP into its c-command domain. §7 sketches an extension of the approach to

valuation of tense features on V. §8 concludes.

2. Evidence from "upward" complementizer agreement.
2.1 The empirical issue

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 (U/D) probing is a parametric choice. One piece of evidence he cites is 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 (17) and (18), from Diercks to appear b).

(17) 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.'

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

Diercks provides two arguments that Lubukusu CA is not simply a copy of SA on T. When subjects are extracted, T agrees only in number and gender (Diercks's "Alternative Agreement Effect," = AAE below). In contrast, agreeing C exhibits full features of gender, number, and person (see (19)). Second, imperative verbs do not bear SA; but 2nd person CA is possible on agreeing C selected by an imperative verb (20a,b) (I assume with Diercks that imperatives contain a silent 2nd person subject with which C can agree).[13]

(19) 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?'

(20) 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.'

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[13] Ndayiragije (personal communication) suggests that Lubukusu agreeing C is not a C at all but a verb agreeing with a controlled *pro* subject. But a control analysis faces severe problems. §2.4 shows that a matrix IO/causee cannot value uφ of Lubukusu C and explains this with the proposal that IOs/causees have Case-licensing in situ 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 WG languages in its independence of SA. Carstens 2003, Haegeman & van Koppen 2012 argue that WG C has uφ distinct from T's uφ, and each is valued separately. Among the evidence in Haegeman & van Koppen 2012 is the fact that WG C can agree with the left member of a conjoined subject, while T must agree with the whole:[14]

(21) 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'

Thus both Lubukusu and WG agreeing Cs exhibit uφ-features independent of SA. But the two patterns contrast in which subject is agreed with. §2.2-2.9 explore this difference.

2.2   Is Lubukusu agreeing C evidential or anaphoric?

Diercks (2010 and to appear b) argues against a direct Agree relationship between Lubukusu agreeing C and the higher subject that values its features, based partly on some restrictions he found in the use of agreeing C. He compares several Lubukusu Cs that can introduce declarative clauses: agreeing C, two invariant Cs *mbo* and *bali*, and a null C. Distributional properties of agreeing C and *bali* lead Diercks to propose (22).

(22)   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).

(23) illustrates one source of motivation for (22b): inanimate DPs were judged by Diercks's speakers to be infelicitous controllers of CA (see (23a)) unless they included an animate possessor (23b). And the speakers Diercks consulted preferred *bali* when either the speaker or the subject doubts the contents of the embedded clause (see (24)).[15] (23)-(24)

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[14] Some conjoined DPs in Lubukusu allow mismatches between SA and CA, depending on noun class and person hierarchies. I leave these issues to future research; see Baker & Safir 2012a on Lubukusu conjuncts.
[15]*Bali* is homophonous with agreeing C for 3pl/Class 2, a fact consistent with its 'hearsay' usage.

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.

(23) 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.'

(24)   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 gives examples of CA with expletive subjects ((25a,b) = (73) and (74) in

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). This is hard to reconcile with

(22b), the requirement that CA's controller have a "mind to report" or a "point of view."

(25) 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'

The absence of a thematic role for the matrix subject position in (25a,b) might make covert

raising of the embedded subject seem a possible account of these facts consistent with the

point-of-view requirement in (22b). 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 (26).

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

Based on (25) 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 uφ-valuation under Agree – something that quite commonly yields expletive values, absent a thematic element for uφ 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. [16]

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 (24) at all, and Diercks (personal communication) informs me that the division of labor among Cs varies considerably across close geographic regions. But (27) seems a good start on accounting for the judgments reported in (24).

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

>*Bali:*   Hearsay
>Agreeing C, mbo, or ø: Elsewhere

As for (23), I suggest that for speakers with these judgments agreeing C is selected only by verbs with animate subjects, rather as the English verb *surprise* must have a perceptual source subject and an animate object. The four speakers I worked with did not share the judgments in (23). This might have a dialectal basis or be connected with mild deviance one of my speakers initially reported for the verb 'show' having a CP complement. Apart from this, my speakers consistently approved inanimate subjects valuing CA (see (28)).

(28) 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'

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[16] As pointed out in note 6, Diercks, van Koppen, & Putnam (2011, 2012) propose that Lubukusu agreeing C is an anaphor with unvalued interpretable φ-features like a reflexive in the framework of Rooryck & Vanden Wyngaerd (2011). This section's arguments against the presence of an anaphor apply.

   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 (25) argues strongly against the claim that

Lubukusu agreeing C has evidential properties or that its controller must have a mind to

report, and (28) provides further evidence. The conclusion which emerges is that

Lubukusu CA is due to unvalued uɸ like WG CA, though the relevant Cs 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 supports 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.

2.3   **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 both WG and Lubukusu have uɸ features independent of those giving rise to SA 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 is theoretically desirable.

    As I noted in §2.1, Baker and Diercks view the contrast between WG and Lubukusu CA

as at least partially explained by a U/D parameter. But a 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. U/D is also

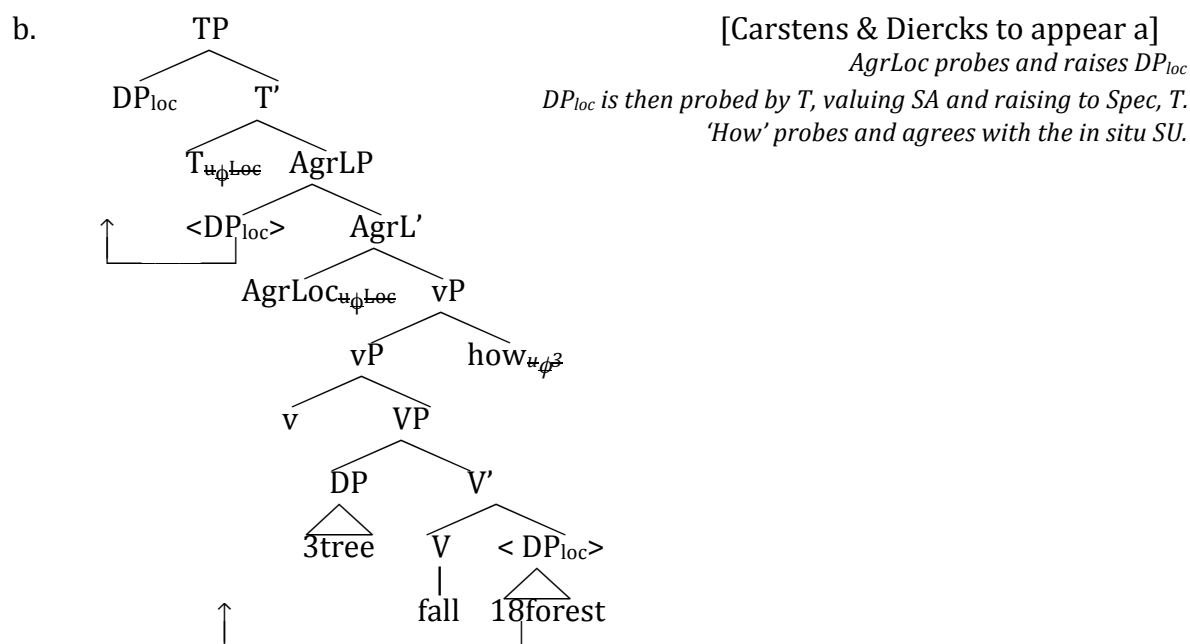anomalous from a derivationalist standpoint (see discussion of (2) in §1.1).

       In addition to these theoretical drawbacks, Carstens & Diercks (to appear a) show

that upward probing cannot account for Lubukusu agreeing 'how' (see (29)).

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

Carstens & Diercks (to appear a) argue that Lubukusu 'how' is a right adjunct to vP bearing

uφ-features which are valued by downward-probing the subject in its Merge position, Spec,

vP. Only this approach 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 (30), adapted from Diercks 2011a). T agrees with the inverted DP_{loc}

while 'how' agrees with the *in situ* subject (31a). Carstens & Diercks propose that DP_{loc}

reaches locality with T via Spec of the locative clitic that is obligatory in such constructions;

this clitic is a probe sensitive only to locatives. 'How' probes unselectively downwards as

shown in (31b), and must agree with whatever DP is closest, hence with the thematic SU.

(30)   **Repeated agreement LI (RALI):** *selected DP_{loc} raises to Spec, TP; thematic SU in situ*
        [$_{TP}$ DP_{loc} v-V-T… [$_{vP}$ <v> [$_{vP}$ SUBJ <V> <DP_{loc}>]]]

(31) 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.   TP   [Carstens & Diercks to appear a]
                                                           AgrLoc probes and raises DP_{loc}
         DP_{loc} T'   *DP_{loc} is then probed by T, valuing SA and raising to Spec, T.*
                                                          'How' probes and agrees with the in situ SU.
              T~~uφLoc~~   AgrLP

                  <DP_{loc}>   AgrL'

                            AgrLoc~~uφLoc~~   vP

                                   vP   how~~uφ3~~

                                v   VP

                                    DP   V'

                                    3tree   V   < DP_{loc}>

                                             fall   18forest

Agreeing 'how' is thus powerful evidence that Lubukusu uφ probes its c-command domain at first Merge, as the derivationalist view of syntax predicts. [17] 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 uφ of different categories probe in different directions in Lubukufsu, this attributes a sort of arbitrariness to syntactic behavior that is difficult to reconcile with Minimalist principles. A unified analysis seems vastly preferable.

2.4   The DELAYED VALUATION approach

I turn to the contrast between WG and Lubukusu CA 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 discussed in §1.1, 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 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 heights of the 2 agreeing Cs; and (iii) one of the DELAYED VALUATION mechanisms sketched out in relation to goal features in §2. Rizzi's approach to the left periphery is illustrated in (32) (INT = interrogative; FOC = focus). The version of the PIC that I adopt is shown in (33).

---

[17] This is partly obscured by frequent pairing of uφ and edge features; see Carstens 2005; Collins 2004.

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

   …[$_{ForceP}$ FORCE [$_{FocP}$ FOC [$_{IntP}$ INT [$_{FinP}$ FIN [$_{TP}$ SU T…]]]]]

(33) In a phase α with head H, the domain of H is inaccessible to operations outside α, only H and its edge are.[18]

Since WG C has access to the contents of the embedded TP I propose that it is the lowest C,

Rizzi's Fin. When uϕ of Fin is Merged, the subject is accessible (see (34)). Hence Fin's uϕ can

find a ϕ-feature match immediately, in its c-command domain:

(34)   *West Germanic complementizer agreement*: *uϕ of Fin successfully probe the subject*

   Fin$_{u\phi}$ [$_{TP}$ SU T [$_{vP}$ <SU> v [$_{VP}$ …]]]

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, Transfer has taken

place and the subject is already gone. Thus like a goal feature in (4) and (5), uϕ of agreeing

C cannot be valued until and unless Merge of additional material expands the possibilities.

 (35)   *Lubukusu complementizer agreement: Force$_{u\phi}$ cannot probe Transferred SU*

   [$_{ForceP}$ Force$_{u\phi}$…[$_{FinP}$ Fin [$_{TP}$ SU …]]]

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 examples like

(36a,b) that there is HYPER-RAISING out of Lubukusu tensed clauses ((36a,b) = Diercks 2011:

(76) and (78)). HYPER-RAISING is licit across non-agreeing C *mbo;* not across agreeing C.

(36) 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'

---

[18] 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 (36) 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.

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 that *mbo* is not a phase head. [19] Hence cyclic Transfer must be triggered by a null head located between *mbo* and agreeing C. [20] 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 18 on long-distance agreement); other verbs of speech, perception, and thought usually select ForceP, [21] containing the intermediate, phasal CP. Thus *mbo* clauses are permeable, and uϕ of the agreeing C cannot be valued by an embedded subject – all the desired results are obtained.

(37) *An intermediate C (Int) triggers phasal Transfer, blocking CA with embedded SU*
.

$[_{ForceP}$ Force$_{u\phi}$ $[_{IntP}$ Int $[_{FinP}$ Fin $[_{TP}$ SU ...]]]

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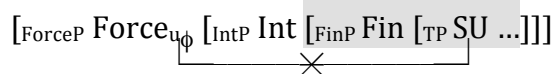
[19] Bošković 2007 reviews evidence from Chuckchee and Blackfoot from Stepanovic & Takahashi (2001) and Legate 2005 suggesting that Agree can reach into an embedded clause. He argues that only Move is subject to the PIC. Given the evidence that Lubukusu cross-clausal agreement fails, I suggest instead 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 Tzez is mediated by a null topic in Spec of the embedded CP.

[20] 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) $[_{ForceP}$ C$_{u\phi}$ $[_{IntP}$ Int $[_{TopP}$ fruit...]]]

[21] 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 §2.2.

The situation for uφ of Force at the point in (37) is parallel to that of D's uCase in (5). There are three ways in which valuation might be hypothesized to take place here. Force might raise to c-command an expression bearing iφ (with or without pied-piping surrounding material). Alternatively, Force might probe upwards as the syntactic object containing it is expanded. Lastly, Force might obtain valuation passively, when an expression is Merged higher, bearing some relevant probe feature and/or matching iφ. Teasing out the best among these options is the next task.

2.5 The subject orientation and its implications
2.5.1 The empirical problem

The evidence that ForceP must raise lies in the identity of the expression that ultimately values its uφ. Diercks (to appear b) demonstrates that only the subject of the immediately superordinate clause can value uφ of Lubukusu C. C cannot agree with a more remote subject (see (38)); nor with an indirect object (IO) or causee (see (39); (38) and (39a) from Diercks (to appear b); thanks to Lillian Waswa for (39b)).

(38) 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.'
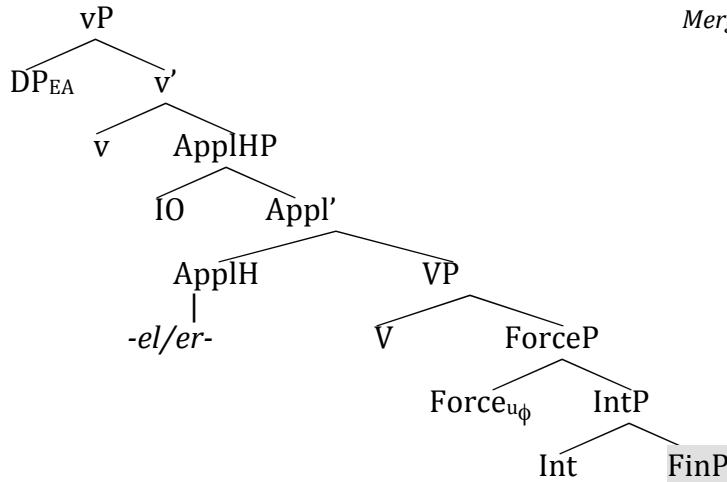
(39) a. Ewe w-abol-el-a   Nelsoni *a-/o-li   ba-keni   ba-rekukha.
       you 2sSA-say-APPL-FV 1Nelson 1/2s-that 2-guests   2SA-left
       'You told Nelson that the guests left.'

    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.'

(38) shows that the relation valuing Lubukusu CA is local, as Diercks (to appear b) points out. Given this, (39a,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. The schematic structure of (39a) is (40). Anticipating (44) and (45) in

19

§2.5.3 and additional binding evidence in §2.7, I assume Lubukusu causees and applied

objects have similar syntax. Thus there is a Caus head counterpart to Appl, though for

reasons of length I focus on the structure of applicatives here.[22] Supporting evidence that

IO and causee asymmetrically c-command DO is given in (41) (see Barss & Lasnik 1986;

Marantz 1993).[23] The Merge positions of SU and agreeing C are not at all local.

(40)   vP   *Merge locations of EA, IO, and agreeing C*

    DP$_{EA}$ v'

         v   ApplHP

           IO   Appl'

             ApplH   VP

               |

           -el/er-   V   ForceP

                        Force$_{u\phi}$ IntP

                              Int   FinP

(41) a. Na-a-rer-er-a   buli   mayi$_i$ 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

---

[22] 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.
[23] Binding relations in Lubukusu double object constructions (DOCs) are more complex than this, as will be detailed §2.7. 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.

with a logophoric null operator in its Spec.[24] But as I noted in §2.2, Lubukusu agreeing C

does not have a reflexive or bound pronominal meaning; and the contrasting directionality

of probing by agreeing 'how' and C is mysterious under this account. Given that 'how'

probes downwards (see §2.3), it would be surprising if uφ of C waited to agree until the

operator is Merged instead of probing its c-command domain like uφ of 'how.' The DELAYED

VALUATION approach explains the full array of facts. It remains only to uncover the precise

mechanism involved and the basis for non-intervention by the IO or causee.

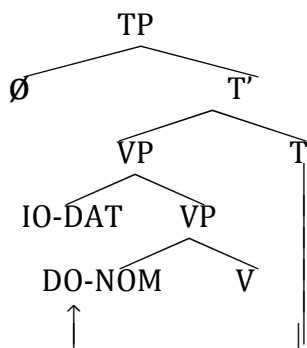### 2.5.2 Datives and intervention

As mentioned in the introduction, I propose that IOs in Lubukusu are Case-licensed in situ

by Appl so they are not active to Agree with C; similarly, causees can be assumed to be

Case-valued by the causative affix Caus (since the affixes incorporate and raise to the

middle field with the verb, the directionality of these relations is an open question). A

reasonable first hypothesis is that their dative Case value makes IOs/causees wholly

irrelevant for valuation of CA. Once the subject is Merged in Spec, vP, it can Agree with uφ of

C across the intervening IO or causee because SU is not yet Case-valued (see §2.5.4).

There is some initial support for such an approach in the behavior of datives in

German. As I noted in the introduction, Bobaljik &Wurmbrand 2005 argue that German T

can value a VP-internal nominative if the domain is small enough (see (13) and (14),

repeated below); and this valuation relation ignores an 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'   ∃»∀/?∀»∃

---

[24] Two additional empirical issues relevant to this question will be addressed in §2.8: CPs within complex NPs and Raising-to-Object, which appears to cross agreeing C without altering the subject-orientation.

(14)

```
              TP
         ┌─────┴─────┐
         Ø           T'
               ┌─────┴─────┐
              VP           T
          ┌────┴────┐
       IO-DAT      VP
              ┌─────┴─────┐
           DO-NOM         V
              └──────────────┘
```

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 uϕ (see (42), adapted from McFadden (2006)).

(42) a. *Under passivization, Accusative OB becomes Nominative and values uϕ 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 uϕ of T*

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

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

*[Die Wissenschaftler]   sind/   Den Wissenshaftlern ist
 [the scientists](NOM)   *be.PL/ [the scientists](DAT)   be.SING

[ein groBer Auftrag]   gegeben worden
[a big assignment]NOM   given   become
'The scientists were given a big assignment'

In contrast, passivized Lubukusu IOs value SA. Compare the Lubukusu (18) (repeated below) with the German (42b,c). The contrast suggests that the Case of Lubukusu IOs is structural, and that they are therefore not systematically inert for Agree.

(18) Sammy ka-bol-el-wa   **a**-li   ba-keni   b-ola.
     1Sammy 1SA-say-APPL-PASS 1-that 2-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).[25] 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.

(43) 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   finnast *t*1 [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 uϕ 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 uϕ of Force unvalued. On the other hand, the approach also provides an independently motivated mechanism for raising ForceP into locality with the subject, overcoming the potential phase-theoretic and defective intervention problems at the same time.

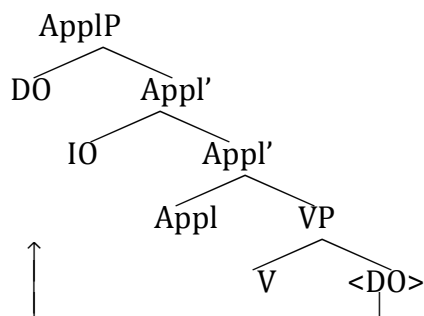[25] See also Preminger 2011 for helpful discussion.

2.5.3 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) feature[26] permitting DO raising across IOs to feed passive and

pronominalization. The examples in (44) demonstrate this symmetry, and (45) shows that

causatives are also symmetrical (thanks to Aggrey Wasike for (44); (45) is from Baker &

Safir 2012b). I illustrate McGinnis's approach in (46).

(44) a. Khu-rer-er-e   o-mu-solelibi-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'

(45) 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
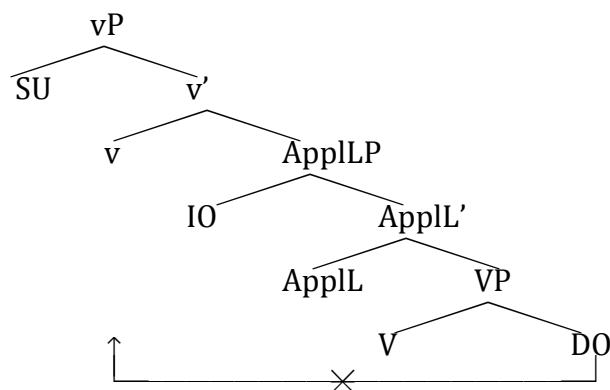   'Wekesa was shown the book.'

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[26]Chomsky 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 §2.7.

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

```
        ApplP
       /     \
     DO      Appl'
            /      \
          IO       Appl'
                  /      \
               Appl       VP
                ↑        /    \
                |       V     <DO>
                |_____|
```

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).

(47)   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).*

```
            vP
           /    \
         SU      v'
                /    \
               v      ApplLP
                     /       \
                   IO        ApplL'
                            /       \
                        ApplL        VP
                          ↑         /    \
                          |        V      DO
                          |____✕_____|
```

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$_{u\phi}$. This

is because by the time the subject is Merged, the complement to the Appl phase head including ForceP will have been spelled out:

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

$$[_{vP} \text{ SU } [_{v'} \text{ v } [_{ApplP} \text{ IO } [_{Appl'} \text{ Appl } [_{VP} \text{ V } [_{ForceP} \text{ Force}_{u\phi}....]]]]]]$$

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$_{u\phi}$. Since ForceP is the direct object, the possibility of raising it is automatically available under McGinnis's approach. [27]

(49) $[_{ApplP} \text{ ForceP}_{u\phi} [_{ApplP} \text{ IO } [_{Appl'} \text{ Appl } [_{VP} \text{ V } <\text{ForceP}_{u\phi}>]]]]$

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

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

$$[_{ApplP} \text{ ForceP}_{u\phi} [_{ApplP} \text{ IO}_{dative} [_{Appl'} \text{ Appl } [_{VP} \text{ V } <\text{ForceP}_{u\Phi}>]]]]$$
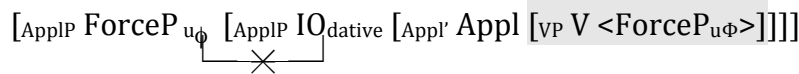
As the derivation continues, Merge introduces v and the thematic SU in Spec, vP. Subjects seem never to become comparably "inactive" in Lubukusu, interacting with multiple probes and valuing agreement many times. §2.5.4 addresses the question of why this is so. For present purposes, let us take it as a given. In line with (16), if v* has an edge feature then uϕ of ForceP is successfully valued after ForceP raises once more, to outer Spec, vP (see §2.5.5 and §2.8.1 for further discussion on this point).[28, 29]

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[27] 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.

[28] Example (18) demonstrated that C agrees with the derived IO SU in a passive containing a double object verb with a ForceP complement. This result follows from 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

(51)   *After ForceP raises again, Agree (ForceP$_{u\phi}$, SU) succeeds*

   [$_{vP}$ ForceP$_{u\phi}$ [$_{vP}$ SU [$_{v'}$ v [$_{ApplP}$ <ForceP$_{u\phi}$> [$_{ApplP}$ IO [$_{Appl'}$ Appl [$_{VP}$ ...]]]]]]]]

2.5.4 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 (see

Chomsky 2000; 2001 among many others). The role of Case in Bantu languages is a topic of

some controversy 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 describe

multiple SA and suggest that it always tracks the nominative argument, because nominative

is valued ex situ. I argue that, in contrast to Lubukusu subjects, IOs and causees cannot

interact with multiple probes. I conclude that IOs and causees have a 1:1 relationship in

situ with a local licenser, which I analyze as Appl/Caus valuing dative Case.[30;31]

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 [$_{ApplP}$ ForceP$_{u\phi}$ [$_{ApplP}$ <IO> [$_{Appl'}$ Appl [$_{vP}$ ...]]]]]]]

[29] On why the CP does not precede the IO in linear order, see §2.6.

[30] 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-values IO. Mainly for simplicity
I 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).

[31] 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.

Lubukusu has multiple SA in full ϕ-features in compound tense constructions and 'how' questions (see (7) and (8) repeated below), motivating the generalization in (52).

(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
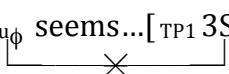   'How will the children buy books?'

(52)   Full ϕ-feature agreement with a subject does not "deactivate" it in Lubukusu; subjects can have relations with multiple uϕ probes.

In theory-neutral terms, the fact that uϕ 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 (53)).

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

Chomsky (2000, 2001) addresses (53b), attributing it in part to a strict relationship between agreement and Case-valuation. He argues that Agree with a "ϕ-complete" probe (in (53b)/(54a,b), the lower T) values a DP's uCase. This prohibits the embedded subject from Agreeing with the matrix T (see 54c). Chomsky (2001:6) writes, "Once the Case value is determined, N no longer enters into agreement relations and is 'frozen in place.'"

(54) *In (53b), agreement/movement of 3S is blocked after Case-valuation in the lower clause*

     a.   [$_{TP1}$ T1$_{uϕ}$ 3S$_{uCase}$ have left] →
     b.   [$_{TP1}$ T1~~uϕ3S~~ 3S~~uNom~~ have left]
     c.   *[$_{TP2}$ T2$_{uϕ}$ 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 (55) and supporting (52).

(55) *Asp agrees with and raises SU; then T agrees with and raises SU*

$[_{TP}$ SU be+T$_{u\phi}$ $[_{AspP}$ <SU> V+v+Asp$_{u\phi}$ $[_{vP}$ <SU> ...]]]
    Agree x2   Agree x1
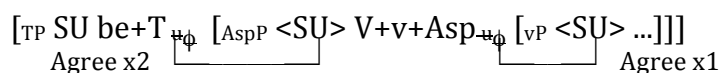
I assume following Carstens 2010, 2011 that the grammatical gender component of noun class (uGen) functions as an "activity" feature. Carstens agues that uGen is uninterpretable so, like uCase, it makes a nominal expression "active". But unlike uCase, uGen comes from the lexicon with a value that is not affected by its participation in Agree relations. Carstens proposes that "deactivation" accompanies Case valuation in a language like English because successive Agree relations could tamper with a Case value, leading to unclarity as to how uCase should be pronounced (see Nevins 2005, Epstein, Kitahara & Seely 2010, and Carstens 2010 on this conception of uF-induced crashes).[32] No such issue arises for uGen since it is never valued via Agree. It therefore does not "deactivate" and can serve as goal iteratively, in successive Agree relations until and unless the expression that bears it obtains a Case value. The reusability of uGen as an active goal feature is clearly demonstrated in the widespread phenomenon of DP-internal concord in languages with grammatical gender. Lastly, N-to-D adjunction makes uGen accessible to clause level probes in Bantu, so all agreement includes gender and can in principle iterate like 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 uϕ 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

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[32]I refer the reader to Carstens 2011 for fuller details on how multiple agreement is ruled out in English. Also relevant here is evidence in Epstein, Kitahara & Seely 2010, Bejar & Massam 1999, and Melebari & Seely 2011 that Case values can be altered in the course of the derivation, but this seems subject to variation across languages and Cases. I will not explore the issue here, though I note a potential relevance to the analysis of hyper-raising (see discussion of (36) in §2.4), which I leave for future research.

(op cit): Lubukusu T always has an edge (EPP) feature that can and therefore must raise

the subject, as the closest expression to it bearing a uF (see (16)). In contrast, Appl confers

Case-licensing on its IO argument in situ, which I will hypothesize to be a structural dative,

rendering them inactive for further Agree relations.

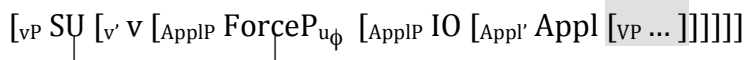### 2.5.5 What happens next: Raising ForceP

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 in active clauses. $Force_{u\phi}$

therefore cannot be valued by the IO in Spec, Appl in (see (50), repeated below).[33]

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

$[_{\text{ApplP}}$ ForceP$_{u\phi}$ $[_{\text{ApplP}}$ IO $[_{\text{Appl'}}$ Appl $[_{\text{VP}}$ V <ForceP$_{u\phi}$>$]]]]]$

Now a point of indeterminacy arises. Once SU is Merged, it is possible that a local match

relation could be established beween SU and ForceP in Spec, ApplP (see (56)): 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 (57).

(56)   *Hypothesis #1: Match with iϕ c-commanding uϕ*

$[_{\text{vP}}$ SU $[_{\text{v'}}$ v $[_{\text{ApplP}}$ ForceP$_{u\phi}$ $[_{\text{ApplP}}$ IO $[_{\text{Appl'}}$ Appl $[_{\text{VP}} …]]]]]]$

(57)   *Hypothesis #2: Match with uϕ c-commanding iϕ*

$[_{\text{vP}}$ ForceP$_{u\phi}$ $[_{\text{vP}}$ SU $[_{\text{v'}}$ v $[_{\text{ApplP}}$ <ForceP$_{u\phi}$> $[_{\text{ApplP}}$ IO $[_{\text{Appl'}}$ Appl $[_{\text{VP}} …]]]]]]]$

The choice among these analytical options is not obvious (assuming CPs typically

extrapose, as I will argue in §2.6 below). However §2.8 will present evidence from CA in

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[33]On the mechanics by which passivized IO/causee values uϕ of Force, see note 27.

complex NPs which argues that ForceP always raises to c-command the subject; hence (57) 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 §2.6 and §2.7 I complete the analysis of CA in ditransitives before moving on to this additional evidence.

2.6   Summary and a word order question

I argued in §2.5 for an analysis of Lubukusu CA in which ForceP raises around an IO or causee to agree with the in situ subject. I present a derivational history in (58), including head movements of V to Appl, V+Appl to v, and V+Appl+v to the middle field of the clause. (58a-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 (58c-d), ForceP raises to outer Spec, ApplP (58e). Then v is Merged in (58f). Merge take precedence over Move (Chomsky 1995, 2001), so the subject is added next yielding (58g). ForceP then raises to outer Spec, vP and its uϕ are valued by the in situ subject (58h). Once T is Merged (58i), the subject raises to its Spec, and (58j) results.[34]

(58)   a. [$_{ForceP}$ Force$_{u\phi}$ [$_{IntP}$ Int [$_{FinP}$ ...]]]   →

b. [$_{VP}$ V [$_{ForceP}$ Force$_{u\phi}$ [$_{IntP}$ Int [$_{FinP}$...]]]]]   →

c. [$_{Appl'}$ Appl [$_{VP}$ V [$_{ForceP}$ Force $_{u\phi}$ [$_{IntP}$ Int [$_{FinP}$...]]]]]   →

d. [$_{ApplP}$ IO [$_{Appl'}$ V+Appl [$_{VP}$ <V> [$_{ForceP}$ Force $_{u\phi}$ [$_{IntP}$ Int [$_{FinP}$...]]]]]]   →

e. [$_{ApplP}$ ForceP$_{u\phi}$ [$_{ApplP}$ IO [$_{Appl'}$ V+Appl [$_{VP}$ ...]]]]   →

f. [$_{v'}$ v [$_{ApplP}$ ForceP$_{u\phi}$ [$_{ApplP}$ IO [$_{Appl'}$ <Appl> [$_{VP}$ ...]]]]]   →

g. [$_{vP}$ SU [$_{v'}$ V+Appl+v [$_{ApplP}$ ForceP$_{u\phi}$ [$_{ApplP}$ IO [$_{Appl'}$ <Appl> [$_{VP}$ ...]]]]]   →

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[34] The absence of an intervention effect by uϕ of Force when T probes SU in (58i,j) supports a proposal in Carstens 2010; Carstens & Diercks to appear a that only intrinsic ϕ can value uϕ. Hence even after valuation, one uϕ is invisible to another and cannot go on to serve as goal in Agree.

h. [$_{vP}$ ForceP$_{u\phi}$ [$_{vP}$ SU [$_{v'}$ V+Appl+v [$_{ApplP}$...]]]]]] →

i. V+Appl+v+T [$_{vP}$ ForceP$_{u\phi}$ [$_{vP}$ SU [$_{v'}$ <V+Appl+v> [$_{ApplP}$ ...]]]] →

j. [$_{TP}$ SU V+Appl+v+T [$_{vP}$ ForceP$_{u\phi}$ [$_{vP}$ <SU> [$_{v'}$ v [$_{ApplP}$ ...]]]]]

Note that this approach predicts that agreeing CP should precede the IO, contrary to fact (see (59)). This problem arises whether or not ForceP raises all the way to outer Spec, vP. Even in (56) (repeated below), ForceP crucially crosses the IO.

(56) *Hypothesis #1: Match with iϕ c-commanding uϕ*

[$_{vP}$ SU [$_{v'}$ v [$_{ApplP}$ ForceP$_{u\phi}$ [$_{ApplP}$ IO [$_{Appl'}$ Appl [$_{vP}$ ...]]]]]]

(59) *Neither CP (59a) nor C alone (59b) 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-li$_C$ [$_{IO}$ 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 contrasts in (60) demonstrate 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 (61) and (62)).[35]

(60) a.   John said [$_{DP}$ his name] loudly.

      b.   *John said [$_{CP}$ that he was leaving] loudly.

      c.   John said loudly [$_{CP}$ that he was leaving].

---

[35] 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 (61) and (62), 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.

(61)   a.   Did [$_{DP}$ John's departure] upset Mary?

       b.   *Did [$_{CP}$ that John left] upset Mary?

(62)   a.   *I think that [$_{CP}$ that John left] upset Mary.

       b.   I think that [$_{DP}$ John's departure] upset Mary.

I propose that Lubukusu ForceP must surface at the right edge like English CPs in (60b,c). [36]

2.7   Binding and the edge feature of Appl

§2 has developed an analysis of how uϕ of Force is valued, based upon the approach to 'high' symmetrical applicative constructions in McGinnis 2001. Following McGinnis, I have argued that ApplP 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 25, questions accordingly arise about the nature of DO raising across the IO, mediated by Appl. Given that this movement feeds pronominalization and passive, should these be viewed as A' processes in Lubukusu? Alternatively, should the status of Appl 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 DO raising across the IO is in fact A-movement. We saw in §2.5.3 that DO and IO are symmetrical for pronominalization and passive. Many applied or causative verbs also allow symmetrical ordering and binding

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[36] 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.

possibilities among the two post-verbal objects. I show this in (63) and (64). When the IO

precedes the DO as in (63a), a universal quantifier in the former can bind a pronoun in the

latter as expected (see (63b) and (64a)). But when the DO precedes the IO as in (63c), a

universal quantifier in the DO can bind a pronoun in the IO (see (63d), (64b), and (65)).

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.

(63) 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'

(64) 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'

(65) a. ...[vP SU v+Appl+read [ApplP every author [Appl' <Appl>[vP V his book]]]]   = (64a)
    b. ...[vP SU v+Appl+read [ApplP every book [ApplP its author [Appl' <Appl> [vP ...]   = (64b)

If raising of the DO across the IO were A'-movement, we would expect (63d) and (64b) to

be unacceptable like the bound reading in the English *Every paycheck, I gave its owner.*

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:

(66) Hypotheses consistent with A-movement of DO over IO in high Appl constructions

    a. Appl has an extra edge feature but it is not a phase head.

    b. A position created by the edge feature of a phase head is not always an A'-position, contra Chomsky (2008).

    c. '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 (66b) seems the most promising. Arguing against (66a) 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 (66c) 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 (67a) 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 (67a), Carstens (2005, 2010) proposes that the DO first moves to an outer Spec, vP (see (67b)). If outer Spec, vP were always and only an A' position, A-movement through it to Spec, TP would be impossible.

(67) a. Maku ta-ma-ku-sol-ag-a   mutu   weneene.
       6beer NEG-6SA-PROG-drink-HAB-FV lperson 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 [$_{vP}$ OB [$_{vP}$ SU [$_{v'}$ v [$_{VP}$ V <OB>]]]] → [$_{TP}$ OB T [$_{vP}$ <OB> [$_{vP}$ SU [$_{v'}$ v [$_{VP}$ V <OB>]]]]]

I conclude that (66b) is correct.[37] 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 discussion of Lubukusu inversion constructions).

2.8 Complex NPs and RTO: delay and A'-opacity
2.8.1 Introduction

This section takes a brief look at Lubukusu CA in two additional constructions: complex

NPs (CNPCs) and Raising-to-Object (RTO). CNPCs argue that DELAYED VALUATION processes

are not initiated until the the next higher phase, at which point an edge feature of v always

raises ForceP to outer Spec, vP. 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 citations in §2.8.3).

2.8.2 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.

(68) 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 approach to the subject orientation. For Diercks

2011b it entails that the null operator must raise from the complex NP to T, and for Diercks,

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[37] In §2.3 I argued that Fin is non-phasal to account for raising from tensed clauses headed by *mbo.* Adoption of (66b) 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.

Putnam, & van Koppen (2011/2012) C itself must so raise.[38] For my own account to work,

ForceP must move out of the complex NP. Questions arise as to how and why this happens.

I propose that neither N nor D in Lubukusu has a phasal edge feature.[39] Given this,

(68) is not problematical for (12), my initial hypothesis for the mechanics of DELAYED

VALUATION. (12) predicts that uϕ of Force, lacking a match in its c-command domain due to

Transfer of the embedded clause, must raise to c-command a potential source of valuation.

The edge feature of v* presents the first opportunity for this to happen.

(12) 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.

(68) 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 §3 and §4.2 that, in

addition to its conceptual merits, this kind of valuation is well-motivated by patterns of

German and English Case. The question then arises as to why uϕ of agreeing C cannot be

valued downwards, in situ, by the head noun *likhuwa* – 'word' in (68).

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.

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[38] 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.
[39] 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.

(15)/(15R) allow for in situ valuation when an edge feature is unavailable, but apparently v* always has an edge feature (see Roberts 2010 for discussion). Hence there can be no valuation process like (69a) due to "kicking in" of v's phasal edge feature as shown in (69b).

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

$[_{vP}\ v\ [_{VP}\ V\ [_{DP}\ D...\ [_{NP}\ N\ [_{ForceP}\ Force\ _{u\Phi}...]]]]]$

a potential match under locality

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

$[_{vP}\ [_{ForceP}\ Force_{u\phi}\ [_{vP}\ SU\ v\ [_{VP}\ V\ [_{DP}\ D\ [_{NP}\ N\ <[_{ForceP}\ Force_{u\phi}\ ...]>]]]]]$

Many interesting issues arise in relation to these facts and the hypothesized non-phasal status of D, but they lie outside the scope of this paper. I leave them to future research.

2.8.3   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. (70) 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 §2.4 and (36), repeated below).

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

(36) 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 A-movement is not really possible out of (phasal) CPs. He proposes that there are two varieties of RTO, depending on how this problem is circumvented. One type Merges the apparent object at the left-peripheral phase-edge and A-moves it into the higher clause. This derivation can feed subsequent A-processes including passive. The second variety of RTO involves A'-movement from within the source clause to the CP phase edge. [40] This canot feed subsequent A-movement.

Since Lubukusu disallows A-movement across agreeing C to subject position, I assume cases like (70) involve the A' movement variety of RTO. I proposed in §2.4 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 (70) lands in outer Spec, IntP (see (71a)). Under the standard assumption that outer Spec, vP can serve as an A'-position, we predict the possibility of RTO from Spec, Int to Spec, vP and hence that the object can precede agreeing C. [41] In contrast, movement via Spec, Int to land in the matrix Spec, TP can only be illicit "improper movement", deriving the infelicity of agreeing C in (36a,b). This is precisely the kind of asymmetry that Bruening's approach is designed to capture.

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[40] Following Carstens & Diercks (to appear b) an additional possibility is the existence of non-phasal CPs, in Lubukusu, these are *mbo* clauses out of which A-movement can proceed (see (36) and discussion in §2.4).
[41] 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 19. I assume that whether Spec, vP "counts" as A- or A'- depends on whether its occupant moves from an A or A' position.

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

[$_{vP}$ v…[$_{ForceP}$ Force [$_{IntP}$ <Barak Obama> Int [$_{FinP}$ …<Barak Obama> will.win]]]]
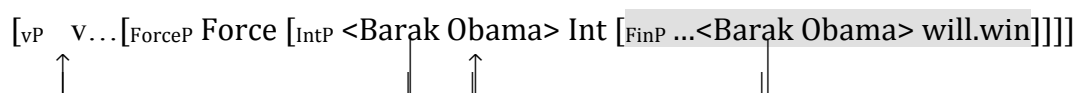
b. *A-movement across ForceP to matrix Spec, TP is illicit "improper movement"*:

* [$_{TP}$ Michael T …seems… [$_{ForceP}$ Force [$_{IntP}$ <Michael> Int [$_{FinP}$ …<Michael> V]]]]
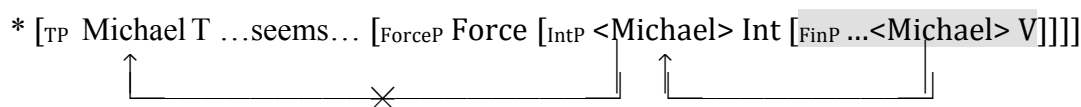
In contrast, A-movement from a clause headed by the non-agreeing complementizer *mbo* in (36) does not cross a phase boundary, so it can licitly land in Spec, TP.

I turn now to the question of how uɸ 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 *engu grjóti* - 'no rock' in (72) is an A'-operator. As indicated, the subject raises to Spec, TP across it (see also Carstens & Diercks to appear on A'-opacity effects in Lubukusu).

(72) [$_{TP}$ Strákarnir$_2$ höfðu [engu grjóti]$_1$ [$_{vP}$ t$_2$ [$_{VP}$ hent *t*$_1$ 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. uɸ of Force is clearly part of the system of A-relations, given its sensitivity to subjects. A'-opacity therefore accounts for why the RTO expressions are ignored. The precise configuration under which uɸ of ForceP agrees with the subject depends upon whether v* has one or two phasal edge features, anticipating the liberalized mechanics of to be argued for in §3 and §4. I illustrate the logical possibilities in (73), and leave the choice among them open.

(73) *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 two phasal edge features*

        [$_{vP}$ [$_{ForceP}$ Force$_{u\phi}$]] [$_{vP}$ Barak Obama [$_{vP}$ SU v [$_{VP}$ want <[$_{ForceP}$ Force$_{u\phi}$]>]]]] *OR*

    b. *"Reverse agree" if v has only one phasal edge feature*

        [$_{vP}$ Barak Obama [$_{vP}$ SU v [$_{VP}$ want <[$_{ForceP}$ Force$_{u\phi}$]>]]]]

A question arises as to why uϕ of ForceP would be sensitive to A- and not A'- expressions,
under scenario (73a). As is common in Bantu, agreement with Lubukusu operators appears
on C heads involved in A'-movement (see (74) from Carstens & Diercks to appear).

(74) *Agreement with operators on C 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'

Given this, I suggest that the sensitivities of probe features are determined by their
intrinsic properties and initial Merge locations. Thus it is the phase heads involved in
moving operators (Int, or Focus) which agree with them once they are in A' positions.

2.9   Summary

To address a theoretical anomaly in the notion of goal features like uCase, §1.1 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 CA 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 §2.8.2 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 in (16)). §2.8.3

proposed that the absence of valuation for uϕ of Force by an RTO expression follows from

the fact that, to move across agreeing C, this expression must first undergo A'-movement to

the phase edge, rendering it opaque to uϕ of Force. With these topics addressed, my

treatment of Lubukusu CA is complete.

3.   Mechanisms of delayed Case valuation
3.1   Introduction

§2 argued that agreement can obtain DELAYED VALUATION by raising to c-command an

"active" expression which bears intrinsic ϕ-features. In this section I turn to the issue of

how uCase obtains DELAYED VALUATION. While Lubukusu CA has argued for (15i), Case

phenomena motivate the directionality-free alternative in (15ii).

(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.

3.2   German nominative in Bobaljik & Wurmbrand 2005

Bobaljik & Wurmbrand 2005 (Henceforth B&W) demonstrate that in German restructuring

contexts, the Case of an embedded object is determined by the matrix verb. If the verb is

active, the object is accusative (75). If the matrix verb is passive (76) the object of the

restructuring verb is nominative although this verb bears no passive morphology itself.

(75) 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*

(76) 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 then provide scopal evidence that nominative DPs in restructuring infinitives are not uniform in location. In (77), 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, (77) means that no windows were remembered to be closed. In contrast, in the simple passive (78) and in (79) where the restructuring verb is a modal, a narrow scope reading is preferred for the nominative.

(77) weil alle Fenster   zu schließen vergessen wurden
     since all windows(NOM) to close   forgotten were
     'Since they forgot to close all the windows   ∀ » forget; *forget » ∀

(78) 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'   ∃»∀/?∀»∃

(79) 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'   ∃»∀/?∀»∃

B&W argue for the generalizations in (80) and (81) (and Cable to appear supports (81) with evidence from Luo, another language that lacks obligatory EPP of T). I reproduce their analysis of (78) and (79) in (82) and their analysis of (77) in (83).[42]
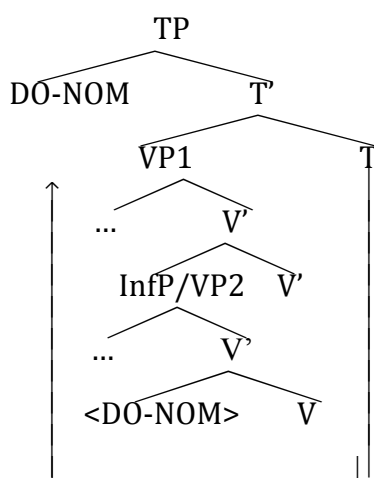
(80) A DP may not be interpreted (for scope and binding) in a position lower than the domain in which it undergoes Case/agreement-checking = its *agreement domain*.

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

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[42] As noted in §2.4.4 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 (82) and (15ii).

(82)   Representation of (78) and (79): in situ valuation for DP$_{nom}$

```
            TP
      Ø            T'
           VP           T
    IO-DAT     VP
          DO-NOM    V
             ↑_____|
```
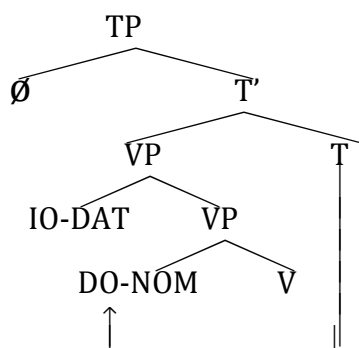
(83)   *Representation of (77): Case driven movement and ex situ valuation of DP$_{nom}$*

```
             TP
   DO-NOM          T'
            VP1           T
       ...       V'
          InfP/VP2   V'
          ...      V'
             <DO-NOM>     V
```

B&W thus provide a strong and persuasive argument that successful valuation of a DP's uNom does not require raising 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 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 explains 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 that the VP complement to a lexical restructuring verb in German be viewed as a phase in the sense of a Spell Out unit. [43]

4. Case and agreement viewed together: motivating A-movement
4.1 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 IO 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 (78) and (79)/(82), the absence of an EPP feature does not cause any problem because in situ valuation is possible. In (77)/(83), because in situ

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[43] 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 §4.2).

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

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

(84) 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.

(84) suggests that only locality between two features matters for Match and Agree to

proceed. If we determine that (84ii) is viable, and define locality as closest c-command, we

can collapse (84i,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 §2 that Lubukusu ForceP will continue to raise after v* is Merged because v* has

an edge feature, as is consistent with (16), hence rejecting the valuation scenario in (56) in

favor of (57) (both are reproduced below). The argument was motivated by the

"imperfection-driven" approach stated in (16) and supported by CNPC data in §2.8.2.

(56)   *Hypothesis #1: Match with iϕ c-commanding uϕ*

        [$_{vP}$ SU [$_{v'}$ v [$_{ApplP}$ ForcePu$_\phi$ [$_{ApplP}$ IO [$_{Appl'}$ Appl [$_{VP}$ ...]]]]]]

(57)   *Hypothesis #2: Match with uϕ c-commanding iϕ*

        [$_{vP}$ ForcePu$_\phi$ [$_{vP}$ SU [$_{v'}$ v [$_{ApplP}$ <ForcePu$_\phi$> [$_{ApplP}$ IO [$_{Appl'}$ Appl [$_{VP}$ ...]]]]]]]

But consider a hypothetical case such as (85) 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 (85)

should be ruled out. Bošković 2007 labels Spec, YP in (85) 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 (85)?[44]

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

$$[_{XP} \ X_{uF1} \ [_{YP} \ Z_{uF2} \ [_{Y'} \ Y \ [_{WP} <Z_{uF2}> \ ...]]]$$
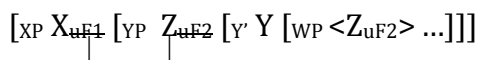
I suggest that (85) might be precisely the situation under which a subject's Case is valued in

English [*for…to*] infinitives such as (86) and (87). 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.[45] (86)

demonstrates with a pronominal theme argument of a passive verb raising to Spec of the

infinitival TP where *for* values its Case as accusative. (87) illustrates the analysis for a

transitive verb with an agent subject.

[44] An anonymous reviewer correctly points out that this is the configuration of WG CA, since C agrees with SU raised from Spec, vP to Spec, TP. What is not clear in WG CA is what "goal" feature of SU interacts with agreeing C. Perhaps it is Nominative, able to remain active until completion of the CP phase (see discussion of (88) on accusative valued by Arabic C). I leave this question about WG CA aside for future research.
[45] 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 show up when affixation is impossible. I leave aside the relationship of this question to the issue of *for* and Case.

(86) 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$_{\text{uAcc}}$ [$_{TP}$ 3S$_{\text{uCaseAcc}}$ to be [$_{vP}$ v [$_{VP}$ arrested <3S$_{uCase}$>]]]]…

(87) 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$_{\text{uAcc}}$ [$_{TP}$ Mary$_{\text{uCaseAcc}}$ to [$_{vP}$ <Mary$_{uCase}$> v [$_{VP}$ invite John]]]]

(86) and (87) argue that raising to be closest c-commandee as in (85) 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.[46] With respect to the Activity Requirement, I further assume that *for* has uϕ 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 (88a) and the accusative subject in (88b). 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).

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[46]Alternatively *for* has no edge feature (hence the **[for t]* effect 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.

It does however strongly suggest that valuation is not contingent upon the valuee's c-commanding the valuer, hence weakening the motivation to reject (85).[47]

(88) 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 c-command a 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 first Merge. But in DELAYED VALUATION, there is no obvious reason why this downward bias should persist.

Bošković (2007) discusses two apparent counter-examples to the hypothesis of valuation in (84ii) and (85) 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 (89a). He next concludes from the ill-formedness of (89b) that raising the object of *conjecture* or *remark* to Spec of a CP embedded under an accusative Case-licenser does not remedy the problem (see (89c)).

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

   c. *I [$_{vP}$ v [$_{VP}$ know [$_{CP}$ what [$_{TP}$ John remarked <what>]]]]
                                                                      Case-valuation fails

Bošković also argues that the unacceptability of (90a) is due to the fact that ECM-type Case-licensing is unavailable with such verbs as *wager*. W*h*-movement of the embedded subject

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[47] In Arabic, it is well-known that when a lexical subject is post-verbal, number agreement on V is invariantly singular. Melebari & Seely 2011 among others argue that a null singular expletive is probed by T and raises to Spec TP in VS. This refutes Zeijlstra's (2012) claim that Arabic motivates universal "Reverse Agree".

yields an improved result (see (90b)), and Bošković proposes that this is because Case-valuation can only be obtained if a DP raises to c-command the Case-licenser. Hence *who* obtains Case through A'-movement to the higher Spec, vP en route to Spec, CP (see (90c)).

(90) 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 thought-provoking arguments, but I think insufficient basis to conclude that the relationship for ex situ valuation is narrowly directional rather than purely local. While a full treatment lies outside this paper's scope, I will sketch out alternative approaches.

First, a different interpretation of (89) might be that *remark* and *conjecture* simply do not c-select DP complements. No strategy for Case-valuation of a DP complement can overcome this problem, and (89) is therefore irrelevant to the issues at hand.

Second, Postal (1974), Pesetsky (1992), Ura (1993), and Bošković (1997) show that *wager*-class verbs have a set of curious properties beyond the simple contrast in (90a,b). Like ECM verbs, they allow passivization and pronominalization of the subject of their infinitival complement (see (91a,b)). A full DP subject is more felicitous if it bears some thematic relation to the higher *wager*-class verb (91c). I add to these prior observations my judgment that an *in situ wh*-subject is better than a name (compare (91d) with (90a)).

(91)　　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 (90b) sketched in (90c) 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 Case-valuation to closest c-commandee. 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.

5. 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 (92a-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 uϕ agrees with the subject

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(92d). For Bejar & Rezac, this indicates a second cycle of probing under *cyclic expansion*

(see (93)). 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.[48] 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.

(92) a. ikusi z̲-in-t-u-da-n   c.   ikusi n̲-ind-u-zu-n   [Basque]
         seen 2-X-PL-have-1-PST   seen 1-X-have-2- PST
         'I saw you̲.'   'You saw me̲.'

    b. ikusi n-ind-u-en   d. ikusi n̲-u-en
        seen 1̲-X-have- PST   seen 1-have- PST
        'He saw me̲.'   'I̲ saw him.'

(93) 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 uφ probe. Given cross-linguistic

evidence that an expression must have a uF to be "active" in agree relations, the DPs that

can value the uφ probe qualify as probes themselves as I have argued previously in this

paper. Basque and other agreement displacement languages thus can be taken as

supporting evidence that the positions of would-be probe and goal can be reversed; goals

are probes. 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. I suggest that it is preferable to analyze agreement

displacement in this way 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.

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[48] 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).

6.   XPs as probes

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 arises 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 (94) is common and well-motivated cross-linguistically:

(94)   *Match and valuation where DP's uCase is the "probe"*

   $[_{TP} DP_{uCase} [_{T'} T_{uNom} ...]]$

In addition, we have seen that a unified account is possible for Case and valuation $Force_{u\phi}$ under the assumption that ForceP raises and probes (see (51), repeated below).

(51)   *After ForceP raises again, Agree ($ForceP_{u\Phi}$, SU) succeeds*

   $[_{vP} ForceP_{u\phi} [_{vP} SU [_{v'} v [_{ApplP} <ForceP_{u\phi}> [_{ApplP} IO [_{Appl'} Appl [_{VP} ...]]]]]]]$

In languages with grammatical gender, it is common for adjectives to show "concord" in gender and number. Under the traditional view of adjectives as heading AP adjuncts[49] to NP (or nP), concord entails that XPs can probe (see (95-96)).[50] Building on Carstens 2000, 2008, 2010, 2011 I propose (97) (raising N(P) derives surface word orders).

(95) a kitabu   [$_{AP}$ *ki*zuri sana]   [Swahili]
         7book   7good very
         'a very good book'

      b. mzigo   [$_{AP}$ *m*zito   mno]
         3load   3heavy too
         'too heavy a load'

(96) a. la   muchacha   [$_{AP}$ muy bonit*a*]   [Spanish]
         the.fem girl.fem   very pretty.fem
         'the very pretty girl'

      b. une   voiture [$_{AP}$ plus   vit*e*]   [French]
         a.fem   car.fem   more fast.fem
         'a faster car'
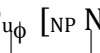
(97)   a. *AP contains no source of valuation for A's uϕ*

         [$_{AP}$ A$_{uϕ}$ ...]

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

         [$_{NP}$ AP$_{uϕ}$ [$_{NP}$ N$_{iϕ}$]]

See also §2.2 and Carstens & Diercks to appear a for an XP-probing analysis of Lubukusu agreeing 'how'.

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[49] 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 §2.5.4 and Carstens 2010, 2011.
[50] Recall from §2.5.4 that the grammatical gender of nouns is an "activity" feature, valued but uninterpretable. As such it comes into the syntax with a value and hence it can participate in multiple probe-goal relations.
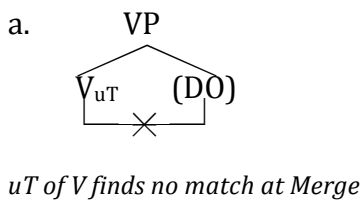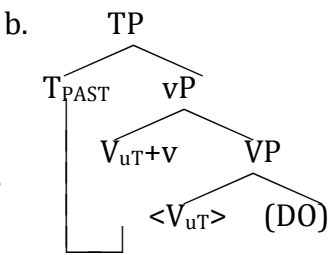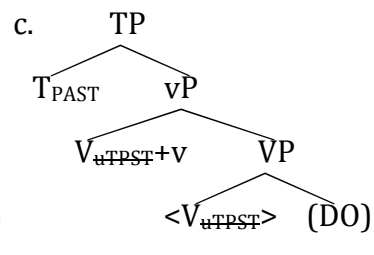
7.   A note on Tense features and "Reverse Agree"

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 and Zeijlstra argue that the Minimalist "downwards' probing approach to Agree should be rejected in favor of "Reverse Agree."

(98)   a. $T_i...V_{uT}$ → $T_i...V_{\overline{uT}}$

        b.   Reverse Agree: universally, valuation obtains when iF closest c-commands uF
                  (adapted from Wurmbrand 2011, Zeijlstra 2012)
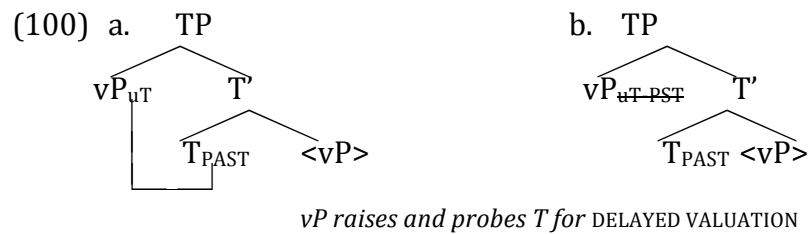
I have argued that uF of X must probe the c-command domain of X upon Merge. If there is no source of valuation, X may be valued in situ or XP may raise and probe. The choice depends upon whether an edge feature is available and, if one is absent, whether a source of valuation is located in the same phase 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.

(99)   a.   VP   b.   TP   c.   TP

uT of V finds no match at Merge

in situ DELAYED VALUATION *for uT of V*

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

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in §6; 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 (100):

(100) a.   TP

    vP$_{uT}$ T'

        T$_{PAST}$ <vP>

b.   TP

    vP$_{\text{uT PST}}$ T'

        T$_{PAST}$ <vP>

vP raises and probes T for DELAYED VALUATION

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.

8. 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 complemetizer agreement, or German nominative valuation in more

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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 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 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. Case-valuation in English [*for…to*] infinitives is an example.

In the final sections of the paper I sketched out how my approach can extend to explain agreement displacement, concord, 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 CA; and agreement of the Lubukusu vP-adjuct '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 note 18 (see Bošković

2007,Stepanovic & Takahashi 2001, Legate 2005 among others).

But some of the factors in the above-cited works advocating "Reverse Agree" do indeed

warrant such an 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.

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