Information structure is syntactic: Evidence from Bantu languages

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Abstract

The status of information structure in syntax has long been an area of theoretical concern. In recent work, Kratzer and Selkirk (2020) argue that features for focus and givenness are syntactic, even in a language like English where they are realized via intonation. This paper provides additional evidence for this conclusion from a distinct empirical domain, the morphosyntax of various Bantu languages. I extend a proposal that focus and givenness features may be represented on a functional projection in the middlefield of the clause (ComP, for Comment Phrase). This was first advanced by Sikuku and Diercks (2022) to account for object marking properties in Lubukusu, and is extended here to account for object marking across a variety of languages. I then show that this same explanation can account for a number of apparently unrelated puzzles in Zulu and Ndebele. The paper therefore provides a unifying analysis of a broad range of phenomena, and in the process re-affirms the conclusion drawn by Kratzer and Selkirk (2020): information structure is indeed syntactic.

1   Introduction

The term "information structure" refers to concepts like focus, topic, givenness, and contrast. The idea that information structural concepts like focus and givenness would need to be represented syntactically is relatively uncontroversial for some languages. For example, Kwa languages have dedicated left-peripheral focus positions accompanied by an overt focus marker.

(1)   Gungbe (Kwa, Gbe, Benin) (Aboh, 2004, 237)

    a.   Pragmatically neutral declarative

        Sέná xìá   wémà
        Sena read-PFV book

        'Sena read a book.'

    b.   Object Focus

        wémàk$_k$ *(wὲ)   Sέná xìá t_k
        book   *(FOC) Sena read-PFV

        'Sena read A BOOK.'

Focused phrases in Gungbe raise to a left-peripheral position, appearing before a morpheme that is reasonably glossed as a focus marker, which is the analysis of Aboh (2004).

(2)
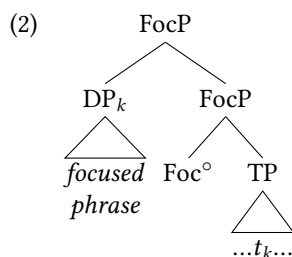
The use of syntactic projections to grammatically encode information structural concepts in the left periphery of the clause is now highly familiar, largely credited to Rizzi (1997), based on work on the left periphery in Italian. Despite the Minimalist unease at times with the cartographic enterprise, the use of syntactic projections for notions like "Topic" and "Focus" is widespread among syntacticians. Nonetheless, as pointed out by Kratzer and Selkirk (2020), "[d]espite many years of research, there is no common ground on how to identify [information structure] concepts, what their place in grammar is, or whether there is any theoretical unity or value to them" (Kratzer and Selkirk, 2020, 1). This is perhaps no surprise given 1) the complexity of the empirical domain, and 2) the fact that

in the most well researched languages (English and other western European languages) these phenomena are least-transparently syntactic.

Kratzer and Selkirk (2020) claim that even in English—where focus and givenness are largely realized via intonation—givenness ([G]) and focus/contrast ([FoC]) are best analyzed via syntactically-represented features. In this paper, I provide additional evidence in support of this conclusion based on a number of relatively recent studies on the morphosyntax of Bantu languages. Specifically, I argue for the syntactic nature of information structure from a distinct grammatical domain, the morphosyntax of agreement. One of the more novel components of the proposal by Kratzer and Selkirk (2020) is that information structure features may participate in Probe-Goal valuation operations, like other morphosyntactic features (for somewhat similar proposals and/or relevant phenomena, see van der Wal 2022, Ostrove 2018, Mursell 2021, Kallulli 2000, 2001, Kishimoto 2018, Zeller 2008, Zeller 2015, among others). The main theoretical contribution is to affirm Kratzer and Selkirk's proposals, and to insist on the retention of their proposals in the theoretical milieu.

My proposals centrally build on the analysis of Lubukusu object marking proposed by Sikuku and Diercks (2022), which incorporates focus and givenness in explaining the distribution of object marking. On their account, a functional projection at the edge of vP (which they call ComP) bears probes related to focus, givenness, and φ-valuation. In this paper I show that the analysis Sikuku and Diercks (2022) advance there can be extended to object marking constructions in other languages, suggesting a broad cross-linguistic pattern. Beyond that, I show how this approach offers a novel analysis of a number of documented intersections of syntax with information structure in Bantu languages, proposing a semi-novel analysis of Zulu object marking (§3.5), obligatory vP focal domains, conjoint/disjoint patterns (§4), and the distribution of augmentless noun phrases (§5) in southern Bantu languages. And all of this supports the ultimate theoretical conclusion: information structure must necessarily be syntactically represented, as Kratzer and Selkirk (2020) claim.

2 Information Structure as Syntactic: Kratzer and Selkirk (2020)

Kratzer and Selkirk (2020) argue that a single [F] feature marking focused constituents is insufficient to capture the distribution of pitch accents in English focus constructions. Instead, they argue that information structure is encoded in Standardized American and British English by two kinds of features: [FoC] features, which encode the notion of contrast, and [G] features for givenness, which encode the notion of discourse-familiarity. Arguing on the basis of default prosody in all-new contexts, Kratzer and Selkirk (2020) make the case that "[t]]here is no feature for newness in English, nor is there a feature that lumps together FoCus and newness" (Kratzer and Selkirk, 2020, 15). Newness in their system is simply unmarked (featurally-speaking). Rather than re-litigating their proposals here, I simply outline their mechanics and discuss their application, in order to bring our attention to the contributions of the current paper.

On their account, a [G] feature marks a constituent as discourse-familiar; they define givenness as an instance where calculating alternatives yields a singleton set. On their notation, the denotation with an [A] annotation captures the alternatives denoted by a focused element.

(3) **Givenness** (Kratzer and Selkirk, 2020, 34)
     An expression α is Given with respect to an individual, property, or proposition α in C iff $[\![\alpha]\!]_{A,C} = \alpha$.

According to Kratzer and Selkirk (2020, 34) "The [G]-feature introduces a Givenness requirement that has to be satisfied by the utterance context, regardless of how deeply embedded the feature may be. [G] does not contribute anything to the truth-conditional content of the expressions it attaches to, nor does it affect the computation of alternatives." They go on to say that "[t]he appropriateness of [G] does not depend on the mutual beliefs or expectations of discourse participants. All [G] cares about is whether something has been said before or is otherwise contextually salient" (Kratzer and Selkirk, 2020, 34).[1]

As for focused elements, Kratzer and Selkirk (2020) claim that a [FoC] feature creates a contrastive focus interpretation (not being involved with 'newness' focus). They implement this with a relatively standard Alternative Semantics (Rooth, 1992, 2016). On this approach, a lexical item has both an ordinary semantic denotation, as well as

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[1]For related discussion, see Rochemont (2016) and Büring (2016), among others.

a focus denotation associated with a set of alternatives to the referent of the focused element. Focus is specifically licensed by a discourse context that contains (or entails) the existence of one of the alternatives from that set (see Kratzer and Selkirk 2020, Wagner 2021, Rooth 2016, and Büring 2016 for overviews and discussion). To take an example, an English sentence like *MAYA ate the rice* is not licit out of the blue, but is readily available when some other element from the set [x ate rice] is available in the discourse context. So that sentence is very natural in this exchange: *A: Alex ate the rice. B: No, MAYA ate the rice.*[2]

Following a long tradition originating with Rooth (1992), Kratzer and Selkirk (2020) assume that [FoC]-marked constituents are obligatorily c-commanded by the ∼ (squiggle) operator. "Like [G], the meaning contribution of the ∼ operator is expressive (use-conditional). Also like [G], the ∼ operator establishes an anaphoric relation to a discourse referent" (Kratzer and Selkirk, 2020, 35). This requires that a discourse context exist that contains some alternative of the focused interpretation (e.g. *Alex ate the rice* licenses *No, MAYA ate the rice*).

They also suggest (without in-depth exploration) that the relationship between the operator and the [Foc]-marked element can be implemented via an Agree relation: the ∼ (squiggle) operator bears a [uFoC] feature that requires valuation by a [FoC] feature, and probes its c-command domain for a [FoC] feature. The result is a configuration much like [wh]-constructions, with potential long-distance feature valuation relationships possible between the operator and the element marked with the interpretable version of the feature.

This syntactic approach to the components of information structural (namely, focus and givenness) will surely be hotly debated, if for no other reason than that the bulk of those working on these issues in English have understandably come from the fields of semantics and prosody/phonology. Focus and givenness are realized by intonation in many Englishes, and the long history of work on the issue understandably pays most attention to the semantics and the intonation. What I propose (following Kratzer and Selkirk 2020) is that it is proper to conceive of features for focus and givenness as syntactic in nature, participating in syntactic processes and implemented with the usual syntactic mechanics.

3   Object marking inherently linked with information structure

It is becoming clear that givenness and focus are central to the analysis of object marking (OMing) in many languages, especially the ability of object markers/clitics (OMs) to co-occur with (i.e. *double*) lexical DP objects.[3] In this paper I attend to three languages where these issues are among the best-researched: Zulu, Lubukusu, and Cinyungwe.

3.1   Zulu OM, linked with focus/givenness

There is a long history of research on object marking in Zulu (Bantu, South Africa) (Adams, 2010; Buell, 2005, 2006; Cheng and Downing, 2009; Halpert, 2012; Van der Spuy, 1993; Zeller, 2012, 2014, 2015, among others).[4] Zulu OMing shows what has often been termed "symmetrical" properties in the literature on Bantu languages (cf. Bresnan and Moshi 1990, and much subsequent work). Some languages only allow a single object (the structurally highest object) to carry object properties like being OMed on the verb, or being promoted to subject in a passive: these are termed asymmetrical languages. Symmetrical languages, on the other hand, allow structurally lower objects to do so as well. With respect to object marking, then, Zulu is symmetrical, illustrated in (4) where the overt DP object, if present, is at the right edge.

(4)   a.   U-Langa   u-phek-el-a   u-mama   i-nyama.
            AUG-1a.Langa 1SM-cook-APPL-FV AUG-1a.mother AUG-9.meat

            'Langa is cooking meat for mother.'

      b.   U-Langa   u-[m-]phek-el-a   i-nyama   [(u-mama)].
            AUG-1a.Langa 1SM-1OM-cook-APPL-FV AUG-9.meat AUG-1a.mother

'Langa is cooking meat for her (mother).'

c. U-Langa u-[yi-]phek-el-a u-mama [(i-nyama)].
   AUG-1a.Langa 1SM-9OM-cook-APPL-FV AUG-1a.mother AUG-9.meat

   'Langa is cooking it for mother (the meat).'

The predominant proposal has been that overt postverbal objects that are OMed on the verb are in fact dislocated from their base position, appearing outside the *v*P ([Van der Spuy 1993](#) et seq.). For example, OM-doubled arguments occur to the right of manner adverbs:

(5) a. Si-bon-a i-n-kosi kahle.
       1SG.SM-see-FV AUG-9-chief well

       'We are seeing the chief well.'

    b. *Si-[yi-]bon-a [i-n-kosi] kahle.
       1SG.SM-9OM-see-FV AUG-9-chief well

    c. *Si-bon-a kahle i-n-kosi.
       1SG.SM-see-FV well AUG-9-chief

    d. Si-[yi-]bon-a kahle [i-n-kosi].
       1SG.SM-9OM-see-FV well AUG-9-chief

       'We are seeing him well, the chief.' ([Zeller](#), [2015](#), 20)

Assuming that manner adverbs adjoin to *v*P, this suggests that OM-doubled arguments move outside *v*P:

(6)   . . .siyibona kahle]$_{vP}$ . . . inkosi = ([5d](#)) ([Zeller](#), [2015](#), 20)

Another diagnostic comes from the properties of focused phrases in Zulu. It is well-established that focused phrases in Zulu must appear *v*P-internally ([Buell](#), [2008](#); [Zeller](#), [2015](#); [Cheng and Downing](#), [2009](#); [Zeller](#), [2021](#); [Carstens and Zeller](#), [2020](#), among others).
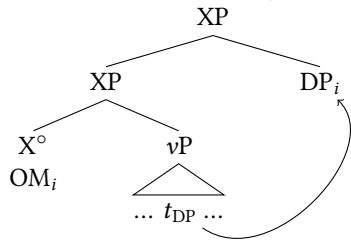
(7) a. Ku-sebenz-e bani?
       17.EXPL-work-PST 1a.who

       'Who worked?'

    b. *U-bani u-sebenz-ile?
       AUG-1a.who 1.SM-work-PST

       ([Zeller](#), [2015](#), 20)

Since OM-doubled phrases must be outside *v*P and focused phrases inside *v*P, OM-doubling of focused phrases is impossible.

(8) a. U-cul-e **i-phi i-n-goma**]$_{vP}$?
       2SM-sing-PST 9-which AUG-9-song

       'Which song did you sing?'

    b. *U-[yi-]cul-ile]$_{vP}$ [**i-phi i-n-goma**]?
       2SM-9OM-sing-PST 9-which AUG-9-song

       ([Buell](#), [2008](#), (5))

[Zeller](#) ([2015](#)) argues that the appropriate analysis of these patterns is that object markers arise via an agreement relation with a functional head on the edge of *v*P, which triggers movement of the relevant object to a right-facing specifier of the functional projection. ([9](#)) sketches this analysis. The typical assumption for Bantu languages (following [Julien 2002](#)) is that the verb raises to the middlefield of the clause (above XP in ([9](#))); I omit this movement from diagrams in this paper for visual clarity.

(9) Zeller's (2015, (65)) analysis of Zulu object marking

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                    XP
                  /    \
               XP       DP_i
              /  \        ↑
           X°     vP       |
           OM_i   /\       |
                 /  \      |
               … t_DP …────┘
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      Zeller (2015) argues that the relevant feature triggering this Agree relation is an A'-feature related to the discourse status of objects that undergo this short right-dislocation. Zeller proposes that this is an *anti-focus* feature. This explains, among other things, why Zulu object marking is 'symmetrical' (i.e. either object of a ditransitive can be OMed): the anti-focus Probe doesn't necessarily find the closest DP, but instead finds the closest anti-focus-marked DP. Therefore, basic principles of relativized minimality explain this apparently non-local Agree relation. We will return to Zulu object marking in §3.5, proposing a modest revision of this analysis based on the Lubukusu proposals below.

3.2 Lubukusu OM, linked with focus/givenness

Sikuku and Diercks (2022) argue that there are three main interpretive components of a typical Lubukusu (Bantu, Kenya) OM-doubling construction:

(10) Necessary Conditions for OM-doubling in Lubukusu
    1. A focused element appears inside the verb phrase, or the verb phrase itself is focused.[5]
    2. The focused element must be especially noteworthy or significant: Sikuku and Diercks (2022) analyze this as *mirative focus.*
    3. The OM-doubled object itself must be discourse-given.

      OM-doubling can result in emphasis on another object, an adjunct, or the entire predicate. Question and answer congruence is one natural way to establish a context that facilitates this focus reading. In (11) and (12) the OM-doubling construction places emphasis on some element other than the OM-doubled object itself: in (11) the recipient object is doubled and the theme object is emphasized, and in (12) the direct object in a monotransitive is doubled, emphasizing the manner adjunct.

(11) Lubukusu OM-doubling: Direct Object Focus
Q: Ba-ba-ana   ba-a-kes-el-a   ba-b-ebusi siina?
    2-2-children 2SM-PST-harvest-APPL-FV 2-2-parents what
    'What did the children harvest for their parents?' *OK without verum*

A: Ba-ba-ana   ba-a-⌈ba-⌉kes-el-a   ⌈ba-b-ebusi⌉ **ka-ma-indi**
    2-2-children 2SM-PST-2OM-harvest-APPL-FV 2-2-parents 6-6-maize
    'The children harvested MAIZE for their parents.' (Sikuku and Diercks, 2022)
    some additional context required, see below

(12) Lubukusu OM-doubling: Manner Adjunct Focus
Q: w-a-teekh-a   ka-ma-kanda o-rieena ?
    2SG-PST-cook-FV 6-6-beans   2SG-how
    'How did you cook the beans?'

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[5]More specifically, the focus must fall within a structure that is slightly larger than the *v*P, including a projection where discourse-prominent material can scramble to. I abstract away from that for the purposes of our discussion here.

A: N-a-[ka-] teekh-a [ka-ma-kanda] **bwaangu**
1SG.SM-PST-6OM-cook-FV 6-6-beans quickly

'I cooked the beans QUICKLY.' ([Sikuku and Diercks, 2022](#))
some additional context required, see below

Contrastive focus also readily facilitates OM-doubling constructions, and in (13) the OM-doubling construction places emphasis on the entire predicate.

(13) Lubukusu OM-doubling: Predicate Focus

Ba-ba-ana ba-a-[bu-] **ly-a** [**bu-suma**] , se-ba-a-timany-a chi-ngokho ta.
2-2-children 2SM-PST-14OM-eat-FV 14-ugali NEG-2SM-PST-chase-FV 10-chickens NEG

'The children ATE UGALI, they didn't chase the chickens.' ([Sikuku and Diercks, 2022](#))
some additional context required, see below

[Sikuku and Diercks](#) ([2022](#)) show that OM-doubling is inherently focus-linked: any OM-doubling construction is associated with a focused interpretation of some element within the verb phrase, or on the verb phrase itself; this focused element must have an appropriate discourse antecedent in order to be felicitous, as is always the case with focus. Likewise, [Sikuku and Diercks](#) ([2022](#)) show that OM-doubled objects must be interpreted as discourse-given/familiar: this is evident in the distinction between the non-doubled sentence with a non-specific object in (14a) and the OM-doubled sentence with the familiar/identifiable object in (14b).

(14) a. N-a-w-a o-mw-aana ka-ma-beele
1SG.SM-PST-give-FV 1-1-child 6-6-milk

'I gave a child milk.' (could be any child)

b. N-a-[mu-] w-a [o-mw-aana] ka-ma-beele
1SG.SM-PST-1OM-give-FV 1-1-child 6-6-milk

'I gave a specific child milk.' (i.e. it is known who the child is)
*assuming pragmatic conditions are met to license doubling* ([Sikuku and Diercks, 2022](#))

It is also possible to OM-double a focused object as well, as long as it also contains a discourse-given element: D-linked wh-phrases are a quintessential example, which are readily OM-doubled, whereas non-D-linked wh-phrases can never be doubled.

(15) a. Watulo a-[(*mu-)] bon-a [naanu] ?
1Watulo 1SM.PST-see-FV 1who

'Who did Watulo see?'

b. Watulo a-[mu-] bon-a [o-mw-alimu siina] ?
1Watulo 1SM.PST-1OM-see-FV 1-1-teacher 7what

'Which teacher did Watulo see?' ([Sikuku and Diercks, 2022](#))

A first approximation of Sikuku and Diercks' ([2022](#)) analysis is given in (16): they propose (like Zeller's XP) that doubling OMs are generated on a functional projection at the edge of the verb phrase, which they call a Comment Phrase (ComP), borrowing from the traditional terminology of a topic-comment information structure. Com° introduces a [φ]-probe that copies back φ-features to Com°, which are ultimately realized as the OM. But Com° also contains probes related to focus and givenness, linked the Kratzer and Selkirk's ([2020](#)) [FoC] and [G] features. The structure in (16) is imprecise regarding the exact feature specifications of the probes on Com° (see (21) below for the precise specification of the probe).[6]

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[6]A central part of Sikuku and Diercks' analysis is that ComP (like Zeller's XP) sits atop *v*P; this is a crucial component of the analysis, because postverbal agentive subject (which they show to occur *in situ* in Spec,*v*P) can be the focalized/emphasized element. We refer the reader to [Sikuku and Diercks](#) ([2022](#)) for the evidence and argumentation.

(16) Lubukusu OM-doubling Configuration (informal approximation, to be revised) (Sikuku and Diercks, 2022)
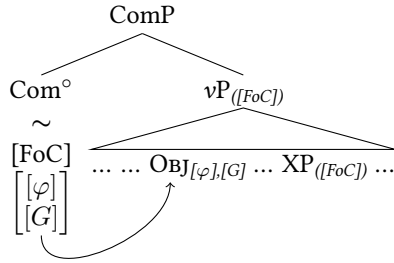
Crucially, the probe that normally results in φ-valuation is linked with givenness, requiring that the OM-doubled object be discourse given, but the [FoC] probe is independent, capable of being satisfied by any [FoC]-marked element in the c-command domain of Com°: this includes [FoC]-marked objects, [FoC]-marked adjuncts, and [FoC]-marked vP as well.

3.3 Focus-associated implicatures in OM-doubling

Notably, Lubukusu OM-doubling is not merely a focus construction, as OM-doubling is virtually never obligatory. So what is the interpretive difference between a doubling construction and a non-doubling construction? Sikuku and Diercks (2022) argue that OM-doubled constructions are *mirative focus*, as described/analyzed in a series of recent work on mirative fronting in Romance (Bianchi and Bocci, 2012; Bianchi et al., 2015, 2016; Cruschina, 2012, 2019b,a, 2021). Typically, the focused element is interpreted as particularly noteworthy, unexpected, or surprising to either the speaker themselves or the addressee.

(17) *Context: Red cows are exceedingly rare, and considered very special. So it is unlikely/unexpected that the children encountered a red cow.*

    A: Ba-ba-ana   ba-a-bon-a   e-khafu.
   2-2-children 2SM-REM.PST-see-FV 9-cow

       'The children saw a cow.'

    B: Babaana   ba-a-[ki-]bona   **e-khafu e-mbesemu**
       2-2-children 2SM-REM.PST-9OM-see-FV 9-cow   9-red

       'The children saw a RED cow.' (Sikuku and Diercks, 2022)

    As developed in a range of relevant projects (Bianchi and Bocci, 2012; Bianchi et al., 2015, 2016; Cruschina, 2012, 2019b,a, 2021), emphatic effects like this can be captured under an analysis that decomposes the interpretive effects as deriving from multiple syntactic functional projections. Bianchi et al. (2016) and Cruschina (2021) (along with the related work cited above) show that interpretive effects like this are well analyzed as focus-dependent conventional implicatures, i.e. a use-conditional meaning that depends on the alternatives generated by the semantics of focus constructions. They claim that the conventional implicature (CI) arises via an operator on a distinct syntactic projection from the focus operator. In (18) YP is the focused phrase that moves to the left periphery arising in Spec,FocP.

(18) Structure of focus-associated (conventional) implicatures (FAI) in Romance focus fronting
$[_{\text{ForceP}}$ Force°... $[_{\text{FAIP}}$ FAI° $_{[mir]/[corr]/[exh]}$ $[_{\text{FocP}}$ YP$_{i[+foc]}$ Foc° $_{[+foc]}$ ... $[_{\text{TP}}$ ... <YP$_i$> ...]]]]
(Cruschina, 2021, 20)

    Sikuku and Diercks adopt the focus-associated implicature analysis, arguing that OMs are in fact the realization of φ-features on a FAI projection that itself agrees with Com°.[7]

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[7]Sikuku and Diercks (2022) show that there are select instances (with concomitant interpretive distinctions) where FAI° appears without Com°, but I set those aside for the moment, as the Cinyungwe discussion will provide much more transparent evidence for the dissociation of the FAI projection and Com°.

(19)
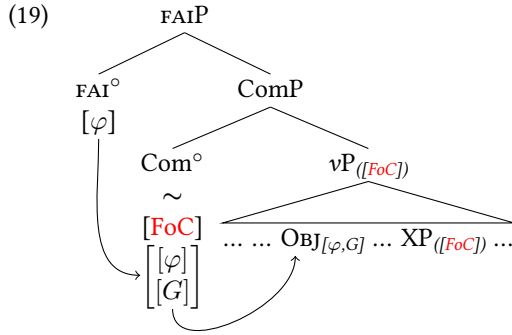
The final relevant piece of the analysis comes from an exploration of when OM-doubling does not target the most local object. It is possible to OM-double the structurally *lower* object in a sentence, but only when the doubled object itself bears mirative focus. (20) offers an example where the THEME object of a lexical ditransitive is OM-doubled instead of the more typical RECIPIENT object.

(20)   *Context: Wekesa is visiting home, and has brought with him very impressive gifts for family and friends.*

    a.   Wekesa   a-w-a   naanu bi-anwa chana?
        1Wekesa 1SM-give-FV 1who 8-gifts   CHANA

        'Who did Wekesa give those gifts that we've been talking about to?'

    b.   se-many-a   ta,   nekakhali a-[bi-] w-a   o-mu-ndu [bi-anwa chana] khubela o-mu-layi
        NEG-1SG.SM.know-FV NEG, but   1SM-8OM-give-FV 1-1-person 8-gifts CHANA   because 1-1-good

        'I don't know, but he gave those AMAZING gifts to someone because he is a good person.' (because gift-giving is a sign of good character) (Sikuku and Diercks, 2022)
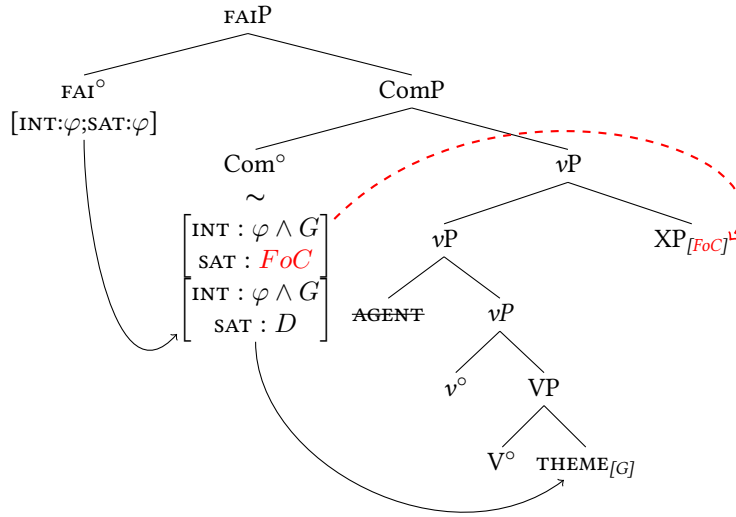
As Sikuku and Diercks show, these instances of non-local OM-doubling are exceptional in that when the higher object is doubled the [FoC]-marked element is readily distinct from the OM-doubled object; only in instances of doubling the lower object must the OM-doubled object itself bear mirative focus (represented with small caps in (20b)).

To account for this, Sikuku and Diercks propose a specific configuration of probes on Com° relying on Deal's (2015; 2021) interaction/satisfaction model of Agree. On this approach, probes are specified for interaction conditions (features that the probe copies back to itself) and satisfaction conditions (features on a Goal that halt a probe's search). Sikuku and Diercks (2022) also assume that probe conditions can be conjoined, creating complex probes (following Scott 2021). On the analysis presented there, OM-doubling is typically generated by a D probe, which is satisfied by the structurally closest DP. This probe is also specified to interact with elements containing *both* φ-features and [G]-features: in a typical instance of OM-doubling, this results in OM-doubling of a DP object and focus on some element inside vP, as illustrated in (22).

(21)   Probe specifications for Lubukusu Com° (Sikuku and Diercks, 2022):

    a.   [INT:FoC, $\varphi \wedge$ G]
        [SAT:FoC]

    b.   [INT:D, $\varphi \wedge$ G]
        [SAT:D]

(22) A schematic of a typical instance of OM-doubling (Sikuku and Diercks, 2022)

Instances of OM-doubling the non-closest DP are therefore instances where the D-probe hasn't copied back φ-features, because the closest DP (which satisfies the D-probe) is not discourse-given, as in (20b). Sikuku and Diercks (2022) claim that in these instances, it is exceptionally the features of the [FoC]-probe that are realized as the OM (as the [FoC]-probe also interacts with φ/[G]-marked elements). The conditions on these circumstances are complex and require lengthy argumentation to explain in detail, and so I will simply refer the reader to Sikuku and Diercks (2022) for details.

What is worth mentioning is that the Focus probe is in fact subject to intervention effects, as would be expected for an Agree operation, but notably the interveners are elements plausibly analyzed as bearing a [FoC] feature. The ability to OM-double the structurally-lower object is restricted: enriching the intervening object with additional information makes it unacceptable to OM-double the lower object:

(23) a. Wekesa a-w-a   naanu bi-anwa chana?
       1Wekesa 1SM-give-FV 1who 8-gifts   CHANA

       'Who did Wekesa give those gifts that we've been talking about to?'

   b. *?Wekesa a-[bi-]w-a   ba-ba-ana   ba-layi [bi-anwa chana]
       1Wekesa 1SM-8OM-give-FV 2-2-children 2-good 8-gifts CHANA

       'Wekesa gave (the) good children those amazing gifts that we were talking about.'

In general, for it to be licit to OM-double the structurally lower object, the intervening object has to be information-light and/or backgrounded. Almost any kind of additional semantic content added to the RECIPIENT DP in (23b) significantly degrades OM-doubling the THEME. Substituting any of the following for the recipient in (23b) creates the same intervention effect:

(24) Properties of 'intervenors'
   • Possessives (e.g. *babaana ba Nafula* 'Nafula's children')
   • Demonstratives (e.g. *babaana abo* 'those kids')
   • Quantifiers (e.g *buli mwana* 'every child')[8]
   • Adjectives (e.g. *babaana balayi* 'good children')
   • Topic-marker (*babaana chana* 'the children we were talking about')

This is completely unexpected for a simple Agree intervention effect for a φ-probe. Why should modifying a DP make it an intervener for the φ-probe? However, this is relatively straightforwardly expected if the probe in

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[8]This is notable, as DPs quantified by *buli* are not even the most natural targets for OM-doubling, though OM-doubling such a DP is not 100% ruled out.

question is a [FoC] probe: adding information is a version of elaboration focus (Büring, 2016) so we might expect such DPs to be [FoC]-marked and therefore to intervene for a [FoC] probe.

These patterns are not formulable without morphosyntactic reference to features for focus and givenness, an initial affirmation of Kratzer/Selkirk's contribution. Moving forward, what we will see is that Sikuku and Diercks' proposal of ComP—a head that introduces features for focus/givenness into the middlefield of the clause—can be productively extended to account for object marking in Cinyungwe and Zulu, but also to account for independent phenomena.

3.4   Cinyungwe OM, linked with focus/givenness

Langa da Câmara et al. (to appear) and Lippard et al. (2022) analyze object marking in Cinyungwe (Bantu, Mozambique), relying on the proposals by Sikuku and Diercks (2022) for Lubukusu. In Cinyungwe, ComP is linked with object movement, whereas OM-doubling is linked with the emphatic interpretation. In an out-of-the-blue context we expect whole-sentence focus, so bifurcating subparts of the clause into an information structure is expected to be unacceptable. This is what we see in (25): the canonical word order in (25a) is acceptable, but the word order with the object moved to the right in (25b) is unacceptable.

(25)   *Scenario: a Cinyungwe-speaking newscaster gets on the radio as part of a news report*

    a. baba   a-da-phik-a   ci-mbamba mwakankulumize
       1father 1SM-PST-cook-FV 7-beans   quickly

       'Father cooked the beans quickly.'

    b. #baba a-da-phik-a   mwakankulumize , ci-mbamba
       1father 1SM-PST-cook-FV quickly   7-beans

       'Father cooked the beans QUICKLY.' (Langa da Câmara et al., to appear)

The rightward-moved element is associated with a discourse-given reading, and the element left after the verb is associated with a focal reading. As (26) shows, a direct object in a transitive can readily be a negative-polarity item in its canonical position (26a), but when move to the right the sentence is ungrammatical (26b).

(26)   a. Kapenu a-libe   ku-won-a   na-munthu-yo   dzulo
       1Kapenu 1SM.PST-NEG 15SM-see-FV NPI-1-person-NPI yesterday

       'Kapenu didn't see anyone at all yesterday.'

    b. *?Kapenu a-libe   ku-won-a dzulo   , na-munthu-yo
       1Kapenu 1SM.PST-NEG 15SM-see-FV yesterday NPI-1-person-NPI

       Attempted: 'Kapenu didn't see anyone at all YESTERDAY.' (Langa da Câmara et al., to appear)

So it appears that a discourse-given interpretation is required of the element moved to the right; in parallel, a focal interpretation is required of the element that is unmoved. A construction where an object has moved to the right leaving a manner adverb after the verb is only acceptable in manner-focus contexts. So a sentence like (25b) is acceptable as an answer to a manner question, and acceptable as a correction about manner.

There is a lot of overlap between OM-doubling contexts and movement contexts: a common formulation of an OM-doubling construction is illustrated in (27), where the OM-doubled object moves to the right, similar to Zulu. We have approximated the interpretation with the English adverbial *really*, with more comment on that below. (27) has an extra emphatic reading, with the focus/emphasis falling on the adverbial *bwino* 'well.'

(27)   baba   a-da-[ci-] phik-a   **bwino** , [ci-mbamba]
       1father 1SM-PST-7OM-cook-FV well   7-beans

       'Father really cooked the beans WELL.' (Langa da Câmara et al., to appear)
       Natural contexts include:
         • *answers to manner questions*
         • *corrections about manner*

OM-doubling is also possible without moving the object, however, showing a full dissociation between object marking and movement in Cinyungwe. When OM-doubling occurs with the canonical word order, the most straightforward reading is a verum-like predicate focus reading that emphasizes the predicate itself.

(28) baba   a-da-[ci-] **phik-a**   [**ci-mbamba**] **bwino**
     1father 1SM-PST-7OM-cook-FV 7-beans   well

'Father really did cook the beans well.' (Langa da Câmara et al., to appear)
Natural contexts include:
- *disagreements about whether this event happened*
- *clarification of a previous assertion*

Research is ongoing on Cinyungwe, but these patterns show us the connections (and distinctions) with Lubukusu.[9]. Assuming an analysis similar to what was adopted for Lubukusu, Langa da Câmara et al. (to appear) propose that a ComP sits atop vP, and Com° introduces both [FoC] and [G] features. As in Lubukusu, Com° does not directly realize OM-doubling. Distinct from Lubukusu, however, the [G]-related probe on Com° in Cinyungwe is linked with movement to the edge of ComP, in a pattern similar to Zulu in ways (though in Zulu this is linked with object marking directly, unlike Cinyungwe). In a Cinyungwe construction like (25b), for example (with object movement but no object marking), ComP is present, and [G] probe finds the [G]-marked object and raises it to (right-facing) Spec,ComP. Langa da Câmara et al. (to appear) propose that there is a [G] probe on Com° which is associated with an EPP quality, requiring movement of the Goal to the edge of ComP.

As for focus, there is a a stark difference with Lubukusu in that while in Lubukusu the [FoC] probe will find any [FoC]-marked element within the vP, in Cinyungwe focus appears to fall on whatever element is immediately after the verb (IAV).[10] This is evident in the ditransitive example with a low adverbial in (29); when *wana* 'children' is moved to the right when it is discourse-given, the focus of the sentence necessarily falls on the constituent immediately following the verb.

(29) baba   a-da-phik-ir-a   ci-mbamba mwakankulumize , wa-na
     1father 1SM-PST-cook–APPL-FV 7-beans   quickly   2-children

'Father cooked the children BEANS quickly.' (Crisófia Langa da Câmara, personal communication)
- *acceptable as a response to an object question*
- *unacceptable as a response to a manner question*

For the focus to fall on the manner adverbial, the postverbal word order must be different:[11]

(30) baba   a-da-wa-phik-ir-a   mwakankulumize cimbamba, wana
     1father 1SM-PST-2OM-cook–APPL-FV quickly   7-beans   2-children

'Father cooked the children beans QUICKLY.' (Crisófia Langa da Câmara, personal communication)
- *unacceptable as a response to an object question*
- *acceptable as a response to a manner question*

The feature composition of the Com° probe here is a more precise version of the original probe specifications offered in Langa da Câmara et al. (to appear).

(31) Feature composition of Com° in Cinyungwe:
  a. Focus probe:
     INT: FoC
     SAT:[-V]

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[9]See Lippard et al. (2022) for an extensive discussion of the interpretive effects of OM-doubling in both Cinyungwe and Lubukusu

[10]This is an extraordinarily common property of Bantu languages: see Hyman 2010, Hyman and Polinsky (2010), Cheng and Downing (2012), van der Wal 2006, among others.

[11]This example also contains the object marker, which suggests that there is some additional syntactic complexity present in this instance. The key point for our purposes is that postverbal focus in Cinyungwe is limited to IAV position.

b. Givenness probe, paired with an EPP quality:
INT:$[G \wedge \varphi]$
SAT:$[G \wedge \varphi]$

As I showed above, OM-doubling is compatible with movement of the object, as well as with the doubled object remaining *in situ*, adding an emphatic interpretation to the sentence. Langa da Câmara et al. (to appear) analyze this as the result of a head bearing an operator responsible for a focus-associated implicature. Lippard et al. (2022) provide a range of evidence arguing that a conventional implicature analysis of those emphatic interpretations is appropriate, as in Lubukusu. In an instance when there was a [G]-marked object in the vP, Com° will have raised that object to its edge, making it the most local DP bearing φ-features when the φ probe on FAI° searches its c-command domain; this is illustrated in (32).

(32)　OM-doubling with object movement: focus on vP (adapted from Langa da Câmara et al., to appear)
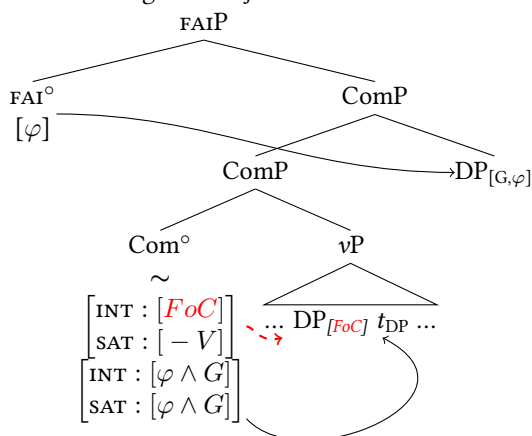
In cases of predicate focus, on the other hand, there is no [G]-marked element inside the vP, and therefore no movement to the edge of vP. In this case, then, the entire vP is marked as focused in these instances, bearing a [FoC] feature. In constituent-focus contexts like (29), the focus probe is satisfied by first XP after the verb, whether it is a DP or an adverbial (hence I annotate that as a [-V] constituent) in (31)). The result is that focus must either be on the vP as a whole (when vP is [FoC]-marked) or on the IAV constituent.

3.5　Zulu OM, revisited

Given these observations, we now have the toolkit to come back to Zulu and propose an alternative formalization of Zeller's analysis of OM-doubling. In contrast to both Lubukusu and Cinyungwe, there does not appear to be any particular conventional implicature or extra emphatic interpretation associated with OM-doubling in Zulu. Instead, it seems to be strictly an information structural operation: vP is a focal domain, and non-focal material is removed from the vP in a process that (usually) involves OM-doubling.

In Zulu, vP is a focal domain, and multiple vP-external positions (e.g. right-dislocation and preverbal subject position) are explicitly anti-focus (Cheng and Downing, 2009, 2012; Van der Spuy, 1993; Sabel and Zeller, 2006; Halpert, 2016; Zeller, 2008). Zulu has a firm restriction against focused material in canonical preverbal subject position, which therefore results in a requirement that focused subjects appear internal to the vP. For example, subjects with the exhaustive focus particle *kuphela* 'only' necessarily appear postverbally in Zulu:

(33)　Ngi-mem-e　　wonke umuntu, kodwa
　　　1SG-invite-PST every1 person1　but

　　　"I invited everybody, but..."

　　a.　*uJohn kuphela u-fik-il-e.
　　　　John1a only　　1aSM-arrive-DJ-PST

b. ku-fik-e uJohn kuphela.
   EXPL17-arrive-PST John1a only

   "...only John came."
   ([Zeller](), [2008](), 241)

As discussed in §3.1, Zeller proposes a functional projection (that he calls XP) above vP on which the object marker originates (as illustrated in (9) above). Zeller proposes that the OM is the result of an anti-focus probe, which finds the closest anti-focus marked DP. The ComP approach sketched above helps formalize assumptions from Zeller's work that were not previously formalized: specifically, Zeller assumes vP as a focal domain without explaining its syntactic implementation, and Zeller also assumes that the anti-focus probe also values φ-features, without formalizing how or why a probe for anti-focus copies back φ-features. The ComP proposals give us a toolkit for tackling this.

As above, I assume that in Zulu there is a ComP that sits above vP: this is Zeller's XP. ComP in Zulu, as in Lubukusu and Cinyungwe, introduces the squiggle operator that demarcates a focus domain, licensing focal elements.[12] Following [Kratzer and Selkirk]() ([2020]()), the squiggle operator is paired with a [FoC]-probe, which will search its c-command domain via a standard Agree relation, finding a [FoC]-marked element in its complement (the sections that follow develop a proposal regarding the [FoC] probe in detail). At the same time, Com° also bears a [G]-probe (Zeller's anti-focus probe), which will find the most local G-marked element. The [G]-probe *also* interacts with φ-features in addition to [G]-features, but the [G]-probe is only satisfied when it finds a [G]-marked element.

(34) Partial Probe specifications for Zulu Com°:
   INT: φ
   SAT: $G \wedge \varphi$

Despite ComP being central to explaining OM-doubling in both Lubukusu and Cinyungwe, the OMs themselves are the morphological realization of φ-features on the head that introduces the focus-associated implicature (FAI°). ComP itself receives no morphological realization in either language, though it is associated with movement of [G]-marked elements in Cinyungwe. This is different in Zulu, where if we assume that Zeller's XP is our ComP, then Com° is itself the OM-generating head.

We can assume that ComP is *always* present in Zulu, and in the absence of [G]-marked DPs the Probe simply does not copy back φ-features, and therefore does not realize an OM (in Deal's [2015]() model of Agree, probes need not succeed in copying back features). So object markers only appear when objects are explicitly marked as [G], capturing the empirical facts. This account also provides a formalization of the focus domain of Zulu as well (much more on that below).

(35) ComP analysis of Zulu object marking (first approximation)
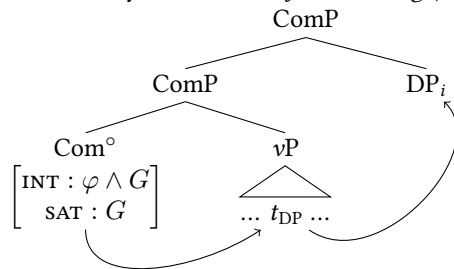
3.6 Intermediate conclusions

[Kratzer and Selkirk]() ([2020]()) advocate for an approach to focus/givenness where intonational phenomena like the placement of the NPA and de-accenting of given material is represented syntactically via [FoC] and [G] features in the narrow syntax. I have presented an argument from object marking constructions in three different Bantu

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[12]In later work, [Zeller]() ([2021]()) argues based on negation in Zulu for a similar placement of the squiggle operator demarcating a focus domain based on the interaction of focus and negation.

languages that this is not only a plausible theoretical approach, but it is in fact necessary: central properties of object marking constructions in Lubukusu, Cinyungwe, and Zulu can only be explained with syntactic reference to features for focus and givenness.[13] In what follows in this paper we will explore some additional implications of these conclusions.

4   A New Analysis of Conjoint/Disjoint distinctions

Conjoint/disjoint distinctions are a kind of verbal inflection in Bantu languages that shows deep connections with the ComP proposal. Specifically, these patterns show central relevance of focus/givenness, as well as showing a structural component, being sensitive to focus/givenness in the verb phrase domain specifically. I argue that the Com° proposal can be readily extended to account for conjoint/disjoint patterns as well.[14]

4.1   Introduction to conjoint-disjoint distinctions in Bantu languages

Across a broad range of Bantu languages, there are forms of verbal marking that correlate with the presence/absence of postverbal material: the forms are known as conjoint forms and disjoint forms. Conjoint forms on a verb show a closer connection between a verb and what follows, and disjoint forms are used when there is a looser connection with what follows, or when nothing follows the verb (van der Wal and Hyman, 2017). The examples below illustrate these patterns from Tswana; CJ annotates the conjoint pattern, and DJ annotates the disjoint pattern. The conjoint form in the Tswana examples below is unmarked, disjoint is marked overtly.

(36)   Tswana (S31, Creissels 1996, 109, glosses added by van der Wal 2017)

   CJ   Dikgomó dí-fúla   kwa nokeng.
       10.cows   10SM-graze(CJ) at   river

       'The cows graze/are grazing at the river.'

   DJ   Dikgomó dí-Á-fúla.
       10.cows   10SM-PRS.DJ-graze

       'The cows are grazing.'

It is quite common for these distinctions to only be realized in specific tenses/aspects, and also to have different morphological forms based on the tense/aspect it appears in.[15] This is illustrated for Swati in (37), where the relevant forms are circled. In (37b) the disjoint form is an independent morpheme, compared to the unmarked conjoint form in (37a). But in (37c) and (37d) the conjoint/disjoint distinction is syncretic with perfective aspect, which is realized as *-é* in conjoint contexts and *-ile* in disjoint contexts.

(37)   Swati (Ziervogel and Mabuza, 1976, 97,98)

   a.   Ngi-natsa...   (conjoint)
      1SG.SM-drink(CJ)

      'I drink...'

   b.   Ngi-[ya-] natsa.   (disjoint)
      1SG.SM-PRS.DJ-drink

      'I am drinking.'

   c.   Ngi-nats-[é]...   (conjoint)
      1SG.SM-drink-PRF.CJ

      'I have drunk...'

   d.   Ngi-nats-[ile].   (disjoint)
      1SG.SM-drink-PRF.DJ

      'I have drunk.'

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[13]It is broadly accepted that Agree operations operate in the narrow syntax, though it is not inarguable: see Bobaljik (2008).

[14]A similar approach was first suggested (to my knowledge) by Pietraszko (2014).

[15]See van der Wal 2017 for a survey of these properties across a variety of languages, and see Ngoboka and Zeller 2017 for a description of the Kinyarwanda patterns that details well the ways in which there is variation based on the tense/aspect involved.

4.2 Analyzing Conjoint-Disjoint in Zulu

In Zulu, the predominant analysis of conjoint/disjoint is that the distinction tracks the presence of morphosyntactic content inside *v*P: conjoint is used when a constituent is inside *v*P, and disjoint is used when *v*P is empty. So (38a) occurs with the unmarked conjoint form with an overt object, but when there is no overt object the conjoint form is unacceptable in (38b); this circumstance instead requires the disjoint form (38c).

(38) Zulu (Zeller, 2015, 19)

    a. U-mama   u-phek-a   i-n-yama   (conjoint)
       AUG-1a.mother 1SM-cook-FV AUG-9-meat

       'Mother is cooking the meat.'

    b. *U-mama   u-phek-a   (conjoint)
       AUG-1a.mother 1.SM-cook-FV

       Intended: 'Mother is cooking.'

    c. U-mama   u-**ya**-phek-a   (disjoint)
       AUG-1a.mother 1.SM-DJ-cook-FV

       'Mother is cooking.'

(39) **Conjoint–disjoint generalization:** (Halpert, 2016, 122)
    Conjoint (Ø): appears when vP contains material (after A-movement)
    Disjoint (ya): appears when vP does not contain material (after A-movement)

As Halpert points out, weather predicates (predicates with no arguments) necessarily occur in the disjoint form of the verb (in tenses with a conjoint/disjoint distinction).

(40)   a. ku-ya-banda
       17SM-DJ-be.cold

       'It's cold.'

    b. *ku-banda
       17SM-be.cold

       (Halpert, 2016, (204), glosses adjusted)

A conjoint form of the verb is required by *in situ* (postverbal) subjects:

(41) **Non-agreeing subject: conjoint required**

    a. ku-pheka   uSipho
       17SM-cook AUG.1Sipho

       'Sipho is cooking.'

    b. *ku-ya-pheka uSipho
       17SM-DJ-cook AUG.1Sipho
       (Halpert, 2016, 124)

In a double object construction, moving one object nonetheless leaves the other object *in situ* inside the verb phrase, requiring the conjoint form of the verb.[16] (42a) gives a discourse-neutral ditransitive construction, where the canonical word order occurs (Subj-Verb-Recipient-Theme). (42b) contains a left-dislocated recipient object, and shows a conjoint form still appearing on the verb; a disjoint form in the same context is unacceptable (42c).

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[16]As Zeller (2015) reports, there are exceptional instances in double object constructions where a disjoint form appears on the verb; Zeller shows that these constructions have disjoint forms precisely because both objects have vacated the verb phrase.

(42) **Double object construction: conjoint required**

    a. uSipho   u-phek-ela   uMfundo   iqanda
       AUG.1Sipho 1SM-cook-APPL AUG.1Mfundo AUG.5egg

       'Sipho is cooking Mfundo an egg.'

    b. uMfundo   uSipho   u-m-phek-ela   iqanda
       AUG.1Mfundo AUG.1Sipho 1SM-1OM-cook-APPL AUG.5egg

       '(As for) Mfundo, Sipho is cooking an egg for him.'

    c. *uMfundo   uSipho   u-ya-m-phek-ela   iqanda
       AUG.1Mfundo AUG.1Sipho 1SM-DJ-1OM-cookAPPL AUG.5egg
       (Halpert, 2016, 125)

Notably, Halpert points out, a paradigm like (42) is important because it shows that a disjoint verb form is not associated with movement out of the verb phrase, but rather with the surface content of the verb phrase (i.e. what the verb phrase contains, after movement operations have applied).

One of the puzzles for conjoint/disjoint forms in Zulu (and in other languages) is that *any* overt verb phrase content requires a conjoint form of the verb, not simply arguments of the verb (see Van der Spuy 1993, Buell 2005, Buell 2006, and Zeller 2015, among others). This is illustrated with the low manner adverbial in (43), which requires a conjoint form of the verb:[17]

(43) Conjoint forms appear with low adverbials

    a. uSipho   u-gijima   kahle
       AUG.1Sipho 1SM-run(CJ) well

       'Sipho runs well.'

    b. *uSipho   u-ya-gijima kahle
       AUG.1Sipho 1SM-DJ-run well
       (Halpert, 2016, 126)

Halpert (2016) offers a syntax-centric analysis of conjoint/disjoint in Zulu. Halpert's core proposal is that there is a licensing projection (LP) at the edge of the *v*P in Zulu that probes the *v*P for content: successful probing results in a conjoint form, whereas the disjoint form is the default that appears when the probe is unsuccessful.

(44) Halpert's (2016) analysis of Zulu conjoint/disjoint

    a. ku-ya-banda
       17SM-DJ-be.cold

       'It's cold.'

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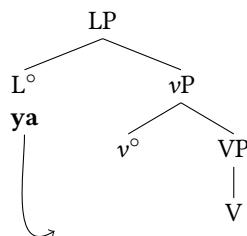
[17]There are many nuances here that require detailed empirical discussion: the structural height of adverbials matters to the appearance of conjoint or disjoint, as does the relative discourse-familiarity (because *v*P is a focus domain, and discourse-familiar material exits the verb phrase). Those facts readily align with the proposal I will set forward here, but I cannot engage the full complexity of these issues in this paper. See Halpert (2016, Ch. 4) and Zeller (2015) for additional discussion.

b. ku-pheka   uSipho
17SM-cook AUG.1Sipho

'Sipho's cooking.'
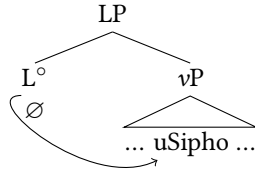
4.3   A focus-Agree formalization of conjoint/disjoint distinctions

Halpert's analysis carries some large questions, however. The main issue is that the precise nature of the probe on $L°$ is undefined. Zulu is a language rich in φ-agreement, but conjoint/disjoint patterns (and the licensing properties of LP) are independent of φ-realization, suggesting that this is not a φ-probe. Per Halpert's account, L's probing is responsible for *both* licensing of augmentless DPs and conjoint/disjoint patterns, and therefore it has to be capable of valuing the Case features of augmentless DPs (we discuss this at length below). But the probe is successful (in the sense that it results in a conjoint form) by finding any phrasal material in its c-command domain, not simply nominal material or material that needs to be Case-licensed (as (43) showed). So it is quite unclear what the precise probing features of the "Licenser" actually are, if they can be valued (i.e probing is rendered successful) by DPs, CPs, adverbials, etc. Halpert provides evidence/arguments that even adverbials should be considered nominal in Zulu, explaining their ability to serve as Goals for the L Probe, but the evidence is admittedly sparse. Kratzer and Selkirk's (2020) approach to focus and givenness suggest an alternative approach.

It has long been observed that vP is a focus domain in Zulu. This has only recently received a precise implementation from Zeller (2021), who proposes that in Zulu the squiggle operator resides at the edge of vP. I propose that both the restriction of vP as a focal domain, and the distribution of conjoint/disjoint patterns, can be accounted for by assuming ComP is always present in standard indicatives in Zulu (as proposed above to account for object marking patterns, but distinct from the assumptions for Lubukusu/Cinyungwe). Assuming the feature specification outlined for Zulu above, this gives us the structure in (45). I assume that this is a more precise formalization of Halpert's Licensing Projecton (LP).

(45)   ComP analysis of Zulu conjoint/disjoint (first approximation)
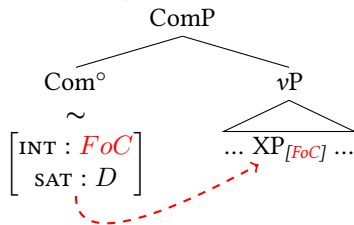
Again consistent with the proposals from Sikuku and Diercks (2022) for Lubukusu and Zeller (2021) for Zulu, $Com°$ introduces the squiggle operator, presupposing a focused element in its complement and linking this to an appropriate discourse antecedent. $Com°$ therefore bears a [FoC]-probe, which Agrees with a [FoC]-marked element in its c-command domain. I assume that when the [FoC] probe copies [FoC] features back to $Com°$, this is spelled out as conjoint verbal morphology; unsuccessful probing (i.e. the failure of the [FoC]-probe to copy back [FoC] features) results in a default form of the [FoC] features being spelled out, i.e. disjoint morphology. I assume a Late Insertion approach, where the morphological spellout rules for tense and aspect spell out distinct morphological forms depending on the presence/absence of a [FoC] feature on the verbal form (the verb having raised past $Com°$ to pick up the relevant features).[18]

Notably, on this account no restriction to nominals is expected: *any* constituent inside vP should be eligible to interact with the focus probe, as any constituent containing descriptive content is capable of bearing a [FoC]-feature.

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[18]This follows from relatively standard assumptions regarding Late Insertion within Distributed Morphology (Halle and Marantz, 1993).

Assuming ComP as a mechanism for incorporating information structural concepts directly into the syntactic grammar provides a coherent account for these patterns in the Bantu language family.

4.4 The link between predicate focus and disjoint constructions

This analysis also has promise to explain a well-established property of disjoint constructions cross-linguistically, though we won't fully explore it here. A conjoint form of a verb is typically linked with default/broad focus in a sentence, or narrow focus on the postverbal element: in these contexts, the postverbal material is asserted, typically discourse new. In contrast, disjoint forms of the verb tend to be linked with predicate focus in some way, either a verum-like reading of the clause or focus on the predicate itself (Doke, 1992 [1927]; Güldemann, 2003). Güldemann (2003) illustrates this for Zulu with the examples in (46):

(46) Zulu conjoint vs. disjoint

    a. ngi-dla   isi-nkwa
       1SM-eat:PRS(CJ) 7-bread

       'I am eating bread.'

    b. ngi-**ya**-si-dla   isi-nkwa
       1SM-DJ-7OM-eat:PRS 7-bread

       'I do eat bread.'
       (Güldemann, 2003, (10))

I don't attempt an appropriately formal analysis here. But if disjoint forms are the spellout of a [FoC] probe that doesn't find a goal, this would be a situation where there is a ∼ operator at the edge of the verb phrase, but there is no subconstituent of the *v*P that bears a [FoC] feature. It is reasonable to assume that a default interpretation in these situations results from assuming the complement of the ∼ operator (the *v*P itself) in these instances is focused in order to satisfy the presuppositions of the ∼ operator. Again, this requires further research and formalization. But the general approach seems promising to capture these empirical facts as well.

5 Augmentless Noun Phrases

5.1 Introduction to Zulu Augments

Halpert (2016) is not centrally about conjoint-disjoint: rather, it is an investigation of augmentless noun phrases in Zulu and what controls their distribution. Halpert's approach to conjoint/disjoint is an extension of the properties of LP that she proposes to account for licensing of augmentless DPs. My suggestion is that Halpert's core observations for about augmentless DPs in Zulu find a ready explanation under the approach sketched here. (Notably, these Zulu patterns have been replicated for Xhosa and Ndebele by Carstens and Mletshe 2016 and Pietraszko 2021, respectively.)

In Zulu, as in many Bantu languages, nominals can bear two noun class prefixes: the initial one is often called the pre-prefix, initial vowel, or *augment* (Halpert, 2019). (47) shows basic Zulu examples of nominals. They bear two noun class prefixes, with the first one (the augment) capable of being dropped in particular contexts (see below).

(47)   a. (u)-mu-ntu
       1AUG-1-person

       'person'

    b. (a)-ba-ntu
       2AUG-2-person

       'people'

For the most part, augments are obligatory—they only have the possibility of being absent on wh-words and when the nominal is interpreted as a negative polarity item ('any X') (though as we will see, there are additional

constraints on their distribution). So when the context is sufficient to license wh-words or NPIs, nominals can appear without the augment.

(48) a. u-bona   bani?
          2SG.SM-see 1who
          'Who do you see?

      b. a-ngi-bon-i   mu-ntu
          NEG-1SG.SM-see-NEG 1-person
          'I don't see anyone.'
          (Halpert, 2016, 68)

Augmented DPs have a relatively unrestricted distribution, but augmentless DPs are much more constrained in where they can occur. There are basically two-layers of restrictions on their distributions: the interpretive restriction noted above, and a structural restriction that details what positions augmentless DPs may occur in. A prominent restriction in Zulu, Xhosa, and Ndebele is that unaugmented DPs cannot occur in preverbal subject position, even when occuring inside the scope of negation.

(49) a. A-ngi-sho-ngo   [ukuthi ku-ik-e   (u-)muntu   ]
          NEG-1SG.SM-say-NEG.PST   that   17SM-arrive-PFV (AUG-)1person
          'I didn't say that anyone came.' (Halpert, 2016, 76)

      b. A-ngi-sho-ngo   [ukuthi *(u-)muntu   u-ik-ile   ]
          NEG-1SG.SM-say-NEG.PST   that   AUG-1person 1SM-arrive-PFV
          'I didn't say that anyone came.' (Halpert, 2016, 76)

But the constraints on the distribution of augmentless DPs extend beyond this. In a transitive sentence with a preverbal subject, an augment is optional on the postverbal object.

(50) *(u)muntu   a-ka-phek-anga   (i)qanda
      AUG.1person NEG-1SM-cook-NEG.PST (AUG)5egg
      'A/the person didn't cook any egg.'

However, when the subject is placed postverbally as in (51), the postverbal subject may be optionally augmentless, but the augment is now obligatory for the object.

(51) a-ku-phek-anga   (u)muntu   *(i)-qanda
      NEG-17SM-cook-NEG.PST (AUG)1person AUG-5egg
      'Nobody cooked the/an/any egg.'

In effect, in leaving the subject in postverbal position the subject inherits the potentially-augmentless property that the object previously possessed, and this bleeds the object's ability to remain augmentless. The distribution of augmented/augmentless DPs in monotransitives in Zulu is summarized in (52).

(52) Mono-intransitives: highest augmentless argument in *v*P is licensed (adapted from Halpert 2016, 80)

Word order	Judgment	Subject	Object
VS	✓	-Aug	-
SVO	✓	+Aug	-Aug
VSO	*	-Aug	-Aug
VSO	✓	-Aug	+Aug
VSO	*	+Aug	-Aug

When this is expanded to ditransitive constructions, we see that the addition of an argument postverbally licenses another augmentless phrase, but only the structurally lowest object (paired with the requirement of the structurally highest argument being licensed postverbally). So in this instance the recipient object requires an augment:

(53) A-ku-thum-el-anga   (u-)muntu   *(i-)zingane (i-)mali
      NEG-17SM-send-APPL-NEG.PST (AUG)1person AUG.10child (AUG)9money

      'Nobody sent the/any children any money.'

This shows that the only acceptable positions of augmentless DPs in these configurations are immediately following the verb, and the final object position.

(54) Ditransitive expletive applicative: two augmentless arguments licensed (adapted from Halpert 2016, 85)

Word order	Judgment	Subject	Benefactive	Theme
VSOO	✓	-Aug	+Aug	-Aug
VSOO	*	-Aug	-Aug	-Aug
VSOO	*	+Aug	-Aug	-Aug
VSOO	*	-Aug	-Aug	+Aug

Halpert (2016) concludes that there is a licensing relationship at play for augmentless nominals:

(55) Augmentless nominal generalization (revised) (Halpert, 2016, 72):
      An augmentless nominal argument must be local to a nominal-licensing head (L or appl/caus).

Halpert's approach is that L and Appl/Caus are Case-licensing heads. Augmented DPs license themselves (i.e. the augment is itself a licensing projection when it contains a DP), but augmentless DPs must be licensed structurally within the clause, which for Halpert is Case-licensing via an Agree relation with one of the licensing heads. The distribution of augmentless nominals is not familiar from other Case-licensing contexts, however, which she explains as a result of the particular configuration of Case-licensing heads in Zulu: T is not a Case-licenser, and instead it is the LP projection that licenses these nominals in most instances.

(56)
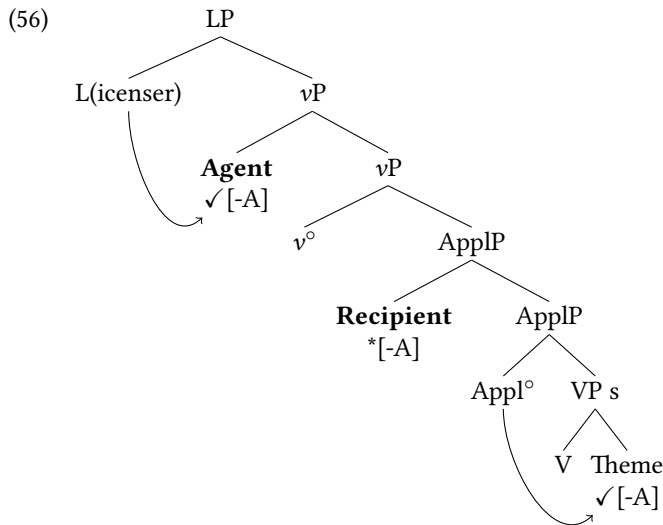
The nature of this probe has remained somewhat mysterious. Halpert's core claim is that it Case-licenses DPs in Zulu that require Case-licensing, and that (as mentioned above) its probing accounts for conjoint/disjoint realization as well. On her account, augments Case-license the DPs they appear on, so the effects of the LP probe only appear for augmentless nominals. What I am going to suggest is that the distribution of augmentless nominals can be explained by ComP.

5.2 Unaugmented DPs as focused elements

Carstens and Mletshe (2016) build on Halpert's work in a variety of ways. Similar to Halpert, they observe that even once accounting for licensing of the NPI-content of augmentless DPs in Zulu and Xhosa, the precise restrictions on

the distribution of augmentless DPs noted by Halpert remains. Carstens and Mletshe argue that augmentless DPs are negative concord items, requiring agreement in [uNeg] features with the [iNeg] features of a negative operator (Zeijlstra, 2004). The significant contribution of Carstens and Mletshe (2016) for our purposes, however, is that they explain the distribution of augmentless DPs on the basis of them being focused phrases which are restricted to occurring in focus positions.

Carstens and Mletshe (2016) show that, in both Zulu and Xhosa, exhaustively focused phrases (only-phrases) and wh-phrases show the same distribution as augmentless DPs. Noting the four taboo locations for augmentless DPs that Halpert identified above, they show that focused elements share the same distribution.

(57) Overlap of focus and augmentless nominals in Xhosa and Zulu (Carstens and Mletshe, 2016)

Expression type	Spec,TP	Clitic-dislocated	IO in ditrans TEC	DO in TEC
[−A] NPI	*	*	*	*
[+A] 'only' DP	*	*	*	*
[+/−A] wh-word	*	*	*	??

This suggests that the distribution of augmentless DPs may not need a Case-theoretic explanation, as it appears that an explanation of the distribution of focus would explain the augmentless phrases as well.[19] For example, Carstens and Mletshe (2015) show that in transitive expletive constructions (TECs) there is an obligatory focus reading on the postverbal subject.

(58) Xhosa: obligatory focused subject in TEC

Ku-theng-a   a-ba-fazi   i-i-ntyatyambo.
17SM-buy-FV 2-2-women 10-10-flowers

'It's the women who buy flowers.' (Carstens and Mletshe, 2015, 194)

Carstens and Mletshe (2015) propose that, contrary to Halpert's (2016) claim, unaugmented DPs do not require Case, and instead are Caseless elements whose distribution is explained by agreement for uNeg and the distribution of focus. On their account, it is only augmented DPs [+A] that require Case. They claim, however, that both [+Focus] and [-Focus] are centrally linked with Case valuation. Specifically, they claim that ECs are instances where both T and v are defective, and Case valuation is not available from either T or v. Instead, a Case-licensing FocP occurs directly above vP, accounting for the distribution of focus and licensing of DPs in ECs. Subjects in TECs raise to this FocP, resulting in both Case-licensing and a focus interpretation in (59).

(59) [$_{FocP}$ SU$_{uCase[+Foc]}$ [$_{Foc'}$ Foc [$_{vP}$ <SU> [$_{v'}$ v [$_{VP}$ V OB$_{uCase}$ . . .]]]]]
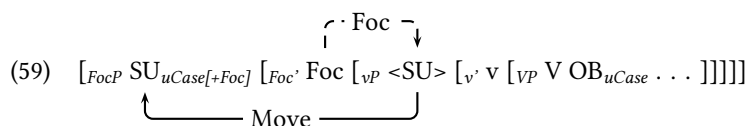
The question of how object DPs are Case-licensed then arises in this approach. Carstens and Mletshe (2015) claim that the same FocP that hosts and Case-licenses the focused subject in (59) also probes the object, providing a [-Foc] value for the object and likewise Case-licensing the object.

(60) [$_{FocP}$ SU$_{uCase[+Foc]}$ [$_{Foc'}$ Foc [$_{vP}$ <SU$_{uCase}$> [$_{v'}$ v [$_{VP}$ V OB$_{uCase[-Foc]}$ . . .]]]]]
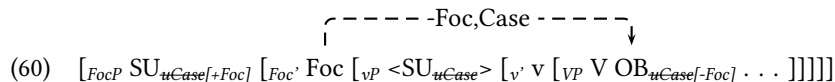
This not only serves to explain where [+A] nominals are (Case-)licensed (on Carstens and Mletshe's 2015 account), but also captures the distribution of focus positions. This captures the distribution of augmentless nominals discussed above, which are focused elements: they can be in immediately postverbal position in a TEC, but not in the direct object position (because that Agrees in -Foc with the Foc head).

The proposal I will advance below shares a number of features with this approach (and with Halpert's), namely, the central role of focus and -focus (givenness) in explaining the distribution of DPs in the postverbal domain. But the account in Carstens and Mletshe (2015) has various weaknesses that would benefit from an alternative

[19]Pietraszko (2021) poses an important critique of this conclusion: see §5.4.2 below.

account. First, the inherent link between Focus and Case is a novel proposal; that begs further discussion (see §5.4.1). Beyond that, the Focus head plays two very different (non-canonical) roles, raising and Case-licensing the most local argument, and then (subsequently) initiating a probing operation for [-Focus] features, finding and licensing the object. In the absence of a generalizing account of why/how Focus phrases have these properties, the explanatory value of the proposal is limited.

5.3 ComP Analysis of augmentless nominals

I argue that the same formalization that accounts for the distribution of object marking and conjoint/disjoint can likewise account for the distribution of augmentless nominals, providing a unified account. Recall that above, for conjoint/disjoint contexts, I proposed that if the [FoC] probe on Com° finds a Goal and copies back [FoC] features to Com°, the result will be a conjoint form of verbal inflection. In contrast, if a [FoC] feature is not copied back to Com°, the verbal inflection will spell out in the disjoint form. Putting together the probes proposed for conjoint/disjoint (the focus probe) and for object marking (givenness probe), the final structure of ComP in Zulu appears as in (61), illustrated in a structure in (62):

(61) Probe specifications for Zulu Com°:

    a. Focus probe:
       INT:FoC
       SAT:D

    b. Givenness probe:
       INT: φ
       SAT:G $\wedge$ φ

(62) ComP analysis for Zulu (final)
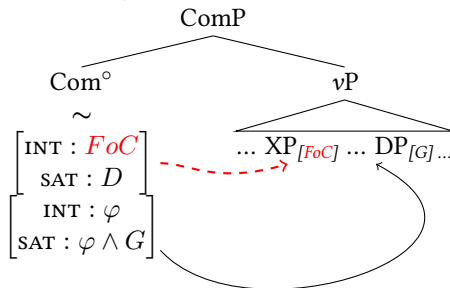
We are now prepared to illustrate how this accounts for the distribution of unaugmented nominals in Zulu. I assume, following Carstens and Mletshe (2016), that augmentless nominals are negative concord elements (licensed via negation Agree) and as such necessarily bear focus features. In order to appear felicitously/grammatically, those focus features must be a licit Goal of an Agree relation with a [FoC] probe. The featural specification of the probe in (62), however, makes very precise predictions about which positions are licit goals for the focus probe.

Take, for example, an instance of a basic transitive sentence with no object marking. As Halpert (2016) shows, such constructions license at most one unaugmented DP. In an SVO sentence, an object occurs postverbally and may be augmentless.

(63) u-muntu   a-ka-phek-anga   qanda
     AUG-1person NEG-1SM-cook-NEG.PST 5egg

    'A/the person didn't cook any egg.'

On this account, the object in this instance has a [FoC] feature. Assuming the presence of ComP at the edge of vP in Zulu, the focus probe on Com° readily finds the focus-bearing augmentless nominal, as sketched in (64).[20]

(64)
    Com° [$_{vP}$ v° ~~SUBJ~~ [V OBJ]]

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[20]There is a broad recognition that the distribution of postverbal nominals in Bantu languages seems to ignore the trace of a subject that has moved to subject position.

In a transitive sentence with object marking we would have the same basic syntax as the example above, but the object bears a [G] feature instead of a [FoC] feature. The [G] probe finds the [G]-marked object and moves it to the right edge of ComP. When the [FoC] probe searches vP, then, there are no available Goals in vP; only the tails of the subject and object movement chains are available, and presumably an Agree relation must find an entire movement chain in its scope to succeed (Riedel 2009 and Anagnostopoulou 2003, among many others). As no [FoC] features are copied back to the [FoC] probe, the verb is spelled out in its disjoint form.

When the a subject is left postverbally in a TEC, however, we begin to see the limited focus-licensing abilities of Com° coming into play.

(65) a-ku-phek-anga   (u-)muntu   *(i)-qanda
      NEG-17SM-cook-NEG.PST (AUG-)1person AUG-5egg
      'Nobody cooked the/an/any egg.' (Halpert, 2016, 80)

The specification of the focus probe that I suggested earlier is [INT: FoC SAT: D]. This means that the probe interacts with any focus-marked elements, but is necessarily satisfied when it finds a DP as a Goal. On Deal's (2015; 2021) interaction and satisfaction model of Agree, a probe is halted once its satisfaction condition is met. Therefore, the focus probe is halted once it encounters a DP, whether or not that DP is focused.

(66) Com° [$_{vP}$ v° SUBJ [V OBJ]]
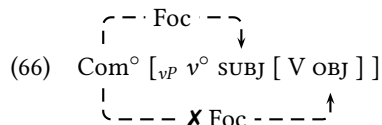
Notably, the probe is satisfied whether or not it has copied back [FoC] features. So, note that a postverbal subject bleeds licensing of a augmentless nominal in object position, whether or not the postverbal subject itself is augmentless.

(67) *a-ku-phek-anga   u-muntu   qanda
      NEG-17SM-cook-NEG.PST AUG-1person 5egg
      (Halpert, 2016, 80)

I don't sketch the outcomes in ditransitives for the sake of space, but the same account holds if we adopt that same assumption that Halpert does, that argument-adding heads like applicatives and causatives themselves also add a probe that licenses augmentless nominals. Here, that means assuming that those heads add a focus probe, which I consider reasonable given the central role that focus plays in licensing the distribution of nominals in Zulu: presumably to licitly add an argument to the vP in Zulu you have to also expand the focus-licensing properties of vP. No additional assumptions are needed, however: the account proposed here makes the same predictions as Halpert's account of those constructions.

What we see, then, is that the same ComP projection bearing focus/givenness probes that can account for object marking and conjoint/disjoint distinctions can also capture distribution of augmented and augmentless nominals in Zulu (and related languages). We need only assume (following Carstens and Mletshe 2016) that while augmented nominals may optionally be focused, augmentless nominals are negative concord elements that are obligatorily focused, which therefore have their distribution constrained by the presence/absence of focus licensing in the positions that they occur in.

5.4   Addressing some outlier data

The literature on [+/-A] nominals in southern Bantu languages is becoming somewhat expansive, and at this point there are several instances documented of exceptional patterns that don't automatically follow from the discussion above. I mention them here along with approaches to dealing with them, though both certainly merit more attention than what I can give here.

5.4.1   Xhosa TECs with experiencer predicates

As discussed in depth by Carstens and Mletshe (2015), TECs with experiencer predicates in Xhosa display a different distribution of arguments than is otherwise available in TECs. In a distinct pattern from the typical one, TECs with

experiencer predicates are actually more restricted with [+A] nominals than they are with augmentless nominals. So TECs with experiencer predicates are impossible with two [+A] nominals (68a), and acceptable with two augmentless nominals (68b).

(68) Xhosa (Carstens and Mletshe, 2015, 190)

    a. *Kw-a-bon-a   u-m-fazi   i-ntaka.
       17SM-CJ-see-FV 1-1-woman 9-9bird

      '(It was) a/the woman (who) saw the bird.'

    b. A-ku-bon-anga   m-ntu   nto!
       NEG-17SM-see-NEG.PST 1-person 9thing

      'NOBODY saw anything!' [Lit.: (There) didn't see anybody anything]

Carstens and Mletshe's approach to analysis is to fundamentally link the cross-linguistically-exceptional properties of experiencer predicates to the explanation for Xhosa. It is quite common for experiencer arguments to be assigned inherent case (i.e. lexically-determined case, distinct from canonical structural cases). Carstens and Mletshe argue that Focus projections in Xhosa are the Case-licensing projections, with the result that even canonical structural Case in Xhosa is semantically-linked.

(69) The Semantic Case Constraint (Carstens and Mletshe, 2015, (12))
    *DP bearing more than one semantically linked Case.

They propose that the distinctive properties of [+/-A] nominals in Xhosa TECs with experiencer predicates falls out from (69).

A full analysis of these exceptional cases is certainly relevant to our concerns here, and certainly has significant bearing on the related concerns about Case and DP licensing in Bantu languages. But presumably some version of (69) is equally applicable to the account advanced here, if we assume that licensing of DPs (so-called "Abstract Case") is centrally linked with the focus and givenness probes I have discussed here. van der Wal (2022) advances a proposal in this spirit, though not directly compatible in its formalization. Therefore a version of (69) might still be in place, which instead says something like "*DP bearing more than one semantically linked licensing feature."

5.4.2 Coming apart of Case and focus in Ndebele

Pietraszko (2021) shows that Ndebele largely shares the same distribution of [+/-A] nominals with Xhosa and Zulu. She points out, however, that the focus-based analysis of Carstens and Mletshe (2016) and Carstens and Mletshe (2015) runs into problems in a specific corner of Ndebele grammar.[21] Specifically, Pietraszko (2021) shows that while focus and augmentless nominals show significant overlap in their distribution, there are instances where their distributions are distinct, specifically, in subject position of subjunctives, relative clauses, and participial adjunct clauses. In these contexts, focused phrases are acceptable, but augmentless DPs are illicit. (70) illustrates with a subjunctive complement clause:

(70) Ndebele (Pietraszko, 2021, (28),(31))

    U-funa   [ukuthi *(u-)bani   a-buye   ]?
    2SG.SM-want   COMP   AUG-1who 1SM-come.SBJV

    'Who do you want to come?'

The chart in (71) summarizes a larger subset of the overall patterns of [+/-A] distribution in Ndebele, taking into account these distinct clause types:

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[21]To my knowledge it remains unknown whether Xhosa and Zulu show the same restrictions as Ndebele in this regard.

(71) Distribution of Ndebele Focus and [+/-A(ugment)] nominals (Pietraszko, 2021, (37))

	[+A DP]	Foc DP	[-A] DP
SV (indicative)	✓	✗	✗
SV (subjunctive)	✓	✓	✗
SV (relative clause)	✓	✓	✗
SV (participle)	✓	✓	✗
VS (any clause type)	✓	✓	✓

The distribution of augmentless nominals clearly overlaps with focus in a large number of contexts, but (at least in Ndebele) there are instances where their distribution comes apart. Pietraszko's puzzle is just as problematic for the account sketched in this paper as it is for Carstens and Mletshe (2016): if augmentless nominals are illicit in some subject positions where focused phrases are acceptable, the unacceptability of those augmentless nominals must have some distinct explanation. This is precisely what Carstens (2022a,b) argues, suggesting that preverbal focused subjects in Nguni are ruled out because of a labeling problem that arises due to their *u*Neg features, not on account of any restriction on focus properties. The approach in this paper likewise requires an independent explanation of these facts, whether it is Carstens' or some other.

6 Discussion

6.1 Information Structure is Syntactic

The main theoretical contribution of this paper is simply to re-affirm the most expansive theoretical contribution from Kratzer and Selkirk (2020): information structure features like focus and givenness are syntactically represented, and participate in morphosyntactic processes in the same way that would be expected for other syntactic features. Given the non-trivial nature of their claims, rigorous examination of their predictions is necessary. This paper provides detailed empirical arguments from new empirical domains, showing that a syntactic approach to focus and givenness is motivated from a broad range of Bantu languages.

This certainly poses problems for some perspectives on the limited properties of narrow syntax. For example, Chomsky (1995) conjectures that "[a]nother natural condition is that outputs consist of nothing beyond properties of items of the lexicon (lexical features)—in other words, that the interface levels consist of nothing more than arrangements of lexical features. To the extent that this is true, the language meets a condition of inclusiveness" (Chomsky, 1995, 206). Properties like focus and givenness as morphosyntactic features pose problems for this so-called *Inclusiveness Condition*, in that they are often not inherently lexical properties of a syntactic object: a lexical item can either be focused or given (or neither), depending on the discourse context of an utterance. I don't have too much to comment here except to say that this is clearly a different view of syntax. That's not to say that the inclusiveness condition is not a valuable desideratum for theorizing: to the contrary, it has instigated a fair degree of theoretical precision. Rather, the argument from Kratzer and Selkirk (2020) and from this paper is that there is an empirical impetus to allow (at least) focus and givenness features to be properties of syntactic derivations, even if they do not arise directly from the lexical entries of heads externally merged in the structure.

Some have explicitly proposed restricting the incorporation of information structure into narrow syntax.

(72) The Strong Modularity Hypothesis for Discourse Features (Horvath, 2010)
No information structure notions – i.e., purely discourse-related notions – can be encoded in the grammar as formal features; hence no ''discourse-related features'' are present in the syntactic derivation. They are available only outside the C_{HL}.

Horvath (2010) argues that the computational system for human language (C_{HL}) ought to only operate on features relevant to truth-conditional content (for some additional discussion, see van der Wal 2022 and Ostrove 2018, among others). Again, what is presented in this paper is an empirical argument to the contrary.

6.2 Counter-cyclic nature of ComP

A central feature of the properties of conjoint/disjoint distinctions and object marking constructions is that they are surface-oriented. To illustrate, consider the distinction between preverbal and postverbal subjects: a preverbal subject plays no role in the probing of the vP domain, but a postverbal subject intervenes. We assumed that movement precedes probing on Com°, but this poses a serious cyclicity puzzle in that ComP is located below TP: on normal assumptions of Merge-based structure-building, Com° is merged before TP and therefore when the probes on Com° do their work, the subject hasn't yet moved to TP.

As Sikuku and Diercks (2022) argue, this kind of surface-orientation also the case for Lubukusu OMing. OM-doubling is centrally related to an emphatic focus internal to the vP, but it is central that the focus be inside vP in its surface position.

(73) Lubukusu (Sikuku and Diercks, 2022)

    a. **Liina** ni-lwo ba-ba-ana ba-a-(#ka)- kes-a ka-ma-indi ?
        11when COMP-11 2-2-children 2SM-PST-6OM-harvest-FV 6-6-maize

        'When did the children harvest the maize?' *Requires verum*

    b. Ba-ba-ana ba-a-ka- kes-a ka-ma-indi **liina**?
        2-2-children 2SM-PST-6OM-harvest-FV 6-6-maize when

        'WHEN did the children harvest the maize?' *Does not require verum*

This is particularly relevant given the syntactic position of ComP: its morphological spellout and its syntactic interactions make it quite clear that it sits roughly at the edge of vP, and that has been the consensus for those working on these related constructions as well (Halpert concluded such for her LP, Zeller for his XP, and Carstens & Mletshe for their FocP). But, consistently, ComP appears to only be sensitive to elements that are in its c-command domain on the surface, not underlyingly. In a framework that builds structure from bottom-up like the Minimalist Program, it is therefore puzzling how probes on Com° manage to ignore potential intervening Goals that eventually move out of the scope of ComP. This countercyclicity has not been lost on those working on these accounts previously. Zeller (2015) proposes the "T Always Probes First" (TAPF) principle, stipulating that his XP (ComP here) can't probe until T probes. Halpert (2016) stipulates the order of probing features on L, requiring that LP raise a subject out of its scope before the Case-probe (that she claims is responsible for licensing augmentless nominals) can do its work. Sikuku and Diercks (2022) propose a Late Merger account, claiming that the clause structure to (at least) TP is constructed before ComP is merged.

Countercyclic puzzles like this are certainly troubling on an approach to structure building that is strictly bottom-up, i.e. where Merge is the only structure-building mechanism. That said, countercyclic puzzles of various sorts are deeply familiar among Minimalist researchers, with a broad range of proposals having been advanced to attempt to deal with them (Takahashi and Hulsey, 2009; Lebeaux, 1988; Stepanov, 2001). The countercyclicity of ComP noted here is a very important analytical component of the individual constructions being considered here (and therefore worth mentioning), and these constructions therefore need to be considered in the theoretical work that continues to address (apparent) counter-cyclicity. But no matter what solution ends up being accepted for the counter-cyclic component of the analysis of these constructions, the main claims of this proposal still stand with respect to the syntactic representation of information structure.

6.3 A new toolkit for theorizing about focus and givenness

The literature on the semantics and syntax of prosodic focus/givenness in Western European languages is expansive: for some overviews, see Büring (2016), Wagner (2021), Rochemont (2016), among others. Within this work, there is extensive debate on extraordinarily nuanced discourse-semantic circumstances and the effects on placement of nuclear pitch accents for focus and de-accenting for givenness. Consider, for example, the discussion of these examples from Wagner (2012) (elements bearing prosodic stress are in caps, and deaccented material is underlined). The example in (74) shows default assignment of the nuclear pitch accent: this sentence is acceptable in neutral discourse contexts.

(74) Mary's uncle brought a red CONVERTIBLE.

If convertibles are familiar from context, it is possible to pronounce the sentence with the nuclear pitch accent moved off of *convertible* and onto the preceding adjective. Notice that this induces constraints on context, however:

(75) *Mary's uncle, who produces high-end convertibles, is coming to her wedding. I wonder what he brought as a present.*

    a. He brought [a CHEAP convertible.]

    b. # He brought [a RED convertible.]
        (Rochemont, 2016, 60)

Wagner (2012) argues based on examples like this that deaccenting of a discourse-given element is not sufficient to explain the placement of the nuclear pitch accent. Despite *convertible* being discourse-given in both examples in (75), there is a simultaneous requirement that the element bearing the nuclear pitch accent be contrastive in some sense. Therefore, deaccenting of *convertible* is possible, in principle, but the presence of the pitch accent on the adjective in the examples above also places a requirement for relevant discourse contrast to be available for the accent-bearing adjective.

The point of offering this example is not to initiate an analytical discussion on the matter (plenty of that already exists: cf. Wagner 2012, 2021; Rochemont 2016). Rather, the intention is simply to illustrate the depth of nuance that is relevant to the semantics of focus/givenness marking. The relevant point here is that work on object marking, right-dislocation, conjoint/disjoint constructions, etc is not yet at that same level of sophistication with respect to discourse-semantic diagnosis. The extensive work on English prosodic focus (and related work) offers a clear pathway of future research on these topics based on Bantu languages with similar patterns to those reported here.

It also seems likely to me that because the grammatical mechanisms are so different (linear placement of intonational pitch accents vs. the structural mechanisms of Probes and Goals), Bantu languages could be particularly helpful to sorting out what are fundamental properties of the semantics of givenness/focus vs. what are properties that fall out from the grammatical mechanism. As discussed by Sikuku and Diercks (2022) (to give just one example), how "default" focus plays out is very different when the default is defined by a nuclear pitch accent vs. a probe and a Goal. Essentially, new grammatical mechanisms encoding the same semantic properties provide a new toolkit for investigating and theorizing about those semantic properties.

For example, consider the distinctions in "default" focus/givenness structures between English and Lubukusu. In English, default placement of the nuclear pitch accent is on the rightmost element in the verb phrase, which is compatible with a variety of focus interpretations.

(76) Maya ate the RICE.

        In response to OBJECT question: ✓
        In response to OOTB question: ✓
        In response to *v*P question: ✓
        In response to SUBJECT question: #

Compare the default pitch accent in (76) with the placement of the NPA on the subject *Maya* in (77).

(77) MAYA ate the rice.

        In response to OBJECT question: #
        In response to OOTB question: #
        In response to *v*P question: #
        In response to SUBJECT question: ✓

This sentence, in contrast, cannot answer any of the questions noted above: it is incompatible with object, verb phrase, or whole-sentence focus. Instead, this sentence is *only* compatible with focus on the subject. What we see, then, is that default stress assignment is compatible with the broadest range of focus constructions, but non-default assignment narrows the range of focal context the utterance is compatible with.

The same situation appears in Lubukusu object marking, as demonstrated by Sikuku and Diercks (2022). OM-doubling the structurally higher object in (78) is compatible with focus on a broad range of contexts.

(78) *Context: discussions of delivery of a dowry for a wedding*

Wafula a-⎡ba-⎤reer-eere ⎡ba-akhwe⎤ chi-khaafu chi-neefu lukali likolooba
1Wafula 1SM-2OM-bring-APPL.PFV 2-in.laws 10-cows 10-fat very 10-only yesterday

'Wafula brought his in-laws really fat cows yesterday.'
       In response to Temporal Question: ✓
       In response to THEME Question: ✓
       In response to RECIPIENT Question: ✓
       In response to *v*P Question: ✓
       Assuming 'noteworthy' emphasis on correct element in each case
(Sikuku and Diercks, 2022)

In contrast, doubling the lower object is only consistent with focus on the doubled object itself: (79) can only serve as an answer to a theme question.

(79) *Context: discussions of delivery of a dowry for a wedding*

Wafula a-⎡chi-⎤reer-eere ba-akhwe ⎡chi-khaafu chi-neefu lukali⎤ likolooba
1Wafula 1SM-10OM-bring-APPL.PFV 2-in.laws 10-cows 10-fat very yesterday

'Wafula brought his in-laws REALLY FAT COWS yesterday.'
       In response to Temporal Question: #
       In response to THEME Question: ✓
       In response to RECIPIENT Question: #
       In response to *v*P Question: #
(Sikuku and Diercks, 2022)

Here we can see that a longer-distance probing operation in (79) is possible under very specific conditions, narrowing the range of focus contexts that OM-doubling is compatible with.

The point is not to analyze this issue in detail, but to illustrate how a recognition of the syntactic role of information structure can in fact provide a fresh perspective on familiar problems. For example, a common explanation of the English facts is that all constituents must be F(oC)-marked, and therefore placing the nuclear pitch accent on the most deeply embedded constituent ensures that some subconstituent of most phrases in the sentence contains a pitch accent (cf. Schwarzschild 1999, Selkirk 1984, 1996, Rochemont 1986, Büring 2016, among others). Yet, in Lubukusu we find the same distinction between the default being compatible with a broader range of focus contexts, and a non-default marking narrows the range of focus interpretations that are available. But none of the direct-containment argumentation that has been common for explaining the English facts can apply to the Lubukusu situation: in Lubukusu, the focused element in the 'default' object marking context is often a non-commanding phrase inside the verb phrase that is distinct from the object marked constituent. Nonetheless, the distinctions in broad/default focus-marking vs. narrow focus-marking is persistent in grammatically distinct kinds of focus-marking (where default focus is compatible with many contexts, and narrow focus is compatible with a restricted range of contexts).

7 Conclusions

I have argued in this paper that Kratzer and Selkirk (2020) are fundamentally correct in that focus and givenness are syntactic phenomena that need to be incorporated directly into the narrow syntax. This conclusion was argued to be necessary to account for object marking constructions in multiple Bantu languages, where a functional projection bearing focus and givenness probes is well-motivated. In this paper I show that this account can be extended to account for conjoint/disjoint distinctions, as well as the distribution of unaugmented DPs in a variety of southern Bantu languages, providing a novel account of several constructions of ongoing research interest.

The result is a unifying approach to disparate phenomena across a broad range of languages, which in itself is desirable. But in doing so, it also provides a strong argument in favor of Kratzer and Selkirk's (2020) syntactic

approach to information structure. While they are (mostly) accounting for intonational phenomena in English, the range of phenomena tackled in this paper are inarguably syntactic: object marking (i.e. clitic doubling) constructions, the distribution of verbal inflections based on vP constituency (conjoint/disjoint), and the distribution of DPs.

The ComP analysis (i.e. the particular syntactic projection housing focus/givenness features) need not have any universal status in order for the core theoretical claims here to hold: presumably, ComP is an innovation specific to the Bantu language family, where focus/givenness evolved to be centrally related to middlefield inflectional properties of the clause. But this syntactic implementation would not be possible if focus and givenness are not syntactically represented, which is the core theoretical contribution of this paper: an affirmation of Kratzer and Selkirk's (2020) claim that information structure is indeed a morphosyntactic phenomenon.

The conclusion is a formalization of information structure in Bantu languages within the morphosyntax that serves to account for a range of properties related to agreement and the distribution of noun phrases. These conclusions certainly raise interesting questions about a long-standing theoretical debate about the nature of DP-licensing (so-called "Abstract Case," also known as Vergnaud Licensing) in Bantu languages (Harford Perez, 1985; Diercks, 2012; Halpert, 2016; Carstens and Mletshe, 2015, 2016; van der Wal, 2015; Sheehan and van der Wal, 2016, 2018, , among others). There are a large number of constructions across Bantu languages that are anomalous on standard approaches to DP licensing, and conclusions like those reported in this paper raise the prospect that patterns explained on the basis of Case in other languages are (at times) better-explained by information structure in Bantu languages, suggesting a potential connection between those two domains in this language family (van der Wal 2022 suggests something similar).

Finally, this analysis advanced here offers some promise for explaining the widespread immediately-after-verb (IAV) effects, where focused phrases in many Bantu languages must appear adjacent to the verb. The comments on Cinyungwe in §3.4 provide a model to that effect, though the particulars in each language of course require their own attention.

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