Checking Economy

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This article argues for a restrictive asymmetric checking theory according to which only formal features of functional heads need to be checked for convergence. This theory enables us to dispense with several economy conditions assumed within Chomsky's (1995) checking theory: the Equidistance Condition, Last Resort (Greed), the multiple-Spec hypothesis, and the assumed null cost of Merge as a feature-checking operation. Empirical data supporting these arguments come mainly from Kirundi (Bantu) subject-object reversal and transitive expletive constructions.

Keywords: asymmetric checking theory, Last Resort, equidistance, multiple specifiers, Merge, economy

A leading idea of the Minimalist Program is that the theory of the language faculty must meet general considerations of conceptual naturalness that have some independent plausibility in formal sciences—that is, simplicity, economy, symmetry, nonredundancy, and the like. Under this view, the linguistic theory must be built on minimal assumptions that are strictly necessary and essential on conceptual grounds, and traceable to empirical evidence. My aim is to contribute toward reaching this goal by discussing conceptual issues related to Chomsky's (1995) checking theory, a core property of the computational component of the minimalist framework.

Specifically, I explore (a) the necessity of the Equidistance Condition, Last Resort (Greed), and the multiple-Spec hypothesis, and (b) the assumed null cost of Merge as a checking operation. I show that a very slight modification of current assumptions on feature checking, which basically restricts checking requirements to formal features (FFs) of functional categories rather than FFs of lexical items, enables us to dispense with the aforementioned principles and economy conditions on feature checking, thus eliminating or at least sharply reducing redundancy and potential blowup of economy calculations, inescapable under the current checking theory.

Such an approach, which is very much in the spirit of the crucial role played by functional categories in computational processes (Chomsky 1995) and language variation (Borer 1984), will be empirically confirmed through a close investigation of two syntactically and semantically related constructions in Kirundi (a Bantu SVO language): so-called subject-object reversal (OVS) (Kimenyi 1980, 1988, and Kinyalolo 1991) and transitive expletive constructions (TECs). Illustrations are given in (1b–c), respectively, from the canonical SVO order in (1a). Note that (1b) and

(1c) have the same meaning. They both imply a contrastive focus reading on the postposed logical subject.

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

     b. Amatá y-á-nyôye   abâna.   OVS
         milk   3S-PST-drink:PERF children
         [Lit.: 'Milk drank children.']
         'Children (not parents) drank milk.'

     c. pro_exp ha-á-nyôye   amatá abâna.   TEC
                   LOC-PST-drink:PERF milk   children
         [Lit.: 'There drank milk children.']
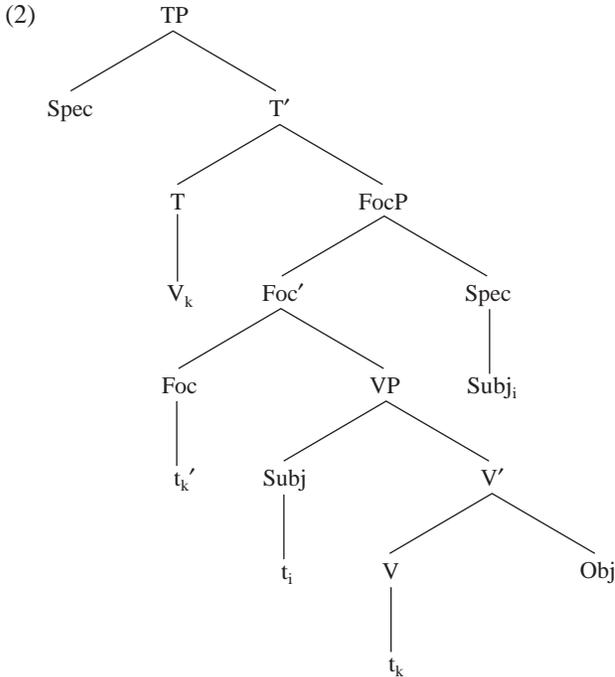   'Children (not parents) drank milk.'

These types of constructions have received much attention in recent developments of the Minimalist Program. In fact, Ura (1996) uses the Bantu OVS construction (1b) as evidence that the Equidistance Condition is required in the definition of Attract F (see section 3.2). However, a deeper analysis of this construction will reveal that it goes against rather than supporting the Equidistance Condition.

Furthermore, Chomsky (1995) considers Icelandic TECs, whose superficial structure is of the form 'There bought many students the book', as an instance of the multiple-Spec hypothesis. He proposes that the (logical) subject and the expletive in Icelandic fill two layered [Spec, TP] positions; that is, T projects more than one specifier position (Spec) in TECs. I will show in section 4 that Icelandic and Kirundi TECs share interesting properties that lead to an account involving two different functional projections rather than two layered [Spec, TP] positions.

Adopting an Agr-less clause structure as in Chomsky 1995, I argue that OVS and TECs derive from the existence of a functional head Focus (Foc) located between TP and VP, whose Spec (an Ā-position) is the landing site of the moved Subj, as depicted in (2).[1] After Ā-movement of Subj to [Spec, FocP], either Obj overtly raises to [Spec, TP], yielding OVS (1b), or a null expletive is merged into [Spec, TP], yielding a TEC (1c).

(2) is clearly untenable under the current checking theory. Indeed, Ā-movement of Subj to [Spec, FocP] leaves Subj with an unchecked Case feature, a violation of Last Resort (Greed), which requires that lexical categories check their −Interpretable FFs, for convergence. Further-

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[1] In section 2 I present empirical motivations for the assumed TP-internal Focus projection in (2), the Ā status of [Spec, FocP], and the overt movement of focused phrases (either arguments or adjuncts) in SVO sentences. In section 3.4.2 I discuss another issue, pointed out by an anonymous *LI* reviewer—namely, why in (2) FocP is the only projection with its Spec on the right. I will suggest that this unique behavior of FocP is related to prosodic properties of theme-rheme structures, which in many cases (such as English heavy NP shift) involve rightward extraposition. Chomsky (1995) makes a similar proposal for [Spec, TP] in TECs, to account for the word order contrast between Icelandic TECs and some more or less acceptable English ones.

(2)

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                              TP
                      ┌───────┴───────┐
                    Spec              T′
                              ┌───────┴───────┐
                              T              FocP
                              │       ┌───────┴───────┐
                             V_k    Foc′            Spec
                              ┌──────┴──────┐        │
                            Foc            VP      Subj_i
                              │      ┌──────┴──────┐
                            t_k′   Subj           V′
                              │           ┌────────┴────────┐
                             t_i          V               Obj
                                          │
                                         t_k
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more, raising of Obj to [Spec, TP] over two Specs ([Spec, VP] and [Spec, FocP]), yielding OVS (1b), violates the Equidistance Condition.

On the other hand, (2) is permitted under the revised checking theory—that is, (a) if only FFs of functional categories need to be checked for convergence, contra Last Resort (Greed), and (b) if the Equidistance Condition is dispensed with. Ā-movement of Subj to [Spec, FocP] is driven by the strong focus feature. Raising of Obj to [Spec, TP], forming OVS (1b), and Merge of the null expletive with [Spec, TP], forming a TEC (1c), are both triggered by the strong EPP (Extended Projection Principle) and nominative Case features of T. Thus, all the FFs of the two functional heads having been checked, (1b–c) are correctly predicted to converge.

Moreover, I will show that (2) may be extended to Icelandic TECs, modulo a leftward position for [Spec, FocP]. Accordingly, TECs do not offer empirical support for the multiple-Spec hypothesis (at least for TP or vP). Finally, I will argue that the assumption that Merge is ''cost-free'' is too strong. Among other things, such an assumption fails to capture the unaccusativity restriction on *there*-insertion in English expletive-associate constructions (see section 1.1). I will argue in section 4.2 that this restriction, which applies in English but not in Kirundi, finds a succinct account if Merge as a feature-checking operation is costlier than Shortest Attract, in a way to be made explicit.

The discussion is organized as follows. Section 1 outlines the main assumptions of the current checking theory, in order to highlight the modifications I am proposing and the empirical reasons behind them. Section 2 argues for the existence of a TP-internal Focus projection in Kirundi SVO sentences, the assumed Ā status of [Spec, FocP] (hence a non-Case-checking position), and the

claim that focused phrases overtly move to that Spec. Section 3 tackles the syntax of the Kirundi OVS construction. The discussion begins with a short survey of some basic properties of this construction. Then Ura's (1996) account of the construction in Bantu is summarized and shown to be unsatisfactory. The alternative analysis in (2) is introduced and defended in section 3.3. Section 3.4 draws two theoretical consequences from the proposed analysis of OVS. The first is the elimination of the Equidistance Condition and Last Resort (Greed) as economy conditions on derivations. The second deals with Kayne's (1994) Linear Correspondence Axiom (LCA). Indeed, the assumed rightward Ā-movement of Subj in (2) goes against the LCA, which, among other things, precludes rightward Ā-movement. Section 3.4 considers alternative analyses to (2), which would be compatible with the LCA, but which will appear to be untenable, thus suggesting that rightward Ā-movement in (2) is a legitimate option, presumably a merely PF property. Section 4 extends this account to Kirundi and Icelandic TECs, arguing that the multiple-Spec hypothesis for TP and *v*P (at least) should be reconsidered, as well as the assumed null cost of Merge as a feature-checking operation. Finally, section 5 tentatively sets parameters distinguishing English-, Icelandic-, and Kirundi-type languages with respect to the presence/absence of OVS and TECs. Concluding remarks appear in section 6.

1 Checking Theory

1.1 Formal Features and Asymmetric Checking

Chomsky (1995) adopts the following assumptions regarding formal features:

Assumption 1
Formal features (FFs) are syntactic objects accessible in the course of the derivation (computation C_{HL}). They are encoded in lexical items and functional heads selected from the lexicon.

Assumption 2
There are different types of FFs: categorial features (N, V, D), ϕ-features (number, person, and gender), and Case features (nominative, accusative, etc.).

Assumption 3
Feature checking takes place when (FFs of) lexical items are attracted into the checking domain of a functional (nonsubstantive) category. Feature checking is achieved if and only if FFs of both lexical items and functional categories involved in the checking relation are of the same sort.

Assumption 4
FFs differ from each other with respect to their interpretability. Some FFs are +Interpretable; others are −Interpretable. −Interpretable FFs must be checked and erased at LF, for convergence. +Interpretable FFs need not be checked (but see below). Among −Interpretable FFs are the Case feature of DP arguments, the Case-assigning feature of T and V, and ϕ-features of verbs and adjectives. Among +Interpretable FFs are categorial features generally and ϕ-features of nouns.

One note is in order here regarding interpretability and erasure. In Chomsky's system, not all +Interpretable features involved in a checking relation survive at LF. For instance, the categorial D-feature (i.e., EPP feature) of T, though inherently +Interpretable, is deleted and erased from T at LF after having been checked, but remains on the DP argument that checks it. Likewise, the *wh*-feature of C, also +Interpretable, is erased from C at LF, but remains on the lexical category that enters into a checking relation with it. This assumption clearly implies that inherently +Interpretable FFs of functional heads are always −Interpretable at LF, since they must be checked and erased for convergence. This is an important point, to which I return shortly.

Assumption 5
FFs differ with respect to strength. Some are strong; others are weak. Strong FFs must be checked before Spell-Out; weak FFs can be checked at LF. Importantly, in Chomsky's system only FFs of functional categories can be strong. Lexical categories do not have strong features.

From the latter two assumptions, it appears that being −Interpretable and strong are the only properties of FFs that trigger the operation of feature checking. A nontrivial question then arises. Is it imperative that −Interpretable FFs of lexical categories (such as Case features of arguments) be checked for a derivation to converge? The answer is no, for the following reasons.

First, according to assumption 3, FFs of lexical categories are checked within the domain of a functional category. Incidentally, all FFs of functional categories are assumed to be −Interpretable at LF, hence must be checked, for a derivation to converge. Therefore, on minimalist grounds it seems redundant to require that lexical items check their FFs, given that feature checking takes place within the domain of a functional category whose FFs, being −Interpretable at LF, need to be checked independently, for convergence.[2]

Second, in Chomsky's system, feature checking can be achieved either by Attract F or by Merge. Importantly, under the Merge option, −Interpretable FFs of lexical categories may remain

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[2] One empirical argument against the requirement that lexical categories check their −Interpretable FFs comes from participial agreement in French. Such agreement takes place only when the internal argument has overtly Ā-/A-moved, as in (ib–c). Otherwise, it does not show up (ia); hence the ungrammaticality of (id). I put aside optional participial agreement in Ā-chains (ib), which is irrelevant here (see Kayne 1989 for more discussion based on a variety of Romance languages).

(i) a. Jean a détruit la maison.
       John has destroyed the house
   b. Voici la maison que Jean a détruite.
       here-is the house that John has destroyed
   c. La maison a été détruite.
       the house has been destroyed
   d. *Jean a détruite la maison.
       John has destroyed the house

According to Chomsky (1995), feature checking may take place at LF, by covert movement of FFs. Furthermore, the latter triggers overt agreement (see footnote 3). If this is correct, then the absence of participial agreement in (id) indicates that the FFs of the DP argument do not undergo covert movement. Therefore, the FFs of both the internal argument and the participle in (ia) remain unchecked at LF; yet the derivation does not crash. This is expected under the assumption that FFs of lexical categories are not required to be checked.

unchecked. This is the case in French expletive-associate constructions, if Chomsky's analysis of this construction is correct.[3]

For these two reasons, it seems that only FFs of functional categories need to be checked for convergence. Therefore, unchecked −Interpretable features of lexical items do not cause a derivation to crash (contra Greed). An important issue arises here, however.

The assumption that −Interpretable FFs of lexical categories do not block convergence is counterintuitive in a system requiring that all −Interpretable features be eliminated prior to or at the relevant interface. Yet this striking puzzle can be solved (a) if as suggested by Collins (1997:chap. 5, fn. 4) the distinction between +Interpretable and −Interpretable features is viewed as a distinction between inherent and relational features, and (b) if the stipulation that lexical categories drawn from the lexicon enter the derivation fully inflected (see assumption 1) is relativized, in the following way: Lexical items enter the derivation with inherent features only (i.e., +Interpretable features, such categorial features as V- or N-features, and φ-features of N). As for relational features (i.e., −Interpretable features, such as Case features of V or DP, and agreement features of V or A), they are generated into positions of functional projections only.[4]

On empirical grounds, there are good reasons to believe that this approach is plausible. For instance, suppose that English V enters the derivation with its tense and agreement features, as standardly assumed. If so, then it is not at all clear why these features do not appear on V at PF (or how they are eliminated) when *do*-support applies—that is, when, for instance, Neg blocks raising of FFs of V to T. A more general problem is that the decision about whether V enters the derivation with all its FFs (or what kind of FFs it enters the derivation with) must always refer to what will happen later in the computation, which is unknown at this particular step of the derivation.

In the same vein, consider French participial agreement. In order to decide whether the participle enters the derivation with a specific agreement feature, we must already know the φ-features of the DP Obj and whether or not the latter will undergo overt movement. This is clearly an undesirable approach on minimalist grounds (see Collins 1997 for a detailed discussion of such global economy calculations).

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[3] Consider the agreement asymmetry in (ia–b) between English- and French-type expletive constructions:

(i) a. There appear(P) to be many unsolved questions(P).
     b. Il semble(S) y avoir plusieurs questions(P) non-résolues.

In English (ia) the expletive *there*, lacking Case features, checks only the D-feature (EPP) of T. The nominative Case and φ-features of T are checked at LF, by raising of the FFs of the associate. This covert raising triggers agreement with the associate. In French (ib), on the other hand, the expletive *il* has all the features needed to check the FFs of T. Accordingly, the FFs of the associate do not raise at LF, hence no agreement is triggered with the associate. Under this analysis, FFs of the associate remain unchecked at LF. This is exactly what is predicted if lexical categories need not check their FFs.

[4] Note in passing that this view is implicitly adopted (at least for V) in the VP shell structure of Chomsky (1995) (see section 3.2), where *v* stands for a nonsubstantive head (i.e., a functional category, given that it is a checking domain) and bears the accusative Case feature of V, which will be checked by the raised DP object. Under this view, the logical conclusion is that V (i.e., the head of the VP complement of *v*) enters the derivation without Case.

For these reasons, it seems appropriate to assume that lexical items do not enter the derivation with (relational) −Interpretable features, the latter being a property of functional heads only. Therefore, the puzzle about how they check these FFs does not arise.

To summarize, I have made the following emendation to Chomsky's assumptions about FFs. Only functional categories need to check their (inherently) −Interpretable FFs for convergence. Lexical categories do not need to check their FFs, because they are not inflected for −Interpretable FFs when they are selected from the lexicon. Under this view, feature checking deletes FFs of functional heads, a view quite in the spirit of the asymmetric nature of feature checking adopted in Chomsky 1995.

1.2 Equidistance and Minimality

Chomsky (1993, 1994) introduced the Minimal Link Condition (MLC) as an economy condition on the operation Move. This condition bars longer movement from α to K if there is a shorter legitimate movement from β to K.

By reinterpreting Move as Attract, Chomsky (1995) incorporates the MLC into the definition of the operation Attract F stated in (3).

(3) a. *Attract F*
     K attracts F if F is the closest feature that can enter into a checking relation with a sublabel of K. (Chomsky 1995:297)
   b. *Closeness*
     If β c-commands α and τ is the target of raising, then β *is closer to* K than α unless β is in the same minimal domain as (i) τ or (ii) α. (Chomsky 1995:356)

The idea in (3a) is that a feature K attracts another feature F if both are of the same sort and if a checking operation takes place. This underlies the condition known as Last Resort.[5] I will keep (3a) as formulated but with a more restrictive interpretation. I assume indeed that K attracts F because K (rather than F)[6] needs to be checked. Under this assumption, derivations are predicted to converge without Attract F insofar as K can be checked by other means. As noted in section 1.1, this prediction is confirmed by French-type expletive constructions (see footnote 2) and challenges the standard Greed-based checking theory.[7]

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[5] This condition is defined as follows: Move F raises F to target K only if F enters into a checking relation with a sublabel of K (Chomsky 1995:280). Attract F in (3a) includes this requirement.

[6] To be more precise: Given the assumption that lexical items entering the derivation do not contain −Interpretable FFs, what does it mean to say that K attracts F? Since feature checking is standardly assumed to be an operation of deletion, one could tentatively consider F as an inherent abstract feature (i.e., a bare slot) of the lexical item that checks/ eliminates the attractor FF of the functional category. This stipulation does not affect the main aspects of the general approach adopted here.

[7] Different versions of Greed have been proposed—among others, Lasnik's (1995) Enlightened Self-Interest and Collins's (1995, 1997) Greedier. The basic intuition of these formulations (which were introduced to account for cases of asymmetric feature checking) is similar to Last Resort, incorporated into (3a). The very restrictive interpretation of (3a) I am suggesting here obviously leads to the elimination of any versions of Greed (Last Resort) that require that lexical categories check their −Interpretable FFs for a derivation to converge, since I assume that they are not inflected for such relational features when selected from the lexicon.

The definition of closeness (3b) includes two cases. Case (i) states that β does not bar raising of α to the target τ if β and τ are in the same minimal domain. Case (ii) states that β does not bar raising of α to the target τ if β and α are in the same minimal domain (i.e., if β and α are equidistant from τ). I propose a modification of (3b) that eliminates the Equidistance Condition (ii) entirely, thus restricting closeness (MLC) to the c-command requirement (i), as stated in (4).

(4) *Closeness (MLC)*
    If β c-commands α and τ is the target of raising, then β is closer to τ than α.

To summarize this section: I have suggested two modifications to current assumptions on feature checking. First, feature checking is driven solely by the need to check FFs of functional categories; lexical categories selected from the lexicon do not enter the derivation with −Interpretable features (the latter being an inherent property of functional heads exclusively). Hence, Last Resort (Greed) can be eliminated. Second, the closeness condition on Attract F can be reduced to c-command. Hence, the Equidistance Condition is also dispensable.

2 Focus in SVO

2.1 A TP-Internal Focus Projection

In sections 3 and 4 I will show that the assumptions made in section 1 regarding feature checking and Attract F are empirically supported by OVS and TECs. First, however, I motivate the Focus projection assumed in (2), an important point for the analysis of those constructions.[8]

Consider the following SVO sentences of Kirundi:

(5) a. Abâna   ba-á-*ra*-nyôye   amatá.   SVO
         children 3P-PST-F-drink:PERF milk
         'Children drank milk.'
     b. Abâna   ba-á-(*ra)-nyôye   amatá.   SVO (Focus = Obj)
         children 3P-PST-(F)-drink:PERF milk
         'Children drank milk (not water).'
     c. Abâna   ba-á-(*ra)-nyôye   iki?   SVO (*wh* = Obj)
         children 3P-PST-(F)-drink:PERF what
         'What did children drink?'

In (5a) the verb contains a morpheme that requires special attention: the italicized particle *-ra-*, which follows the past tense marker *-á-*. Some traditional grammars call this particle an

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[8] The existence of a Focus projection internal to TP has been reported in several languages—among them, Hungarian and Basque (Horvath 1986), Chadic languages (Schuh 1982, Newman 1974, Kidda 1985, Kenstowicz 1985, Tuller 1992), and Bantu languages such as Kikuyu (Clements 1985). Furthermore, the surface position of TP-internal focused phrases varies crosslinguistically. In some languages they are immediately adjacent to the verb: V Foc DO. This is the case notably in Hungarian, Basque, and at least one Chadic language, Podoko. In other languages focused phrases follow the Obj: V DO Foc. This pattern is widely attested in Chadic languages such as Tangale, Kanakuru, and Ngizim. Following Horvath (1986), Tuller (1992) argues that a syntactic focus feature is associated with the category I in Chadic and that focused constituents Ā-move into the domain of I to receive that feature. In the same vein, I argue below for a TP-internal Focus projection dominating VP in Kirundi, as depicted in (2).

''antifocus'' marker. Other describe it as a ''focus functor'' or a ''mood-force'' indicator. What-ever the particle *-ra-* is called, the most relevant point here is that its presence/absence on the verb triggers some important semantic effect. Indeed, when *-ra-* shows up on the verb, as in (5a), the sentence receives a neutral reading. Thus, (5a) would be appropriate as an answer to the question ''What happened yesterday?'' but not to ''What did children drink?'' In (5b) *-ra-* is dropped. As a result, Obj receives a focus reading. Thus, (5b) would be appropriate in response to the question ''What did children drink?'' but not to ''What happened yesterday?'' In (5c) Obj is questioned, and *-ra-* cannot appear.[9] Note that (5c) is a true question (not an echo question), as shown in the translation.

The semantic contrast between (5a) and (5b) clearly shows that there is a semantic feature associated with the presence/absence of *-ra-*. What is the exact nature of this feature? In order to answer this question, let us look at the syntactic distribution of that particle.

Observation 1: The marker *-ra-* is in complementary distribution with the negation marker, even though the two markers show up in different structural positions on the inflected verb, as illustrated in (6a–c). In (6a) the negation marker *-nti-* appears before both the subject-verb agree-ment marker and the past tense marker. In (6b) the antifocus marker *-ra-* follows the past tense marker. (6c) shows that the two markers cannot cooccur.

(6) a. Abâna *nti*-ba-á-nyðye   amatá.   SVO
     children NEG-3P-PST-drink:PERF milk
     'Children didn't drink milk.'

   b. Abâna   ba-á-*ra*-nyðye   amatá.   SVO
     children 3P-PST-F-drink:PERF milk
     'Children drank milk.'

   c. *Abâna *nti*-ba-á-*ra*-nyðye   amatá.   SVO
     children NEG-3P-PST-F-drink:PERF milk

Observation 2: The particle *-ra-* is disallowed in sentences involving an apparently unmoved *wh*-phrase (5c) and in *wh*-constructions involving Ā-movement to initial [Spec, CP], such as cleft constructions (7a–b).

(7) a. Ni abâna$_i$ [$_{CP}$ Op$_i$ [$_{TP}$ t$_i$ ba-á-(**ra)-nyðye   amatá]].
     be children   3P-PST-(F)-drink:PERF milk
     'It was children who drank milk.'

   b. Ni amatá$_i$ [$_{CP}$ Op$_i$ [$_{TP}$ abâna   ba-á-(**ra)-nyðye   t$_i$].
     be milk   children 3P-PST-(F)-drink:PERF
     'It was milk that children drank.'

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[9] This suggests that *wh*-phrases are inherently focused, a claim independently made by many other authors, among them Horvath (1986), Stjepanović (1995), Kim (1997), and Bošković (1998). Indeed, as Bošković points out, there is a clear similarity in the interpretation of *wh*-phrases and contrastively focused phrases. He notes that ''in contrast to simple new information focus, with contrastive focus the set over which the focus operates is closed.'' He further points out, following Stjepanović, that ''a similar situation is found with *wh*-phrases, whose value is drawn from an inferable and therefore closed set of items, delimited by the question itself'' (1998:11).

Observation 3: Although the particle *-ra-* cannot show up on the verb in *wh*-constructions (5c) and (7), it appears in yes-no questions, as in (8a). Note that there is no I-to-C movement in Kirundi yes-no questions. Thus, (8a) has the same word order as the simple declarative sentence (8b). They differ only in prosody: there is a rising intonation in (8a), similar to the one found in English yes-no questions.

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

Observation 4: The particle *-ra-* appears in matrix (and main) clauses. It never shows up in embedded CPs that allow *wh*-movement. Consider (9a–b). In (9a) the embedded CP headed by *ko* precludes the presence of *-ra-* on the embedded verb. In (9b) the embedded CP headed by *ngo* allows *-ra-* on the embedded verb.[10]

(9) a. Yohani a-á-vuze   *kó* pro a-á-(*ra)-nyôye   amatá].
         John   3S-PST-say:PERF C   3S-PST-(F)-drink:PERF milk
         'John said that he drank milk?'
     b. Yohani a-á-vuze   *ngo* pro a-á-*ra*-nyôye   amatá]?
         John   3S-PST-say:PERF C   3S-PST-F-drink:PERF milk
         'John said that he drank milk?'

(10a) shows that *wh*-movement of the internal argument of the embedded CP in (9a) is possible. That is not the case for (9b), as shown by the ungrammaticality of (10b).

(10) a.   Amatá$_i$ [$_{CP}$ Op$_i$ [$_{TP}$ Yohani a-á-vuze [*kó* pro a-á-nyôye   t$_i$ . . .]
          milk   John   3S-PST-say C   3S-PST-drink:PERF
          'The milk that John said he drank . . .'
      b. *Amatá$_i$ [$_{CP}$ Op$_i$ [$_{TP}$ Yohani a-á-vuze [*ngo* pro a-á-nyôye   t$_i$ . . .]
          milk   John   3S-PST-say C   3S-PST-drink:PERF
          'The milk that John said he drank . . .'

A generalization arises from the facts in (7)–(10): matrix clauses containing a *wh*-word and embedded CPs that allow *wh*-movement do not permit *-ra-* to appear on the verb, whereas matrix clauses without a *wh*-word and embedded CPs that resist *wh*-movement do permit it to appear. What does this tell us about the nature and function of the marker *-ra-* in (5a) and its null counterpart in (5b–c)?

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[10] CPs headed by *ko* (9a) are very similar to their English counterparts (as shown in the translation). CPs headed by *ngo* (9b) are, roughly speaking, similar to English quotative constructions (of the form *John said, ''You must do this again''*).

According to Chomsky (1995), matrix clauses such as *John left* are dominated by a CP whose null head C has an LF declarative feature. This C is assumed to be different from the C heading embedded CPs. Chomsky gives some discourse properties distinguishing the two types of CPs. Thus, the utterance ''John left'' is appropriate as an answer to the question ''What happened yesterday?'' but not to ''Who left?''[11] Embedded CPs do not follow this pattern. Interestingly, English matrix clauses show the same discourse properties as Kirundi sentences containing the particle *-ra-* on the verb (cf. (5a) and (5b)).

On the basis of this discourse similarity, one could reasonably suppose that the particle *-ra-* realizes some kind of declarative feature similar to the one assumed by Chomsky for the null C of English matrix clauses. This hypothesis is syntactically corroborated by the fact that *-ra-* cannot appear in embedded CPs headed by a [+ wh] C (i.e., one allowing *wh*-movement), as in (9a). The null counterpart of *-ra-* in (5b–c) may be seen as bearing a *wh*-feature. This would justify the focus/*wh* reading of the Obj in (5b–c). Thus, the only difference between English and Kirundi would be that this LF feature is linked to C in English whereas it is realized in Kirundi by a functional head lower than T, which I will call *Focus*.

Now, it remains to be shown that Focus is indeed lower than T. The fact that the particle *-ra-* that overtly fills this position linearly follows T suggests that this is the case. One additional supporting argument comes from the interpretation of focused phrases with respect to the scope of negation, illustrated in (11).

(11) Yohani *nti*-a-á-somye   ibitabo bibiri.
     John   NEG-3S-PST-read:PERF books   two
     a. 'John didn't read two books.'
     b. 'John didn't read two books (he read only one).'

(11) has two readings: a neutral reading (11a) and a focus reading affecting the Obj (11b).[12] Interestingly, under the focus reading of the quantified Obj, the latter remains within the scope of Neg. Thus, (11b) cannot have the following reading: 'It was two books that John didn't read'. This suggests that the Focus position is c-commanded by Neg, hence lower than TP. In section 3.4.2 I present another, stronger argument in favor of the TP-internal Focus hypothesis, based on *wh*-extraction asymmetries between different types of adjuncts in OVS. The relevance of this argument will become clear only after the analysis of OVS.

2.2 Overt Rightward Ā-Movement of Focused/Wh Phrases

Two arguments show that focused phrases in SVO sentences overtly move to the rightward [Spec, FocP] in (2) and that the latter is an Ā-position. These arguments deal with (a) focus and adverbial placement, and (b) focus in Obj control constructions.

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[11] Some speakers allow the utterance ''John left'' as an answer to the question ''Who left?'' Others find it a bit odd, unless *John* is assigned a focus accent. In French ''Jean est parti'' is not an acceptable answer to the question ''Qui est parti?'', whether *Jean* is stressed or not.

[12] The neutral reading is more obvious with a nonquantified Obj.

2.2.1 Focus and Adverbial Placement Consider first sentences (12a–b). In (12a) the antifocus marker *-ra-* appears on the verb, and the direct Obj receives a neutral (nonfocused) reading. In (12b) *-ra-* is dropped, and the Obj becomes focused.

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

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

In (13) the Obj of (12a) is replaced by a clitic (incorporated) pronoun. Crucially, in this case the antifocus marker *-ra-* must be realized (13a), as shown by the ungrammaticality of (13b). This indicates that weak pronouns cannot be focused.

(13) a. Abâna   ba-á-*ra*-ya-nyôye.
          children 3P-PST-F-CL-drink:PERF
          'Children drank it.'

      b. Abâna   ba-á-*(ra)-ya-nyôye.
          children 3P-PST-(F)-CL-drink:PERF
          'Children drank it.'

Now consider sentences (14a–b), which contain a VP modifier. (14a) shows that the non-focused internal argument is strictly adjacent to the verb. In (14b) the manner adverb intervenes between argument and verb, and the sentence is ill formed.

(14) a. Yohani a-á-*ra*-oógeje   imiduga néezá.
          John   3S-PST-F-wash:PERF cars   well
          'John washed cars well.'

      b. *Yohani a-á-*ra*-oógeje   néezá imiduga.
          John   3S-PST-F-wash:PERF well   cars

One could assume that in (14a) the manner adverb is left-adjoined to VP, and Obj overtly raises to the Spec of a functional head higher than VP, to check a strong FF of that head. This would explain the ungrammaticality of (14b), where Obj has not overtly raised. Such an explanation is untenable, however.

Indeed, if we keep the surface word order in (14a–b) unchanged and drop the antifocus marker *-ra-* on the verb, (14b) becomes grammatical, as shown by (15a), and Obj receives a focus interpretation. (14a) remains well formed, as shown by (15b), but now focus is on the adverb, not on the direct Obj, or on both.[13]

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[13] That Obj in (15b) is not focused is proved by its ability to be replaced by a clitic pronoun, as in (i).

(i) Yohani a-á-*zi*-oógeje   néezá.   (Focus = Adverb)
    John   3S-PST-CL-wash:PERF well
    'John washed them well (not badly).'

(15) a. Yohani a-á-oógeje   néezá imiduga.   (Focus = Obj)
        John   3S-PST-wash:PERF well   cars
        'John washed cars well (not trucks).'

     b. Yohani a-á-oógeje   imiduga néezá.   (Focus = Adverb)
        John   3S-PST-wash:PERF cars   well
        'John washed cars well (not badly).'

The well-formedness of (15a) is unexpected under an analysis that accounts for (14a) by overt Obj raising, driven by a strong FF over the (presumably left-adjoined) VP modifier. On the other hand, (15a) finds a rather straightforward account if the VP modifier is right-adjoined and the focused Obj undergoes rightward movement. Furthermore, the fact that (15b) entails focus exclusively on the manner adverb suggests (a) that there is only one Focus position and (b) that the Focus position is an Ā-position, hence a non-Case-checking position, given that it can be filled by adjuncts.

2.2.2 Focus in Control Structures   (16a–b) illustrate control constructions where the controller is the direct Obj of the matrix verb. In both sentences the antifocus marker *-ra-* appears on the matrix verb, an indication that neither the direct Obj nor the CP is focused. In (16a) the direct Obj *abâna* is immediately adjacent to the matrix verb, and the sentence is well formed. In (16b) the CP intervenes and the sentence is ill formed.

(16) a.   pro tu-á-*ra*-rungitse   abâna_i [_CP PRO_i kuryâma].
          1P-PST-F-send:PERF children   INF-sleep
          'We sent children to sleep.'

     b. *pro tu-á-*ra*-rungitse   [_CP PRO_i kuryâma] abâna_i.
          1P-PST-F-send:PERF   INF-sleep children
          [Lit.: 'We sent to sleep children.']

Interestingly, the grammaticality contrast between (16a) and (16b) disappears once the antifocus marker *-ra-* is suppressed. As a matter of fact, (16b) becomes well formed, as shown in (17a), with a focus reading on the postposed direct Obj. As for (16a), it remains well formed, as illustrated by (17b), but with a focus reading on CP, not on the direct Obj. (17c) shows that the direct Obj of (17b) can be replaced by a clitic pronoun, an indication that it is not focused.

(17) a. pro tu-á-rungitse   [_CP PRO_i kuryâma] abâna_i.
          1P-PST-send:PERF   INF-sleep children
          'We sent to sleep children (not adults).'

     b. pro tu-á-rungitse   abâna_i [_CP PRO_i kuryâma].
          1P-PST-send:PERF children   INF-sleep
          'We sent children to sleep (not to play).'

     c. pro tu-á-ba-rungitse   kuryâma.
          1P-PST-CL-send:PERF INF-sleep
          'We sent them to sleep (not to play).'

The claim that focused phrases overtly move to some higher Ā-position explains the grammaticality contrast between (17a) and (16b), as well as the control of PRO by the focused Obj in (17a), assuming LF reconstruction of this Ā-moved Obj. Importantly, the fact that the focused Obj follows the CP containing the controlled PRO clearly shows that [Spec, FocP] is on the right side of its head. We thus have strong support for the claim that [Spec, FocP] is to the right and for its Ā status—an important conclusion for the analysis of OVS constructions.

3 The Syntax of OVS

3.1 Basic Properties

Subject-object reversal (OVS) in Kirundi is illustrated in (18b), from the canonical SVO (18a). In (18b) the fronted Obj precedes the verb, which in turn precedes the logical Subj.

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

The OVS construction (18b) displays three main properties. First, it precludes the presence of the antifocus marker -*ra*- on the verb, as shown by the ungrammaticality of (18c). As a consequence, the inverted Subj, not the fronted Obj, receives a contrastive focus reading.

Second, the verb in OVS constructions agrees with the fronted Obj, rather than with the postposed Subj. Indeed, (18b) becomes ill formed if the verb takes the Subj agreement marker *a*- that shows up in the SVO sentence (18a).

Third, OVS constructions differ from passive sentences in some respects. Compare the OVS sentence (19a) and the passive sentence (19b).

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

First, the passive sentence (19b) allows the presence of the antifocus marker -*ra*-, unlike the OVS sentence (19a). Second, in the passive sentence (19b) the verb contains the passive morpheme -*u*-, absent in the OVS sentence (19a). Third, the logical Subj in the passive sentence (19b) is

introduced by the preposition *na*, absent in the OVS sentence (19a). Fourth, in the passive sentence (19b) the demoted Subj can be omitted, whereas in the OVS sentence (19a) it cannot. Apart from these contrasts, the OVS sentence (19a) and the passive sentence (19b) share an important property: their underlying Obj agrees with the verb.

3.2 Previous Accounts

My discussion of previous accounts of OVS will be restricted to Ura's (1996) analysis because of its relevance to some of the theoretical issues under discussion. Although Ura's account is based on data from Bantu languages other than Kirundi (see (20)–(21)), the syntactic properties of OVS in those languages are the same as those found in Kirundi: the fronted Obj in (20b) and (21b), rather than the Subj, agrees with the verb; there is no passive marker on the verb; and the inverted Subj is not embedded in a PP (i.e., Subj is not syntactically demoted).[14]

(20) *Dzamba* (Givón 1979)
    a. oPoso a-tom-aki   i-mukanda.   SVO
       Poso   he-send-PST the-letter
       'Poso sent the letter.'
    b. i-mukanda i-tom-aki   oPoso.   OVS
       the-letter   it-send-PST Poso
       'The letter was sent by Poso.'[15]

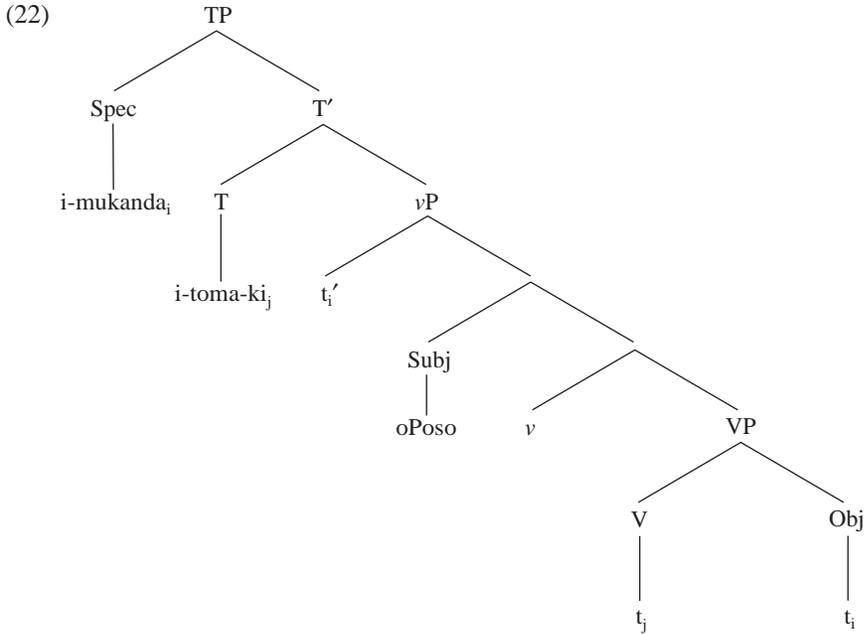(21) *Kilega* (Kinyalolo 1991)
    a. Mutu   t-á-ku-sol-ág-a   maku wéneéné.   SVO
       1person NEG-1-PROG-drink-HAB-FV 6beer alone
       'A person does not usually drink beer alone.'
    b. Maku ta-ma-ku-sol-ág-a   mutu   wéneéné.
       6beer NEG-6-PROG-drink-HAB-FV person alone
       'Beer is not usually drunk by a person alone.'

Ura's account of OVS, depicted in (22), is based on three specific assumptions he makes about the strength of FFs in Bantu languages: (a) the nominal N-feature of *v* is strong, (b) the EPP feature of T is strong, and (c) the nominative Case feature of T is weak.

    In (22) Subj is generated in the inner [Spec, *v*P] (i.e., *v* projects multiple Specs). Obj

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[14] According to Ura, there is no morphophonological sign differentiating SVO from OVS constructions in these languages. He notes, however, referring to Bokamba (1979) and Kimenyi (1980, 1988), that some functional force is involved in OVS. This points to the focus effect, clearly marked by the absence of the antifocus marker *-ra-* on the verb in Kirundi.

[15] Many Bantuists often use passive sentences in the translation of OVS constructions like (20b)/(21b) to express the focus reading of the inverted Subj.

(22)

```
                              TP
                     _____
                   Spec              T′
                    |          _____
             i-mukanda_i      T             vP
                              |         _____
                         i-toma-ki_j   t_i′
                                        |
                                      Subj
                                   _____
                                 oPoso      _____
                                           v          VP
                                                   _____
                                                  V         Obj
                                                  |          |
                                                 t_j        t_i
```

overtly moves to the outer [Spec, vP], because of the presumably strong N-feature of v.[16] In this position Obj checks its Case and D-features. Importantly, prior to further raising, Obj in the outer [Spec, vP] ($t_i′$) and Subj are now in the same minimal domain of v, which means that they are equidistant from [Spec, TP]. Therefore, each of them can, in principle, move to [Spec, TP] if this movement satisfies the Last Resort condition of the definition of Attract F—that is, if the FFs of T and the FFs of the raised argument are of the same type. Although the raised Obj has checked its D-feature in [Spec, vP] ($t_i′$), this feature, being +Interpretable, is not deleted since +Interpretable features of lexical categories are never deleted/erased. Therefore, Obj can raise further to [Spec, TP] to check the strong EPP feature of T. What about the nominative Case feature of T? Since this feature is assumed to be weak, it will be checked at LF, by covert movement (adjunction to T) of the Case feature of Subj. Thus, all the FFs of lexical and functional categories are properly checked in (11), and the derivation is correctly predicted to converge.

    Ura's analysis faces at least three problems. First, the hypothesis that v has a strong N-feature predicts that Obj always raises in the outer [Spec, vP] before Spell-Out; that is, Obj must be adjacent to V even in SVO constructions. Yet we saw in section 2.2 that this prediction is not borne out (see the discussion of (14) and (15)). Second, the hypothesis that the nominative Case feature of T is checked by covert raising of the Case feature of Subj is incorrect on empirical grounds. Indeed, section 3.3.2 will show that it is instead the overtly raised Obj in (22) that checks

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[16] An anonymous *LI* reviewer points out that if strong features must be checked/eliminated immediately, Merge of the strong N-feature of v would trigger overt raising of Obj to the inner [Spec, vP] first, before Merge of the Subj, which would end up in the outer [Spec, vP].

the nominative Case feature of T. Finally, nothing in Ura's analysis explains the mysterious disappearance of the antifocus marker -ra- on the verb in Kirundi OVS and the focus interpretation of Subj in these constructions.

3.3 An Alternative Account

I propose the alternative derivation in (23b) for OVS sentences such as (23a).

(23) a. Ibitabo bi-á-somye   Yohani.   OVS
          books 3P-PST-read:PERF John
          'John (not Peter) read the books.'

b.
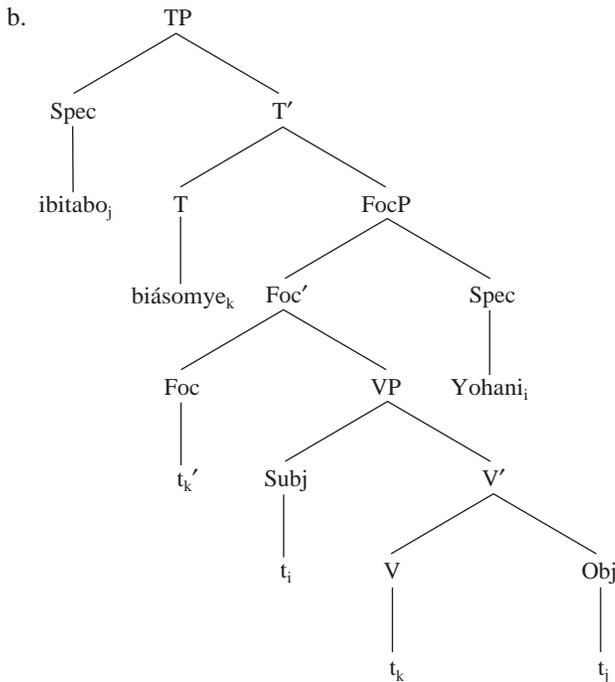
In (23b) Subj Ā-moves to [Spec, FocP], and Obj raises to [Spec, TP]. This derivation is clearly incompatible with the standard checking theory. First, Ā-movement of Subj to [Spec, FocP] leaves Subj with an unchecked Case feature,[17] a violation of Last Resort (Greed), which requires that − Interpretable FFs of lexical items be checked for convergence.[18] Second, Obj raising to [Spec,

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[17] Indeed, I have shown in section 2.2 that [Spec, FocP] is not a Case-checking position, since it can be filled by focused adjuncts. One could assume that the nominative Case feature of the Ā-moved Subj is left in [Spec, VP] and covertly moved to T to be checked, along the lines of Ura's analysis. This solution is untenable, however. As I will show in section 3.3.2, it is the raised Obj that checks, hence eliminates, the nominative Case feature of T.

[18] Under the standard checking theory, which assumes that lexical categories enter the derivation inflected for − Interpretable FFs, an assumption I rejected in section 1.

TP] over two Specs ([Spec, VP] and [Spec, FocP]) violates the Equidistance Condition. Note that this condition would be violated even under a two-layered VP structure like Ura's, as in (22), given the functional projection FocP postulated in (23b). The following discussion shows that (23b) is empirically supported.

3.3.1 Ā-Movement of Subject to [Spec, FocP] in OVS   Section 2.2 has shown that focused phrases in SVO sentences overtly move to an Ā Focus position located between TP and VP. We have also seen that the OVS sentence in (23a) involves focus on the postposed Subj. The minimal hypothesis is that the latter overtly moves to that Focus position. Below I present two arguments in favor of the assumed Ā-movement of the inverted Subj in OVS, as depicted in (23b).

The first argument concerns the position of VP modifiers in OVS constructions. Adverbial placement was used in section 2.2 as an argument for rightward Ā-movement of focused phrases. For clarity, let us review the facts.

Consider the SVO sentences (24a–b) containing a manner adverb and the antifocus verbal marker *-ra-*, whose presence blocks a focus reading. (24a) shows that the nonfocused internal argument must be adjacent to the verb. (24b), where the manner adverb intervenes, is ill formed.

(24) a.   Yohani a-á-*ra*-oógeje   imiduga néezá.
         John   3s-PST-F-wash:PERF cars   well
         'John washed cars well.'
     b.   *Yohani a-á-*ra*-oógeje   néezá imiduga.
         John   3s-PST-F-wash:PERF well   cars

Under the usual assumption that VP modifiers are left-adjoined, the word order in (24a) would be derived from Obj raising to the Spec of a functional head above VP, driven by a strong FF of that head. This would explain the ungrammaticality of (24b), where Obj has not overtly raised. Such an explanation is untenable, however, for the following reason.

If we drop the antifocus marker *-ra-* on the verb in (24a–b), (24b) becomes grammatical, as exemplified by (25a), and Obj receives a focus interpretation. As for (24a), it remains well formed (see (25b)), but now focus is on the adverb, not on the Obj or on both.

(25) a.   Yohani a-á-oógeje   néezá imiduga.   (Focus = Obj)
         John   3s-PST-wash:PERF well   cars
         'John washed cars well (not trucks).'
     b.   Yohani a-á-oógeje   imiduga néezá.   (Focus = Adverb)
         John   3s-PST-wash:PERF cars   well
         'John washed cars well (not badly).'

The grammaticality contrast between (24b) and (25b) weakens the Obj-raising account of (24a). Indeed, this account would wrongly predict (25a), where Obj has not raised, to be ill formed, since the strong feature assumed to trigger overt raising in (24a) would not be checked in (25a), prior to Spell-Out.

On the other hand, the word order facts in (24)–(25) are easily explained if (a) the VP

modifier is left-adjoined to VP (hence the ungrammaticality of (24b)), and (b) the focused Obj in (25a) undergoes rightward Ā-movement from its base position in (24a).

Assuming this analysis to be correct, let us now look at the position of VP modifiers in OVS constructions. (26a) shows that the manner adverb precedes the focused Subj. (26b), in which the focused Subj precedes the manner adverb, is ill formed.

(26) a. Imiduga yi-á-oógeje néezá Yohani.
cars 3P-PST-wash:PERF well John
'John (not Peter) washed cars well.'

b. *Imiduga yi-á-oógeje Yohani néezá.
cars 3P-PST-wash:PERF John well

If, as assumed above, the VP modifier is right-adjoined to VP, then the grammaticality contrast between (26a) and (26b) follows straightforwardly if the OVS sentence (26a) derives from overt rightward Ā-movement of the focused Subj to [Spec, FocP], as in (23b).

A second argument corroborating this hypothesis comes from the position of focused Subj in Subj control OVS constructions. (27a) illustrates the neutral SVO order. The Subj of the matrix clause obligatorily controls PRO of the embedded CP.[19] Very interestingly, (27a) allows OVS, as shown by (27b).[20] The embedded Obj is promoted to the Subj position of the matrix clause and agrees with the matrix verb. The initial Subj of the matrix clause follows the embedded CP. As a matter of fact, (27c), where CP precedes the inverted Subj, is completely unacceptable.

(27) a. Yohani$_i$ a-á-ra-emeye [$_{CP}$ PRO$_i$ kugura iyo modoka].
John 3S-PST-F-accept:PERF INF-buy that car
'John agreed to buy that car.'

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[19] That the matrix verb of (27a) is indeed a control verb rather than a raising one is demonstrated by the fact that it cannot take an *it*-like expletive or head an idiomatic construction, two properties of raising verbs, among others.

[20] In section 3.3.2 I present several arguments showing that the Obj of OVS constructions A-moves to [Spec, TP]. Hence, this may be true for (27b) as well. One argument favoring this claim for (27b) is that if the embedded CP in (27a) is tensed as in (i), then Obj raising to matrix [Spec, TP] is blocked, as shown by the ungrammaticality of (ii). (iii) is a relative clause given to show that the embedded Obj can trivially undergo *wh*-movement. Finally, note that the definition of closeness in (3a)/(4) correctly predicts that PRO in (27b), lacking the FF required to check the nominative Case feature of matrix finite T, will not block overt long-distance raising of the embedded Obj. See Ura 1996 for other cases of ''superraising'' in other languages.

(i) Yohani$_i$ a-á-emeye [$_{CP}$ ko pro$_i$ a-á-guze iyo modoka].
John 3S-PST-accept:PERF that 3S-PST-buy that car
'John accepted that he bought that car.'

(ii) *[Iyo modoka]$_j$ i-á-emeye [$_{CP}$ ko pro$_i$ a-á-guze t$_j$] Yohani$_i$.
that car 3S-PST-accept:PERF that 3S-PST-buy John
'John accepted that he bought that car.'

(iii) [Iyo modoka]$_j$ Yohani$_i$ i-á-emeye [$_{CP}$ ko pro$_i$ a-á-guze t$_j$] . . .
that car John 3S-PST-accept:PERF that 3S-PST-buy
'That car that John accepted that he bought . . .'

b. [Iyo modoka]$_j$ i-á-emeye   [$_{CP}$ PRO$_i$ kugura t$_j$] Yohani$_i$.
       that car   3s-PST-accept:PERF   INF-buy   John
     'John (not Peter) agreed to buy that car.'

c. *[Iyo modoka]$_j$ i-á-emeye   Yohani$_i$ [$_{CP}$ PRO$_i$ kugura t$_j$].
       that car   3s-PST-accept:PERF John   INF-buy
     'John (not Peter) agreed to buy that car.'

The grammaticality of (27b) clearly indicates that Subj in OVS constructions undergoes overt rightward Ā-movement. Obligatory control of PRO by the postposed Subj is simply explained, assuming LF reconstruction of the Ā-moved Subj, an exclusive property of Ā-chains. Trying to derive the word order in (27) from, say, overt A-raising of the embedded CP will leave unexplained, among other things, the obligatory control of PRO by the inverted Subj. We thus have here a strong argument for Ā-movement of the focused Subj in OVS constructions.

3.3.2 Raising of Object to [Spec, TP] in OVS Constructions   Several arguments support the claim that Obj in OVS constructions raises to [Spec, TP]. Some of them are presented below.

3.3.2.1 Pro-Drop of the Fronted Obj   Like other Bantu languages, Kirundi is a pro-drop language. This is illustrated in (28b), where pro fills the position of the overt Subj in (28a).

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

This pro-drop phenomenon also shows up in passive sentences (29b).

(29) a. Ibitabo bi-á-ra-som-u-ye   (na Yohani).
         books   3P-PST-F-read-PASS-PERF by John
         '(The) books have been read (by John).'
     b. pro bi-á-ra-som-u-ye   (na Yohani).
             3P-PST-F-read-PASS-PERF by John
         'They have been read (by John).'

OVS instantiates pro-drop. The fronted Obj in (30a) is replaced by pro in (30b).

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

The syntactic similarity among the SVO sentence (28b), the passive sentence (29b), and the OVS sentence (30b) with respect to pro-drop in [Spec, TP] suggests that the fronted Obj in OVS constructions is located in that position.

3.3.2.2 Negation   Kirundi has two distinct negative markers: *nti-* and *-ta-*. The former is used in matrix clauses (31a) and in raising constructions such as the passive sentence (31b).

(31) a. Yohani *nti*-a-á-somye   ivyo bitabo.
         John   NEG-3S-PST-read:PERF those books
         'John didn't read those books.'
     b. Ivyo bitabo *nti*-bi-á-som-u-ye   na Yohani.
         those books NEG-3P-PST-read-PASS-PERF by John
         'Those books were not read by John.'

The negation *-ta-* appears in embedded clauses and in all clauses (either matrix or embedded) involving *wh*-movement to initial [Spec, CP]. The latter case is illustrated by Obj relativization in (32a), from the matrix clause in (31a). (32a) becomes ill formed if the negative marker *-ta-* is replaced by *nti-*, as shown by the ungrammaticality of (32b).

(32) a. Ibitabo$_i$ [$_{CP}$ Op$_i$ [$_{TP}$ Yohani a-*ta*-á-somye   t$_i$]] . . .
         books   John   3S-NEG-PST-read:PERF
         'Books that John didn't read . . .'
     b. *Ibitabo$_i$ [$_{CP}$ Op$_i$ [$_{TP}$ Yohani *nti*-a-á-somye   t$_i$]] . . .
         books   John   NEG-3S-PST-read:PERF

(33) shows that OVS constructions allow the negation *nti-* (33a), like matrix clause sentences (31a) and passive sentences (31b), but not the negation *-ta-* (33b) that appears in constructions involving *wh*-movement to [Spec, CP], as in (32a), a relative clause.

(33) a. Ibitabo *nti*-bi-á-somye   Yohani.
         books   NEG-3P-PST-read:PERF John
         'John (not Peter) didn't read the books.'
         (= It was not John who read the books (it was Peter).)
     b. *Ibitabo bi-*ta*-á-somye   Yohani.
         books   3P-NEG-PST-read:PERF John
         '*John (not Peter) didn't read the books.'

The syntactic similarity among matrix clauses such as (31a), raising constructions such as passive (31b), and OVS (33a) with respect to the choice of negation and, in the same respect, the contrast between OVS and *wh*-constructions involving Ā-movement to [Spec, CP] (32a) follows if the fronted Obj of OVS constructions such as (33a) is located in [Spec, TP], an A-position.

3.3.2.3 Raising and Multiple Agreement   (34a–b) illustrate multiple agreement in verb-raising constructions. In (34a) the raised Subj agrees in φ-features with the auxiliary and the thematic predicate. In (34b), a passive sentence, the raised Obj agrees with each of two lexical heads.

(34) a. Abâna   *ba*-á-riko *ba*-soma   igitabo.
          children 3P-PST-be 3P-read:IMPERF book
          'Children were reading a book.'

      b. Igitabo *ki*-á-riko *ki*-som-u-a   na abâna.
          book   3S-PST-be 3S-read-PASS-IMPERF by children
          'The book was being read by children.'

(35a–b) illustrate *wh*-movement of Obj, from (34a). The Ā-moved Obj does not trigger Obj
agreement; witness the ungrammaticality of (35b).

(35) a. Igitabo$_i$ [$_{CP}$ Op$_i$ [$_{TP}$ abâna   *ba*-á-riko *ba*-soma   t$_i$]] . . .
          book   children 3P-PST-be 3P-read:IMPERF
          'The book that children were reading . . .'

      b. *Igitabo$_i$ [$_{CP}$ Op$_i$ [$_{TP}$ abâna   *ki*-á-riko *ki*-soma   t$_i$]] . . .
          book   children 3S-PST-be 3S-read:IMPERF

In OVS constructions (36a), the fronted Obj agrees in ɸ-features with the auxiliary and the
thematic predicate, as in raising constructions (34a–b). (36b), in which the verb agrees with the
postverbal Subj, is ungrammatical. Under the hypothesis that Obj in OVS constructions moves
into [Spec, TP], these agreement patterns follow directly.

(36) a. Igitabo *ki*-á-riko *ki*-soma   abâna.
          book   3S-PST-be 3S-read:IMPERF children
          [Lit.: 'A book was reading children.']
          'Children (not adults) were reading a book.'

      b. *Igitabo *ba*-á-riko *ba*-soma   abâna.
          book   3P-PST-be 3P-read:IMPERF children
          '*Children (not adults) were reading a book.'

3.3.2.4 OVS in Embedded CPs   OVS is allowed in embedded CPs, as shown by (37b), from
(37a). Note that the fronted Obj follows the complementizer *ko*, an indication that it has not
moved to its Spec.

(37) a. Petero a-á-anse   *kó* [$_{TP}$ abâna   ba-Ø-soma   ibitabo].
          Peter 3S-PST-refuse:PERF C   children 3P-PRES-read:IMPERF books
          [Lit.: 'Peter refused that children read books.']

      b. Petero a-á-anse   *kó* [$_{TP}$ ibitabo bi-Ø-soma   abâna].
          Peter 3S-PST-refuse:PERF C   books 3P-PRES-read:IMPERF children
          [Lit.: 'Peter refused that children (not adults) read books.']

Furthermore, as pointed out in footnote 20, OVS is ''tensed-clause-bound''; witness the ungram-
maticality of (38a), where Obj of the embedded CP has moved to [Spec, TP] of the matrix clause.
Compare (38a) with (38b), a case of long-distance relativization.

(38) a. *Ibitabo$_i$ bi-á-anse   *kó* [$_{TP}$ abâna   ba-∅-soma   t$_i$ Petero] . . .
      books   3P-PST-refuse:PERF C   children 3P-PRES-read:IMPERF   Peter

   b. Ibitabo$_i$ [$_{CP}$ Op$_i$ [Petero a-á-anse   *kó* [$_{TP}$ abâna
      books   Peter 3S-PST-refuse:PERF C   children
      ba-∅-soma   t$_i$] . . .
      3P-PRES-read:IMPERF
      [Lit.: 'The books that Peter refused that children read . . .']

3.3.2.5 Adjuncts

Adjuncts are not allowed in the position of the fronted Obj of OVS constructions. This is illustrated by (39b), from (39a). (39c) is a cleft construction showing that adjuncts can be *wh*-moved.

(39) a. Yohani a-á-ra-tambutse   buhorobuhoro.
      John   3S-PST-F-walk:PERF slowly
      'John walked slowly.'

   b. *Buhorobuhoro bu-á-tambutse   Yohani.
      slowly   3S-PST-walk:PERF John

   c. Ni buhorobuhoro Yohani a-á-tambutse.
      be slowly   John   3S-PST-walk:PERF
      'It was slowly that John walked.'

3.3.2.6 Weak Crossover

Weak crossover effects are standardly assumed to be a property of Ā-chains. A-chains do not instantiate such effects.[21] Now consider (40a–b). (40a) illustrates a non-*wh*-construction. The quantified Subj c-commands the bound pronoun of the DP Obj. (40b) is an OVS sentence, ill formed because of the linkage between the pronoun and the postposed quantified Subj. The same is true for (40c), a passive sentence.

(40) a. Umunyeshule weese$_i$ a-∅-ra-kunda   umwarimu wiwé$_i$.   SVO
      student   every 3S-PRES-F-like teacher   of-him
      'Every student$_i$ likes his$_i$ teacher.'

   b. *Umwarimu wiwé$_i$ a-∅-kunda   umunyeshule weese$_i$.   OVS
      teacher   of-him 3S-PRES-like student   every
      'Every student$_i$ likes his$_i$ teacher.'

   c. *Umwarimu wiwé$_i$ a-∅-kund-u-a   na umunyeshule weese$_i$.
      teacher   of-him 3S-PRES-like-PASS-IMPERF by student   every
      'His$_i$ teacher is liked by every student$_i$.'

This clear similarity between OVS and passive with respect to weak crossover indicates that the fronted Obj of the OVS construction has moved into an A-position.

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[21] For detailed discussion, see notably Reinhart 1983, Koopman and Sportiche 1983, Lasnik and Stowell 1991, Williams 1994, Safir 1996, Réjean 1996.

3.3.2.7 Object Dislocation   Right-/Left-dislocation is an exclusive property of A-chains. (41b) exemplifies right-dislocation of the Subj in [Spec, TP] of the SVO sentence (41a). The Subj-verb agreement remains unchanged, and the right-dislocated Subj in (41b) shows a definiteness effect, expressed by the demonstrative.

(41) a. Abâna   ba-á-ra-somye   igitabo.
        children 3P-PST-F-read:IMPERF book
        'Children read a book.'
     b. pro$_i$ ba-á-ra-somye   igitabo, [abo bâna]$_i$.
           3P-PST-F-read:IMPERF book   DEM children
        'They read a book, those children.'

Now, if the fronted Obj of OVS constructions is in [Spec, TP], one predicts that it may undergo right-/left-dislocation. This prediction is borne out, as illustrated by (42b), from (42a). The Obj-verb agreement holds, and the right-dislocated Obj in (42b) displays a definiteness effect, like (41b).[22]

(42) a. Igitabo ki-á-somye   abâna.
        book   3S-PST-read:PERF children
        'Children (not parents) read a book.'
     b. pro$_i$ ki-á-somye   abâna, [ico igitabo]$_i$.
           3S-PST-read:PERF children DEM book
        'That book, children (not parents) read it.'

3.3.2.8 Nominative Case for the Fronted Object   Kirundi makes a clear distinction between nominative and accusative Case. This distinction is morphologically and distributionally expressed in the agreement system of the inflected verb, as depicted in (43).

(43)   *Nominative*   *Accusative*
     2nd sg.   u-   -ku-
     3rd sg.   a-   -mu-
     3rd pl.   ba-   -ba-

Illustrations are given in (44). In (44a) the morpheme *ba-* expresses the nominative Case and agreement features (person, number, and gender) of the Subj in [Spec, TP]. In (44b) the direct Obj of (44a) is realized by the clitic pronoun *-mu-*.[23] The latter appears after the tense marker *-á-* and the antifocus marker *-ra-*.

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[22] This argument is reinforced by long-distance left-dislocation of the fronted Obj of the OVS construction (42a), over a *wh*-island, as in (i). Were the fronted Obj of (42) in an Ā-position, (i) would be ungrammatical, violating Subjacency.

(i) [Ico gitabo]$_i$, Petero arazi   igituma [$_{TP}$ pro$_i$ ki-á-somye   abâna].
        DEM book   Peter knows reason   3S-PST-read:PERF children
    'That book, Peter knows why children (not parents) read it.'

[23] As pointed out by two anonymous *LI* reviewers, a distinction must be made between Subj and Obj markers. I suggest that, at least for Kirundi, the latter are true incorporated pronouns, whereas the former are Subj agreement markers. There are at least two arguments for this. First, a quantified NP Subj, like any other Subj, must cooccur with a Subj-

(44) a. Abanyêshule *ba*-á-ra-bonye   uwo mwarimu.   SVO
       students   NOM-PST-F-see:PERF that teacher
       'Students saw that teacher.'

      b. Abanyêshule *ba*-á-ra-*mu*-bonye.
       students   NOM-PST-F-ACC-see:PERF
       'Students saw him.'

(45a) illustrates a passive construction. The raised Obj bears the nominative Case feature, as expressed by the nominative marker *a*- that precedes the tense marker *-á-*. (45b–c) show that the accusative Case marker *-mu-* that appears in (44b) is allowed neither in the position of accusative (44b) nor in the position of nominative (44a).

(45) a. Uwo mwarimu *a*-á-ra-bon-u-ye   na abanyêshule.
       that teacher   NOM-PST-F-see-PASS-PERF by students
       'That teacher was seen by students.'

      b. *Uwo mwarimu á-ra-*mu*-bon-u-ye   na abanyêshule.
       that teacher   PST-F-ACC-see-PASS-PERF by students

      c. *Uwo mwarimu *mu*-á-ra-bon-u-ye   na abanyêshule.
       that teacher   ACC-PST-F-see-PASS-PERF by students

The OVS sentence (46a), formed from the SVO sentence (44a), shows the nominative Case marker *a*- on the verb, as in the passive sentence (45a). Replacing this nominative marker by the accusative marker *-mu-* leads to ungrammaticality (46b–c), as in the passive sentences (45b–c). Furthermore, the two Case markers cannot cooccur (46d).

(46) a. Uwo mwarimu *a*-á-bonye   abanyêshule.
       that teacher   NOM-PST-see:PERF students
       'The students (not the dean) saw that teacher.'

      b. *Uwo mwarimu á-*mu*-bonye   abanyêshule.
       that teacher   PST-ACC-see:PERF students

---

verb marker, but a quantified NP Obj cannot be doubled by an Obj marker ((ia) vs. (ib)). Second, the Subj marker remains on the verb when the DP Subj is *wh*-moved, but the Obj marker is excluded when the corresponding DP Obj is *wh*-moved ((iia) vs. (iib)). For simplicity's sake, however, I will gloss these two markers as NOM (for *nominative*) and ACC (for *accusative*). In an Agr-based clause structure, they would head Agr$_S$P and Agr$_O$P, respectively.

   (i) a. Abantu benshi *(*ba*)-á-ra-je.
       people many   (3P)-PST-F-come:PERF
       'Many people came.'

      b. Yohani *a*-á-ra-(*ba*)-bonye   abantu benshi.
       John   3S-PST-F-(3P)-come:PERF people many
       'John saw (*them) many people.'

  (ii) a. Ni abantu bangahe t *(*ba*)-á-je?
       be people many   (3P)-PST-come:PERF
       'How many people came?'

      b. Ni bande Yohani a-á-(*ba*)-bonye   t?
       be who John   3S-PST-(3P)-see:PERF
   'Whom did John see?'

   c. *Uwo mwarimu *mu*-á-bonye   abanyêshule.
        that   teacher   ACC-PST-see:PERF students

   d. *Uwo mwarimu *a*-á-*mu*-bonye   abanyêshule.
        that   teacher   NOM-PST-ACC-see:PERF students

The clear parallelism between passive and OVS with respect to the nominative Case feature of the raised Obj clearly proves that, in OVS constructions, it is the fronted Obj, rather than the Subj, that checks the nominative Case of T. This goes against Ura's (1996) analysis of OVS according to which the nominative Case of T is checked by covert raising (adjunction to T) of FFs of the Subj in [Spec, VP] (see section 3.2).

3.4 Theoretical Consequences

3.4.1 Asymmetric Feature Checking, Last Resort, and Equidistance   The preceding discussion has provided compelling arguments that Kirundi OVS constructions derive from overt Ā-movement of Subj to [Spec, FocP] and raising of Obj to [Spec, TP], as depicted again in (47b), for (47a).

(47)   a.   Ivyo bitabo bi-á-somye   Yohani.   OVS
          those books 3P-PST-read:PERF John
          'John (not Peter) read those books.'

b.
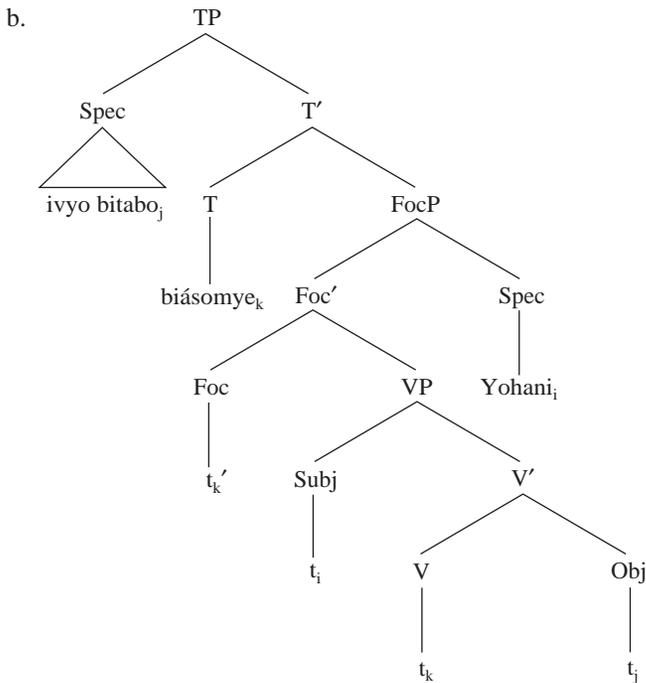
(47b) is obviously incompatible with the standard checking theory. Indeed, Ā-movement of Subj to [Spec, FocP] creates an Ā-chain whose −Interpretable Case feature remains unchecked, a violation of Last Resort (Greed), which requires that arguments check their −Interpretable features for convergence.[24] Furthermore, Obj raising to [Spec, TP] violates the Equidistance Condition. Recall that the latter would be violated even if a two-layered VP shell structure were assumed (i.e., multiple Specs for *v*P), given the presence of FocP below TP.

On the other hand, (47b) is a legitimate derivation under the revised asymmetric checking theory—that is, (a) if feature checking is driven solely by the need to check FFs of functional categories, (b) if lexical categories (arguments and heads) selected from the lexicon do not enter the derivation inflected with (relational) −Interpretable features, the latter being an exclusive property of functional heads, and (c) if the Equidistance Condition and (trivially) Last Resort (Greed) are dispensed with.

Under this theory, Ā-movement of Subj to [Spec, FocP] in (47b) is driven by the strong focus feature. Obj raising to [Spec, TP] is triggered by the strong EPP and nominative Case features of T. All the FFs of the two functional categories having been checked, (47a) is correctly predicted to converge.

3.4.2 Kayne's (1994) Linear Correspondence Axiom The rightward Ā-movement of Subj assumed in (47b) goes against Kayne's (1994) Linear Correspondence Axiom (LCA), which, among other things, precludes rightward movement. In the introduction I stipulated, actually following Chomsky's (1995:sec. 4.9) assumption regarding word order contrast between Icelandic TECs and some more or less acceptable English ones (see section 4.1), that the rightward position of [Spec, FocP] in (47b) derives from prosodic properties of theme-rheme structures. A formal characterization of this essentially PF property is lacking at the moment, however. Therefore, the simplest way to validate rightward Ā-movement is to show that no alternative to (47b) that would be compatible with the LCA is viable. Four possibilities are considered below.

The first is that Subj in OVS constructions (47a) remains in [Spec, VP] at Spell-Out, as in Ura's (1996) analysis. One apparent argument favoring this hypothesis is that the inverted Subj in OVS constructions follows VP modifiers, such as manner adverbs (48), assuming that the latter are left-adjoined to VP or, trivially, enter into a checking relation by left-adjoining to some functional projection higher than VP, as proposed by Oka (1993).

(48) Imiduga yi-á-oógeje   néezá Yohani.   OVS
cars   3P-PST-wash:PERF well John
'John (not Peter) washed cars well.'

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[24] One could assume that focus turns referential DPs into predicates. Therefore, focused DPs lack Case features, hence are not subject to feature checking. This is untenable, however, given that the focused Subj in (47a) may be replaced by a *wh*-phrase, as in (i).

(i) Ivyo bitabo bi-á-somye   ndé? OVS
those books 3P-PST-read:PERF who
'Who read those books?'

This argument is not compelling, however. Indeed, left-adjunction of VP modifiers, either to VP or to a higher functional projection, fails to account for their variable position in SVO sentences (49).

(49) a. Yohani a-á-*ra*-oógeje   imiduga néezá.
         John   3S-PST-F-wash:PERF cars   well
         'John washed cars well.'

     b. *Yohani a-á-*ra*-oógeje   néezá imiduga.
         John   3S-PST-F-wash:PERF well   cars

     c. Yohani a-á-oógeje   néezá imiduga.
         John   3S-PST-wash:PERF well   cars
         'John washed cars well (not trucks).'

(49a) shows adjacency between the verb and the nonfocused Obj. If the manner adverb is left-adjoined to VP, then the word order in (49a) results from overt Obj raising to some higher position, either [Spec, Agr$_O$P], the upper [Spec, vP] of the multiple-Spec hypothesis, or their variants within the split-VP hypothesis, along the lines proposed by Koizumi (1994) and Bobaljik (1995). Importantly, under each of these options one must assume that the presumed overt raising of Obj in (49a) is triggered by some strong feature of its landing site, which must be checked for the derivation to converge. One immediate problem is that this explanation, although able to account for (49b), fails to capture the well-formedness of (49c), which shows the same word order as (49b), but with focus on the postposed Obj.

On the other hand, (48) and (49a–c) are directly explained if the manner adverb is right-adjoined to VP, and if the focused DP (i.e., Subj in (48) and Obj in (49c)) undergoes rightward Ā-movement to [Spec, FocP], as in (47b). Incidentally, this Ā-movement correctly accounts for control of PRO by the Obj in (50b–c),[25] under LF reconstruction of the Ā-moved constituent, namely, the focused Obj in (50b) and the focused CP in (50c).

(50) a. Yohani a-á-*ra*-zanye   inka$_i$ [$_{CP}$ PRO$_i$ kurisha].   SVO
         John   1S-PST-F-bring:PERF cows   INF-graze
         'John brought cows to graze.'

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[25] As well as the control of PRO by the inverted matrix Subj of (ia) in the OVS sentence (ib). See the discussion of (ia–c) in section 3.3.1, examples (27a–c).

(i) a. Yohani$_i$ a-á-ra-emeye   [$_{CP}$ PRO$_i$ kugura iyo modoka].
         John   3S-PST-F-accept:PERF   INF-buy that car
         'John agreed to buy that car.'

    b. [Iyo modoka]$_j$ i-á-emeye   [$_{CP}$ PRO$_i$ kugura t$_j$] Yohani$_i$.
         that car   3S-PST-accept:PERF   INF-buy   John
         'John (not Peter) agreed to buy that car.'

    c. *[Iyo modoka]$_j$ i-á-emeye   Yohani$_i$ [$_{CP}$ PRO$_i$ kugura t$_j$].
         that car   3S-PST-accept:PERF John   INF-buy
         'John (not Peter) agreed to buy that car.'

   b. Yohani a-á-zanye t_i [$_{CP}$ PRO$_i$ kurisha] inka$_i$.   SVO
      John 3s-PST-bring:PERF   INF-graze cows
      'John brought cows (not goats) to graze.'

   c. Yohani a-á-zanye   inka$_i$ t_j [$_{CP}$ PRO$_i$ kurisha]$_j$. SVO
      John 3s-PST-bring:PERF cows   INF-graze
      'John brought cows to graze (not to sleep).'

Finally, given that the CP of SVO sentences (50a) can be focused, as in (50c), nothing within the [Spec, VP] hypothesis bars this option in OVS sentences; thus, (51b) is predicted to be well formed, with focus on the CP, as in (50c), Subj remaining in [Spec, VP].

  (51) a.   Inka$_i$ zi-á-zanye t_j t_i [$_{CP}$ PRO$_i$ kurisha] Yohani$_j$. OVS
           cows 3P-PST-bring:PERF   INF-graze John
           'John (not Peter) brought cows to graze.'

        b. *Inka$_i$ zi-á-zanye   Yohani t_i t_j [$_{CP}$ PRO$_i$ kurisha]$_j$. OVS
           cows 3P-PST-bring:PERF John   INF-graze

The well-formedness of (51a) and the ill-formedness of (51b) are unexpected if the Subj of OVS constructions remains in [Spec, VP], but they are accounted for succinctly if rightward Ā-movement (47b) is a legitimate movement (contra the LCA).

    The second avenue, compatible with the LCA, would be that [Spec, FocP] in (47b) is on the left side of its head and that the inverted Subj in OVS constructions moves to that position. This would lead to other complications, however. Indeed, an additional upper functional projection with a strong feature would be needed in order to account for the position of the CP in (51a). Needless to say, motivating the presence of that functional projection and the obligatory movement to its Spec would be by no means a trivial matter. Moreover, (50c), in which the focused CP follows Obj, would be unaccounted for. Finally, the word order in (50a–b) would hardly be accommodated.

    The third alternative to (47b) is that the Subj of OVS constructions moves to [Spec, TP]. This is untenable, however, given that [Spec, TP] is filled by the fronted Obj, as extensively demonstrated in section 3.3.2. Incidentally, this hypothesis would lead to the undesirable conclusion that other focused XPs, such as focused adjuncts in SVO sentences, move to that A-position.

    The final avenue, also compatible with the LCA, is that the Subj of OVS constructions moves leftward to [Spec, FocP], with FocP higher than TP. Under this hypothesis, however, several functional projections above FocP (and below CP)[26] would be needed to serve as landing sites for all constituents preceding Subj in OVS sentences, among them those in (51a). Furthermore, a strong feature would be required for each of those functional projections. But then we would wrongly predict there to be no SVO sentences at all in Kirundi, with Subj in [Spec, TP]—unless we were to allow construction-specific variability in the strength of FFs of functional categories, an undesirable assumption. Finally, this hypothesis would lead to the conclusion that

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[26] Since OVS is allowed in embedded CPs (see section 3.4.2).

the fronted Obj in OVS constructions appears in an Ā-position, a possibility ruled out by the broad range of evidence presented in section 3.3.2.

One could rescue the hypothesis that [Spec, FocP] is above TP and avoid the proliferation of empirically unmotivated functional projections below TP, by assuming the derivation in (52).

(52)
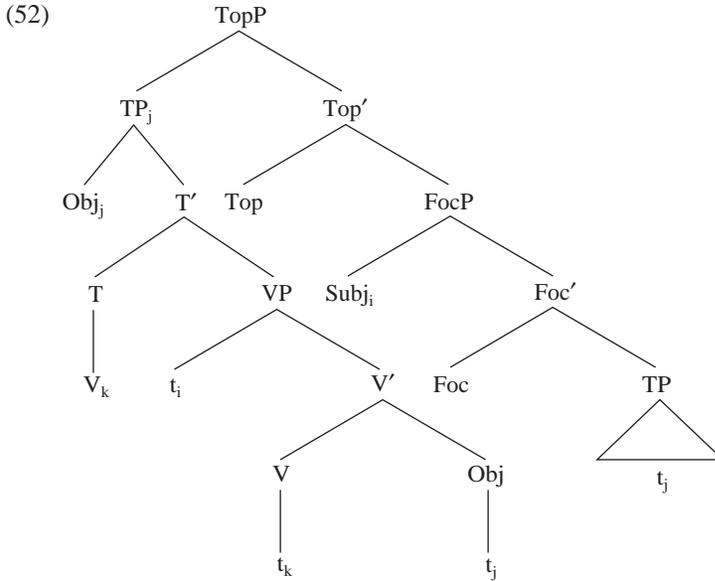
According to (52), the focused Subj moves directly from [Spec, VP] to [Spec, FocP]; V raises to T; Obj raises to [Spec, TP]; and finally the whole TP, which contains Obj and potential VP modifiers, moves to the Spec of a higher Topic phrase (TopP). Raising of V to T and Obj to [Spec, TP] would explain Obj agreement in OVS constructions. Furthermore, VP modifiers being uniformly left-adjoined to VP as required by the LCA, (52) would account for the ordering of this class of adjuncts. Finally, there is an (apparently) empirical argument not mentioned so far that supports (52): OVS constructions do not allow *wh*-extraction of the logical Subj; witness the ill-formedness of (53b), from (53a).

(53) a.   Ivyo bitabo bi-á-somye   Yohani.   OVS
           those books 3P-PST-read:PERF John
           'John (not Peter) read those books.'

      b. *Umuntu$_i$ [$_{CP}$ Op$_i$ [$_{TP}$ ivyo bitabo bi-á-somye   t$_i$ . . .   Relativization
           person   those books 3P-PST-read:PERF
           'The person who read those books . . .'

(52) accounts for (53b) quite neatly, since the filled [Spec, TopP], an Ā-position, forms a *wh*-island for Subj extraction. On the other hand, (53b) is not predicted by the analysis of OVS in (47b), whereby the fronted Obj moves to [Spec, TP]. Indeed, under this analysis (53b) should converge, which is not the case. I will return to this puzzle shortly.

Coming back to (52), this seemingly attractive analysis raises a wide range of new problems, some of which I mention in the following paragraphs.

First, motivating the presence of the functional head Top (with a presumed strong feature), and especially Ā-movement of TP, is not a trivial matter. For instance, nothing would prevent long-distance Ā-movement of this TP to [Spec, Top] or [Spec, CP] of the matrix clause, which is precluded. Second, under (52), it would be hard to account for focus of Obj and adjuncts in SVO constructions. Third, and more importantly, (52) should bar *wh*-movement of any constituent within the TP in [Spec, Top]. Unexpectedly, *wh*-movement of the fronted Obj in (53a) is grammatical, as illustrated by (54b), a long-distance relativization of the fronted Obj of the embedded OVS construction in (54a).

(54) a. Petero a-á-anse   *kó* [$_{TP}$ ibitabo bi-Ø-soma   Yohani].
      Peter   3S-PST-refuse:PERF C   books 3P-PRES-read John
      [Lit.: 'Peter refused that John (not Paul) read books.']

     b. Ibitabo$_i$ [$_{CP}$ Op$_i$ [Petero a-á-anse   *kó* [$_{TP}$ t$_i$ bi-Ø-soma   Yohani]]] . . .
      books   Peter 3S-PST-refuse:PERF C   3P-PRES-read John
      [Lit.: 'The books that Peter refused that John (not Paul) read . . .']

Since (52) with TP in [Spec, TopP] instantiates a configuration that displays Condition on Extraction Domain effects, which are reported to be weak crosslinguistically, one would expect (54b) to be not entirely acceptable, a wrong prediction. Moreover, unlike Obj, VP modifiers in OVS constructions resist *wh*-extraction; witness the ungrammaticality of (55b), in which the manner adverb of (55a) is cleft. This extraction asymmetry between Obj and VP adjunct in OVS constructions is not predicted by (52).

(55) a. Ivyo bitabo bi-á-somye   ningoga Yohani.   OVS
      those books 3P-PST-read:PERF quickly John
      'John (not Peter) read those books quickly.'

     b. *Ni [níngoga]$_i$ [$_{CP}$ Op$_i$ [$_{TP}$ ivyo bitabo bi-á-somye   t$_i$ Yohani].
      be quickly   those books 3P-PST-read:PERF   John
   'It was quickly that John (not Peter) read those books.'

Fourth, although the LCA-based analysis correctly accounts for the surface order of VP modifiers, it hardly explains the position of clausal modifiers, such as causal and temporal adjuncts. The OVS sentence in (56a) shows that causal adjuncts follow the inverted Subj. (56b), where the causal adjunct precedes Subj, is unacceptable. Furthermore, (56c) shows the interesting fact that clausal adjuncts undergo *wh*-extraction, unlike VP modifiers (55b).

(56) a. Ivyo bitabo bi-á-somye   ningoga Yohani kubéra mwebwé.
      those books 3P-PST-read:PERF quickly John   because you
      'John (not Peter) read those books quickly because of you.'

     b. *Ivyo bitabo bi-á-somye   ningoga kubéra mwebwé Yohani.
      those books 3P-PST-read:PERF quickly because you   John
      'John (not Peter) read those books quickly because of you.'

c.   [Kubéra iki]$_i$ ivyo bitabo bi-á-somye   ningoga Yohani t$_i$?
     because what those books 3P-PST-read:PERF quickly John
     'Why did John (not Peter) read those books quickly?'

Under (52), which sustains leftward movement and leftward adjunction of adjuncts, there is no way to handle these facts. Adding in (55) another functional projection below FocP to which the causal adjunct in (56a) would be left-adjoined wrongly predicts (56c) to be ill formed, since the filled [Spec, FocP] position would block *wh*-extraction of the causal adjunct. Alternatively, assuming the functional projection to be higher than FocP wrongly predicts (56b) to be well formed. Finally, assuming it to be higher than TopP wrongly predicts (56a) to be ill formed.

To recapitulate, neither the derivation (52) nor the other four LCA-based analyses of OVS discussed above capture (a) the extraction asymmetry between Obj and VP adjuncts on one hand and VP adjuncts and clausal adjuncts on the other hand, (b) the relative order of (non)focused Obj and adjuncts in SVO constructions, and (c) the empirical arguments presented in section 3.3.2 showing that Obj in OVS constructions moves only as far as [Spec, TP]. On the other hand, all these facts are easily accounted for under derivation (47b), repeated here.

(57)
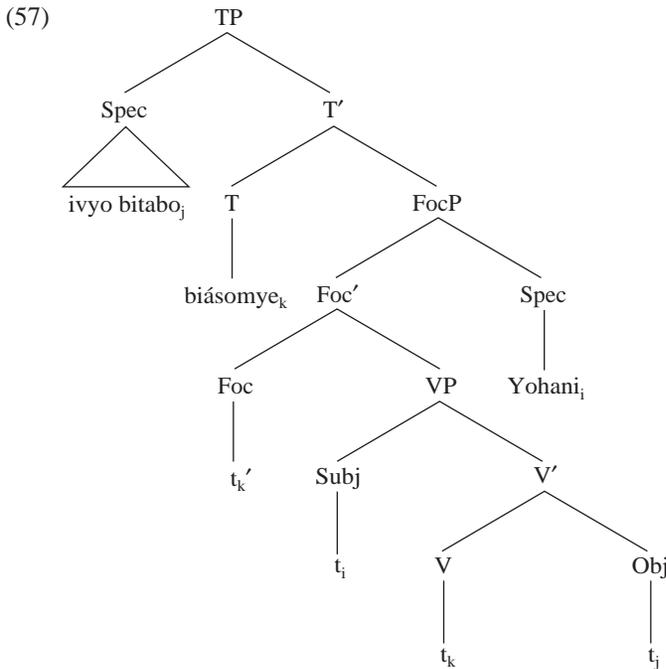
That Obj raises to [Spec, TP] accounts for its A-properties. Furthermore, Ā-movement of Subj to [Spec, FocP] explains why the latter forms an extraction island for lower VP modifiers, thus ruling out (55b). Finally, clausal adjuncts and Obj, being higher than [Spec, FocP], are correctly predicted to undergo *wh*-extraction. Note in passing that these *wh*-extraction asymmetries provide an additional argument (forecast at the end of section 2.1) for the TP-internal Focus hypothesis.

The only problem that (57) leaves unexplained is why OVS disallows *wh*-movement of Subj (see (53b)).

Ura (1996) derives this restriction from the absence of an agreement relationship between Subj and V. The idea is that only arguments that agree with V—namely, Obj in (57)—may undergo *wh*-movement.[27] This explanation encounters some problems, however. To mention one, it wrongly predicts a Subj extraction asymmetry between English and French expletive-associate constructions. Indeed, as shown by (58a–b), V agrees with the associate in English expletive-associate constructions, but not in French ones. Yet Subj extraction is allowed in both cases; witness the grammaticality of (59a–b). Therefore, the agreement requirement is not the source of the restriction on Subj extraction in OVS constructions.

(58) a. There remain/*remains three cars in the garage.
  b. Il reste(s)/*restent(P) trois voitures dans le garage.

(59) a. How many cars do there remain in the garage?
  b. Combien de voitures reste-t-il dans le garage?

The derivation in (57) offers a more viable solution. The Ā-moved Subj checks its focus/*wh*-feature in [Spec, FocP]. Therefore, there is no more focus/*wh*-feature on Subj to be attracted by the *wh*-feature in initial [Spec, CP], hence no further *wh*-movement of Subj. As a matter of fact, were the focused Subj in (57) allowed to subsequently Ā-move to [Spec, CP], Subj would be doubly focused, thus creating an illegitimate LF object, much like an NP with two Dets having identical LF features. If this account is correct, then (57) becomes plausible, and rightward movement is empirically supported, contra the LCA.

4 Transitive Expletive Constructions and Related Issues

4.1 Multiple Specs for TP

Sentences (60a–b) illustrate transitive expletive constructions (TECs) in Icelandic.

(60) a. Það lásu einhverjir stúdentar bókina.
    EXP read some   students the.book
    'Some students read the book.'
  b. Það hafa margir jólasveinar   borðað búðing.
    EXP have many Christmas-trolls eaten   pudding
    'Many Christmas trolls have eaten pudding.'
    (Jonas and Bobaljik 1993)

One of the main questions raised by such constructions is the position of the logical Subj. According to Vikner (1991) and Bures (1992, 1993), the Subj remains internal to VP in overt

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[27] This idea is adopted by Pensalfini (1995) for a similar extraction asymmetry in Malagasy.
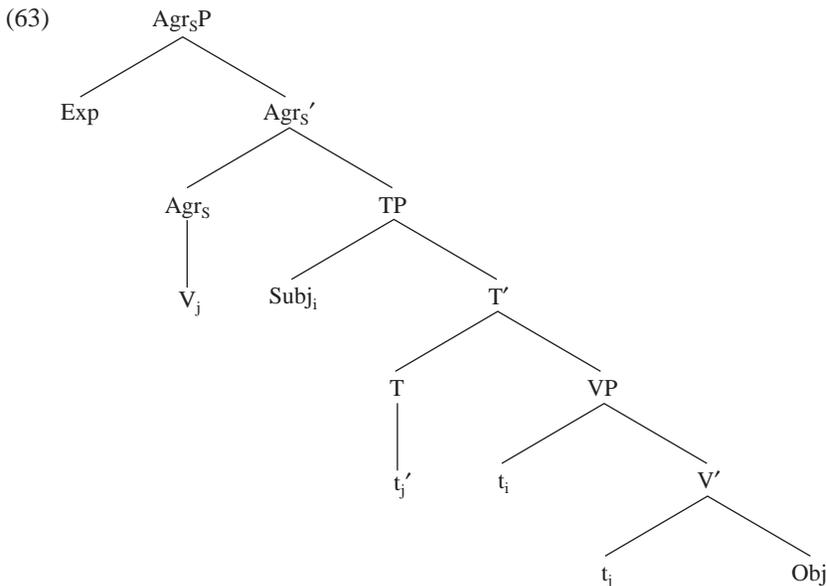
syntax. Jonas and Bobaljik (1993; see also Bobaljik and Jonas 1996), following Jonas (1992), show convincingly that the Subj is raised overtly from [Spec, VP]. Evidence favoring this hypothesis comes from the position of Subj in TECs involving sentential and VP adverbs (61) and multiple auxiliaries (62). In (61a) the logical Subj precedes the VP modifier and follows the sentential adverb. (61b), in which the VP modifier precedes the logical Subj, is ill formed.

(61) a. Það luku   sennilega einhverjir stúdentar alveg   verkefninu.
         EXP finished probably some   students   completely the.assignment
         'Some students probably completely finished the assignment.'
     b. *Það luku   sennilega alveg   einhverjir stúdentar verkefninu.
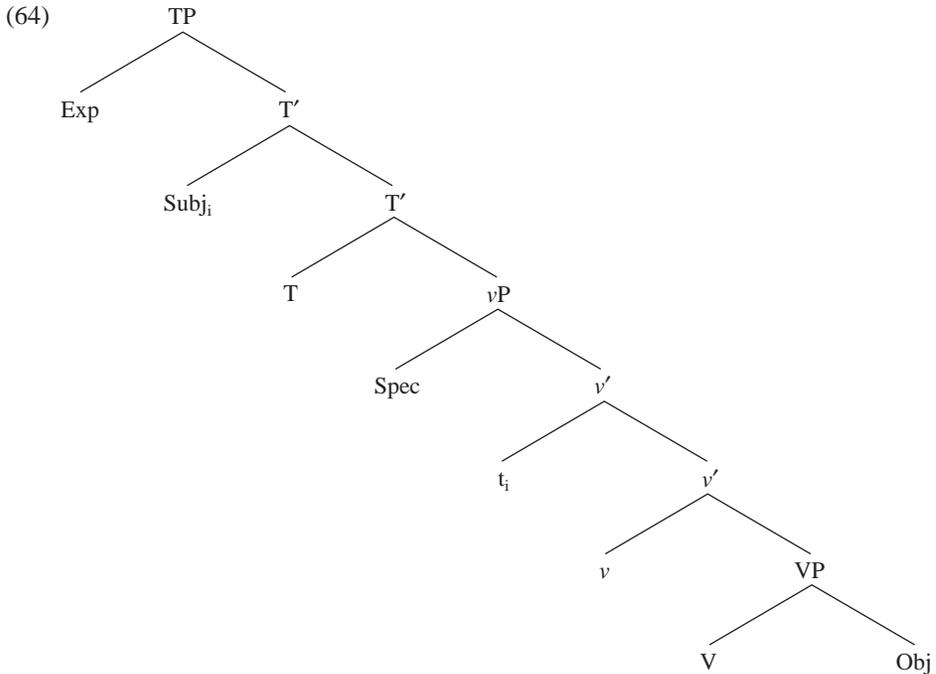   EXP finished probably completely some   students   the.assignment

(62a–b) contain two auxiliaries in addition to the main verb. In (62a) Subj is separated from the thematic VP by one auxiliary. (62b), where Subj and the main predicate are contiguous, is ungrammatical.

(62) a. . . . að það mun einhver   hafa borðað þetta epli.
             that EXP will someone have eaten   this   apple
         '. . . that someone will have eaten this apple.'
     b. *. . . að það mun hafa einhver   borðað þetta epli.
             that EXP will have someone eaten   this   apple

Adopting an Agr-based clause structure, Jonas and Bobaljik propose the derivation in (63) for Icelandic TECs. The expletive is inserted in [Spec, Agr$_S$P], Subj overtly raises to [Spec, TP], and the verb moves in stages into Agr$_S$.

(63)

```
                      Agr_S P
                    /        \
                 Exp         Agr_S′
                            /      \
                        Agr_S        TP
                          |        /    \
                         V_j    Subj_i    T′
                                        /    \
                                      T        VP
                                      |      /    \
                                     t_j′   t_i    V′
                                                 /    \
                                               t_j     Obj
```
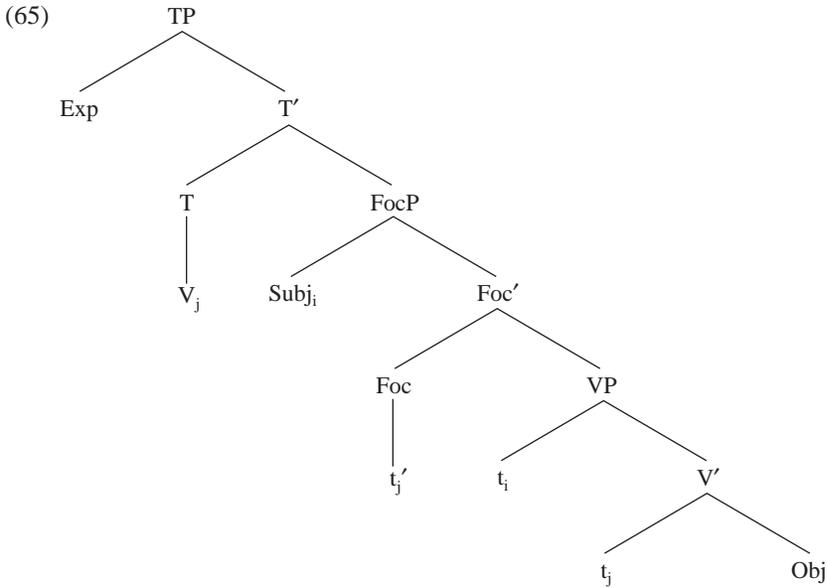
Chomsky (1995) proposes an alternative account, aimed at eliminating the Agr system entirely from syntactic derivations. He claims that the expletive and the Subj fill two layered Specs of TP, as depicted in (64).

(64)

```
                    TP
          ┌─────────┴─────────┐
         Exp                  T′
                    ┌──────────┴──────────┐
                  Subj_i                  T′
                              ┌───────────┴───────────┐
                              T                       vP
                                          ┌───────────┴───────────┐
                                        Spec                      v′
                                                      ┌───────────┴───────────┐
                                                    t_i                       v′
                                                                  ┌───────────┴───────────┐
                                                                  v                       VP
                                                                              ┌───────────┴───────────┐
                                                                              V                      Obj
```
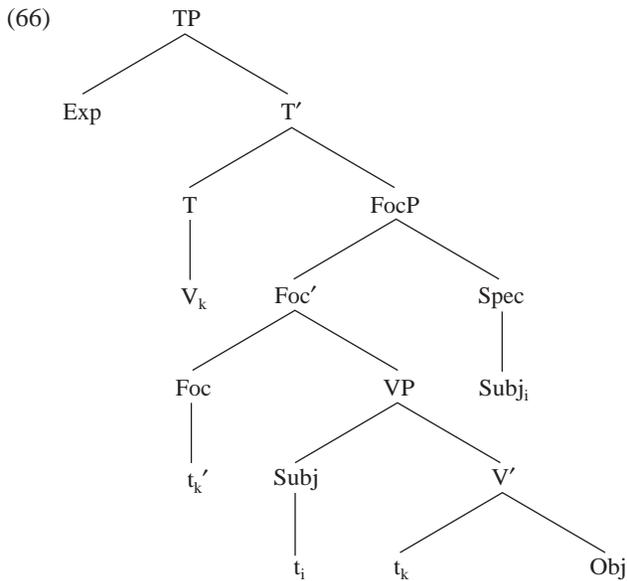
The expletive is merged in the upper [Spec, TP], where it checks the strong EPP feature of T. T is assumed to have a parameterized property that allows the EPP feature to escape erasure when checked, thus triggering attraction of Subj from [Spec, vP] to the inner [Spec, TP].[28] According to this proposal, TECs are permitted only if T has a strong EPP feature that tolerates a single unforced violation of Procrastinate, under the multiple-Spec hypothesis.

Following the analysis of Kirundi OVS, I argue below that TECs derive instead from the existence of the functional head Focus located between TP and VP, whose strong focus feature triggers overt Ā-movement of the Subj to its Spec, as depicted in (65).

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[28] Chomsky notes that this analysis predicts the order [Exp-Subj-T^{0max} XP] rather than what is observed at PF, namely, [Exp-T^{0max}-Subj XP]. He suggests that the observed order results from phonologically driven operations (e.g., adjunction of T^{0max} to Exp or to TP) that may be required to satisfy the verb-second property. Obviously, such a solution needs to be reinforced in order to explain the word order in (61a) whereby the raised Subj obligatorily follows the sentential adverb.

(65)

```
                    TP
           _____|_____
          Exp               T'
                    _____|_____
                   T                 FocP
                   |          _____|_____
                   Vⱼ       Subjᵢ             Foc'
                                      _____|_____
                                     Foc               VP
                                      |          _____|_____
                                     tⱼ'        tᵢ             V'
                                                        _____|_____
                                                       tⱼ             Obj
```

Under this view, the only difference between Icelandic and Kirundi TECs is that [Spec, FocP] is on the right side of its head in Kirundi, as in (66).

(66)

```
                    TP
           _____|_____
          Exp               T'
                    _____|_____
                   T                 FocP
                   |          _____|_____
                   Vₖ       Foc'              Spec
                     _____|_____         |
                    Foc              VP       Subjᵢ
                     |         _____|_____
                    tₖ'      Subj            V'
                              |        _____|_____
                             tᵢ       tₖ             Obj
```

In the following discussion I show that (66) holds for Kirundi TECs. I also point out syntactic similarities and contrasts between Kirundi and Icelandic TECs, suggesting that (65) holds for

Icelandic TECs.[29] If so, then TECs do not offer empirical motivation for either the multiple-Spec hypothesis for TP or Chomsky's parameter governing TECs—that is, the ability of the strong EPP feature of T in TECs to tolerate a single unforced violation of Procrastinate.

Kirundi TECs are illustrated in (67b), from the canonical SVO order in (67a). In (67a) the verb contains the Subj agreement marker *ba-* and the antifocus marker *-ra-*. In (67b) the Subj position is filled by a null expletive (recall that Kirundi is a pro-drop language) that agrees in φ-features with the verb.[30] Agreement is expressed on the verb by the locative marker *ha-*. The logical Subj appears in a postverbal position, following the direct Obj (and indirect Obj if there is one). (67c), where the Subj precedes the direct Obj, is ill formed.

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

     b. pro$_{exp}$ ha-á-nyoye   amatá abâna.   Exp-VOS
             LOC-PST-drink:PERF milk   children
        'Children (not parents) drank milk.'

     c. *pro$_{exp}$ ha-á-nyoye   abâna amatá.   Exp-VSO
             LOC-PST-drink:PERF children milk

Four empirical arguments demonstrate that the inverted Subj of TECs (67a) overtly moves to [Spec, FocP] as depicted in (66), rather than to [Spec, TP], as in (65).

First, Kirundi TECs and OVS disallow the antifocus marker *-ra-* on the verb and entail a focus reading on the postposed Subj, as illustrated in (68a–b). These two properties require a unified account. In section 3.3.2 I argued extensively that the inverted Subj of OVS constructions (68a) overtly Ā-moves to [Spec, FocP], thus explaining its focus reading and the absence of the antifocus marker *-ra-*. The minimal hypothesis is that the same derivation holds for the focused Subj of TECs (68b).

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[29] This predicts that the Subj of Icelandic TECs is somehow focused. I presume this to be the case, given that it cannot undergo further *wh*-extraction (see discussion below). Interestingly enough, an anonymous *LI* reviewer points out that the standard characterization of Icelandic TEC subjects as obeying an indefiniteness requirement is incorrect, and certain strong quantified expressions are admitted in [Spec, TP].

[30] In Icelandic TECs, on the other hand, it is the associate, rather than the expletive, that agrees with the verb. More precisely, as reported by Thráinsson (1979) and Schutze (1993), the verb agrees with the DP that bears nominative Case, both in dative shift constructions (i) and in TECs (ii). See Ura 1996 for a detailed discussion of dative shift constructions. I return to this interesting agreement contrast between Icelandic and Kirundi TECs in section 5.

   (i) Mér   líka   ekki bílarnir.
       me(DAT) like(3P) NEG   the-cars(NOM)
       'I don't like the cars.'
       (Thráinsson 1979:466)

  (ii) Það líka   einhverjum   ekki bílarnir.
       EXP like(3P) someone(DAT) NEG   the-cars(NOM)
       'Someone doesn't like the cars.'
       (Schutze 1993:345)

(68) a. Amatá y-á-nyôye   abâna.   OVS
        milk   3S-PST-drink:PERF children
        'Children (not parents) drank milk.'

     b. pro_exp ha-á-nyôye   amatá abâna.   TEC
             LOC-PST-drink:PERF milk   children
        'Children (not parents) drank milk.'

Second, in OVS constructions (68a) the verb agrees in φ-features with the fronted Obj rather than the inverted Subj. In TECs (68b) the verb agrees with the null expletive. Accordingly, there is no covert raising for agreement checking either in (68a) or in (68b). Now, if both the expletive and the Subj of TECs (68b) are in layered Specs of TP, nothing prevents Subj-verb agreement in TECs (68b). Furthermore, the contrast between Kirundi and Icelandic TECs with respect to associate-verb agreement would remain unexplained.

Third, we have seen that the inverted Subj in OVS constructions (but not the fronted Obj) resists *wh*-extraction. The same restriction applies to Subj of TECs, as shown by (69b). A problem arises here. The ungrammaticality of (69b) is unexpected if the null expletive in (69a) is in [Spec, TP].

(69) a. pro_exp ha-á-somye   ivyo bitabo abantu benshi.   TEC
             LOC-PST-read those books people many
        'Many people read those books.'

     b. *[_CP Abantu bangahe_i   [_TP pro_exp ha-á-somye   ivyo bitabo t_i]]?
          people   how many   LOC-PST-read those books
        [Lit.: 'How many people there read those books?']

Note in passing that TECs (69a) also forbid *wh*-extraction of the direct Obj and potential VP modifiers, yet permit *wh*-extraction of clausal adjuncts. One could assume that the null expletive undergoes further Ā-movement to some position higher than [Spec, TP][31] (say, [Spec, Top]), but lower than the position of clausal adjuncts, thus correctly allowing *wh*-extraction of clausal adjuncts while barring *wh*-extraction of Subj, Obj, and VP modifiers in TECs. Such an account is not viable, however. Indeed, it would fail to account for the fact that the same asymmetries appear in OVS constructions. Recall that only the fronted Obj and clausal adjuncts in OVS constructions are extractable; the inverted Subj and VP modifiers are not. Yet, Obj in OVS constructions is in [Spec, TP], as demonstrated in section 3.3.2.

On the other hand, these *wh*-extraction asymmetries follow directly if the inverted Subj in both TECs and OVS constructions is in [Spec, FocP]. In this position Subj checks its focus feature,

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[31] Jonas and Bobaljik (1993) mention this possibility for Icelandic TECs. This suggests that Icelandic TECs display the same restrictions on *wh*-movement that show up in Kirundi TECs and OVS constructions. If so, a unified account is required.

hence cannot be subject to further Ā-movement for the reason already given—that is, double focusing. Furthermore, the filled [Spec, FocP] forms an island for *wh*-movement of lower arguments (direct and indirect Obj) and VP adjuncts. Clausal adjuncts, being in a position higher than FocP, are correctly predicted to be extractable.

Finally, the multiple-Spec hypothesis for TP and *v*P fails to capture the interesting binding asymmetry illustrated by the facts in (70b–c). In (70a), an SVO sentence, the pronoun inside the DP complement is bound by the c-commanding Subj in [Spec, TP]. In (70b), a TEC, the direct Obj linearly precedes the Subj. Yet binding still shows up. More surprisingly, the binding option fails to apply in OVS constructions (70c). This important contrast is unexpected, since Obj precedes the binder (Subj) in both TECs (70b) and OVS constructions (70b).

(70) a. Yohani$_i$ a-á-*ra*-zanye   imodoka yíwé$_i$.   SVO
      John   3S-PST-F-bring:PERF car   of-him
      'John$_i$ brought his$_i$ car.'

    b. pro$_{exp}$ ha-á-zanye   imodoká yíwé$_i$ Yohani$_i$.   TEC
         LOC-PST-bring:PERF car   of-him John
      'John$_i$ (not Peter) brought his$_i$ car.'

    c. *Imodoka yíwé$_i$ i-á-zanye   Yohani$_i$.   OVS
      car   of-him 3S-PST-bring John
      'John$_i$ (not Peter) brought his$_i$ car.'

Let us begin with the multiple-Spec hypothesis for *v*P. Under this hypothesis, the TEC (70b) would be derived as in (71).

(71)
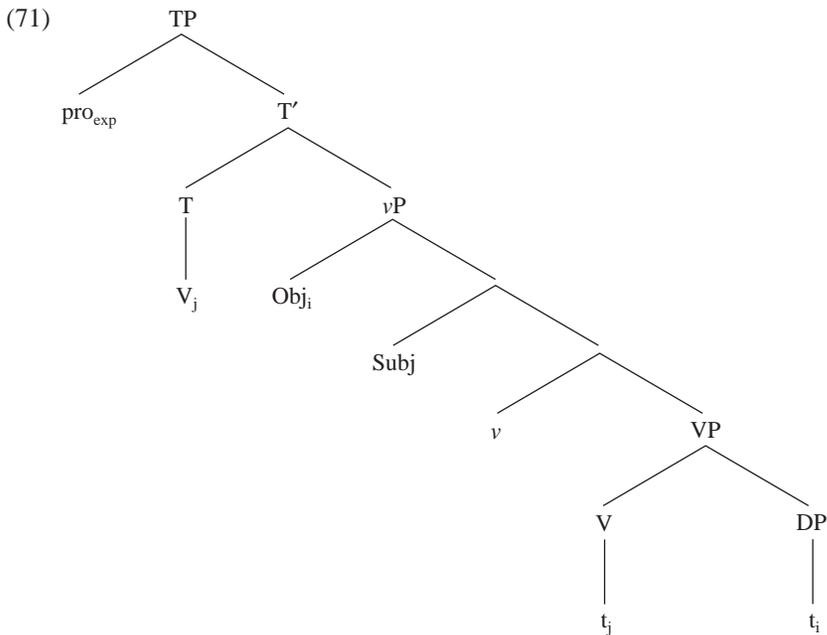
In this derivation the DP Obj overtly raises to the outer [Spec, *v*P], over the Subj in the inner [Spec, *v*P], and a null expletive is merged in [Spec, TP] to check the FFs of T. (71) clearly fails to account for the binding possibility in (70b).

Indeed, Subj and Obj in (71) are not in a legitimate binding-theoretic configuration for Subj to bind the pronoun inside the upper Obj. It is crucial to note that there is no associate-verb agreement in Kirundi TECs, hence no LF raising of the FFs of the Subj to T that would assign A-position properties to Subj for binding purposes.

Furthermore, one could not appeal to LF reconstruction of the raised Obj to satisfy the c-command requirement for binding, given that there is no LF reconstruction for A-chains. Incidentally, such a possibility would wrongly predict (70c) to be well formed, with LF reconstruction of the raised Obj in [Spec, TP]. Note in passing that the ungrammaticality of (70c) proves that the fronted Obj is not in an Ā-position.

Now let us consider the multiple-Spec hypothesis for TP. At first glance it appears to handle the binding facts in (70b–c) quite easily. Indeed, under this approach the TEC (70b) is derived as in (71), but with subsequent (rightward) raising of Subj to one of the two layered Specs of TP (64), in order to check the undeleted EPP feature of T, following Chomsky's analysis presented above. This derivation creates the right configuration for the raised Subj, now in [Spec, TP], to c-command and bind the pronoun inside the raised Obj in [Spec, *v*P]. Thus, (70b) is correctly predicted to be well formed. Furthermore, the ungrammaticality of (70c) follows, given that raising of Obj to the outer [Spec, TP] yields an illegitimate binding configuration much like the one in the *v*P structure of (71).

Yet this seemingly attractive hypothesis leaves many problems unexplained. Beyond those mentioned in the discussion of the LCA, it permits some nonconvergent derivations to be constructed. To see this, consider the following hypothetical derivation.

We know that Obj can raise in [Spec, TP], yielding an OVS construction (68a). Now, given the intermediate derivation in (71) for a TEC, nothing on conceptual grounds prevents Obj, instead of Subj, from raising into the presumed inner [Spec, TP][32] and checking the undeleted EPP feature of T, thus forming a TEC with Obj (rather than Subj) in the inner [Spec, TP] in (64). Empirically, if (70b), repeated as (72a), is well formed because Subj is in the inner (rightward) [Spec, TP] (64) and thus binds Obj in [Spec, *v*P], the alternative TEC in (72b), with Obj (rather than Subj) in the inner [Spec, TP], should be as well formed as the OVS construction in (72c), since no binding is involved in these two sentences. The grammaticality contrast between (72b) and (72c) is not predicted by the multiple-Spec hypothesis for TP.

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[32] Indeed, since Obj and Subj in (71) are in the same minimal domain of *v*, which means that they are equidistant from the unfilled inner [Spec, TP], each of them could, in principle, move to the inner [Spec, TP], if the raised argument has a D-feature to be checked against the EPP feature of T. Although the Obj in (71) has checked its D-feature in [Spec, *v*P], this feature, being +Interpretable, is not deleted since +Interpretable FFs of lexical categories are never deleted. Therefore, the Obj could move to the inner [Spec, TP] to check the undeleted EPP feature of T, following Chomsky's parameter for TECs.

(72) a. pro$_{exp}$ ha-á-zanye [imodoká yíiwé$_i$] Yohani$_i$.   Exp-VOS
        LOC-PST-bring car of-him John
        'John$_i$ (not Peter) brought his$_i$ car.'

   b. *pro$_{exp}$ ha-á-zanye Yohani$_i$ [imodoká yíiwé$_j$].   Exp-VSO
        LOC-PST-bring John car of-him
        'John$_i$ (not Peter) brought his$_j$ car.'

   c. [Imodoka yíiwé$_j$] i-á-zanye Yohani$_i$.   OVS
        car of-him 3s-PST-bring John
        'John$_i$ (not Peter) brought his$_j$ car.'

On the other hand, the binding facts in (70b–c) find a simple account under the derivation in (66) for Kirundi TECs, repeated in (73).

(73)
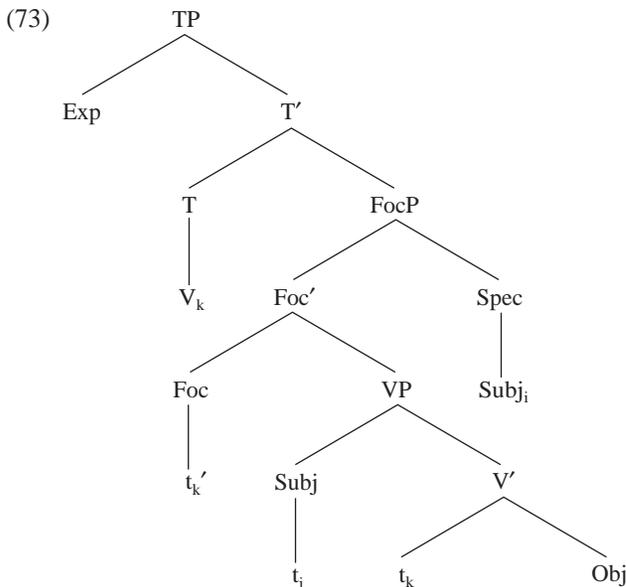
Recall that the expletive in [Spec, TP] checks all the FFs of T before Spell-Out. As a consequence, there is no LF raising of the FFs of Subj (actually, its trace in [Spec, VP]), hence no associate-verb agreement in Kirundi TECs. Ā-movement of Subj to [Spec, FocP] captures the binding possibility in the TEC (70b), assuming LF reconstruction of the Ā-moved Subj. Furthermore, the binding contrast between (70b) and (70c) follows directly. The raised Obj in [Spec, TP] in the OVS construction (70c) is not in the right configuration to be bound by the Subj, LF reconstruction being excluded for A-chains.

Two problems remain, however. First, (73) does not explain why (72b) is not well formed, with Obj rather than Subj in [Spec, FocP]. I give a simple explanation in the following section devoted to the cost of Merge as a feature-checking operation. Second, the agreement contrast

between Kirundi TECs and Icelandic ones is problematic if (73) holds for Icelandic TECs, modulo a leftward position for Spec of FocP. I discuss this issue as well in the following section.

4.2 Merge versus Shortest Attract

According to Chomsky (1995), the operation Merge is cost-free. This assumption might be reconsidered, however. One immediate problem is that it leaves unexplained the unaccusativity restriction on English expletive-associate constructions. Only unaccusative verbs are permitted in such constructions; witness the contrast between (74a) and (74b–c). In (74a–b) Subj remains in [Spec, VP].

(74) a.   Suddenly, there entered three women.
     b. *Suddenly, there three women smiled.
     c. *Suddenly, there three women called the manager.

In Chomsky's system FFs of the internal argument in (74a) covertly adjoin to T to check Case and ϕ-features. This explains the verb-associate agreement. However, this analysis also predicts (74b) to be well formed, which is not the case. An explanation is in order, if the analysis of (74a) holds.

Another puzzle is that the lexical restriction in (74) does not apply in Kirundi. Unergative and transitive verbs freely occur in expletive-associate constructions, as shown by (75a–b), respectively.

(75) a. pro$_{exp}$ ha-á-(*ra)-tweenze   abagoré batatu.
                 LOC-PST-(F)-smile:PERF women three
         [Lit.: '*There smiled three women.']
         'Three women smiled.'
     b. pro$_{exp}$ ha-á-(*ra)-siize   inzu   abagore batatu.
                 LOC-PST-(F)-paint:PERF house women three
         [Lit.: '*There painted the house three women.']
         'Three women painted the house.'

It is important to recall that Kirundi (T)ECs disallow the antifocus marker -ra- on the verb and assign a focus reading to the logical Subj. These two properties clearly indicate that Subj in (75a–b) has overtly moved to [Spec, FocP], leaving a trace in [Spec, VP], as depicted in (73). An interesting generalization arises from English ECs (74) and Kirundi ECs (75). The expletive can be inserted in [Spec, TP] only if [Spec, VP] is either nonexistent (74a) or filled by a trace (75). This leads us to the following strictly local economy condition on Merge as a feature-checking operation:

(76) Merge as a feature-checking operation is costlier than Shortest Attract.

The intuitive content of (76) is that Merge is barred if, at a particular step in the derivation, a less costly operation, Shortest Attract, can take place. In ECs this is quite clear. Inserting the expletive in [Spec, TP] appears to be costlier than applying Shortest Attract to Subj in [Spec,

VP].[33] (76) thus provides a unified account of the unaccusativity restriction in (74) and the trace-in-[Spec, VP] requirement for Kirundi (T)ECs. Furthermore, (76) straightforwardly accounts for one of the two problems left unsolved in section 4.1, namely the nonexistence of Kirundi TECs with Obj (rather than Subj) in [Spec, FocP]. The existence of such TECs would violate Shortest Attract, which bars Merge of the expletive in [Spec, TP] if the closest [Spec, VP] is filled by Subj, an overtly attractable lexical item.

5 Deriving Crosslinguistic Variation

The final issue deals with the source of parametric variation. Why do languages differ with regard to the existence of TECs and OVS constructions? More specifically, why do Icelandic and Kirundi, but not English, allow TECs? Furthermore, why does Kirundi permit both TECs and OVS, while Icelandic permits only TECs?

To the extent that the analysis proposed above is correct, the existence of TECs derives from the strong EPP feature of T (independently required for simple unaccusative expletive-associate constructions to be formed) and, more crucially, the availability in Kirundi and Icelandic, but not in English, of a TP-internal Focus head bearing a strong FF, which forces overt Ā-attraction of Subj to its left/right Spec (65)/(66).

As for OVS constructions, another parameter is in order, besides the strong focus feature. The nominative Case feature of T must be strong, thus triggering overt raising of Obj to [Spec, TP]. The fact that Kirundi allows OVS constructions, and Icelandic does not, even though both allow TECs, follows straightforwardly: the nominative Case feature of T is strong in Kirundi, but weak in Icelandic.

Interestingly enough, this parameter directly accounts for one problem left unsolved in section 4.1, namely, the contrast between Kirundi and Icelandic with respect to agreement in TECs. (Recall that in Kirundi TECs the verb agrees in ϕ-features with the expletive (as in French ECs), whereas in Icelandic TECs it agrees with the associate (as in English ECs).) For Kirundi, the null expletive merged in [Spec, TP] checks the strong EPP and Case features of T, thus barring LF raising of the FFs of the trace t_i in [Spec, VP] left by the Ā-moved Subj in [Spec, FocP] (73). As a consequence, there is no agreement between verb and associate. For Icelandic, on the other hand, the expletive checks only the strong EPP feature. The nominative Case feature, being weak,

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[33] As pertinently pointed out by one *LI* reviewer, what counts as Shortest Attract still needs to be characterized precisely. This is a general problem that is not specific to my account, however. But suppose a solution is in order here. Given the unaccusativity restriction on English expletive-associate constructions, I propose to define Shortest Attract for A-chains as a local Spec-to-Spec relation (thus dealing with the residue domain identified in Chomsky 1993:11). [Spec, TP], the landing site for A-chains, targets the closest Spec. If the latter does not have the FFs required to check the FFs of T, then Shortest Attract fails to apply. Therefore, Merge of the expletive in [Spec, TP] and overt raising from the complement domain (Chomsky 1993:11), both being last resort strategies, are equally costly. For head movement, such as V-to-I, Shortest Attract is (trivially) a local head-to-head relation. Thus, in English, if Neg blocks raising of the FFs of V, then Shortest Attract fails to apply. Hence, the only way to check the FFs of T is to invoke *do*-support, a last resort strategy, hence a costly one. Note in passing that *do*-support provides more evidence for (76).

is checked at LF, by covert raising to T of the FFs of the trace t_i in [Spec, VP].[34] This LF raising triggers agreement with the associate.[35]

6 Conclusion

Building on the central role devoted to functional categories and their formal features (FFs) in computational processes (Chomsky 1995), I have argued for a restrictive asymmetric checking theory that claims that feature checking is driven solely by the need to check FFs of functional categories. Under this theory, −Interpretable features are an exclusive property of functional heads; lexical categories entering the derivation are not inflected for such (noninherent) features. This approach is confirmed in an interesting range of cases. I have also shown that, on conceptual grounds, several economy conditions postulated within the current checking theory may be dispensed with, namely, the Equidistance Condition, Last Resort (Greed), the multiple-Spec hypothesis (at least for TP and vP), and the assumption that Merge as a feature-checking operation is cost-free. Under a strictly minimalist view, such a simplification is desirable, though still to be tested on a broader range of empirical phenomena.

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[34] Indeed, if (73) holds for Icelandic TECs, modulo a leftward [Spec, FocP], the trace t_i still bears the FFs of the Ā-moved Subj in [Spec, FocP] since, according to Chomsky (1995), FFs of Ā-chains are neither deleted nor erased at LF. (I put aside here cases of TECs involving dative Subj (see footnote 30), which raise no problem for my analysis.) Chomsky's assumption finds empirical support from English associate-verb agreement in (i) where the associate has been *wh*-moved.

(i) [How many books]$_i$ do you think there are t$_i$ in the library?

[35] An anonymous *LI* reviewer points out a potential problem for the unified analysis in (73). If the trace t_i in [Spec, VP] of the Ā-moved Subj bears FFs (i.e., Case and agreement features, then these FFs will be attracted by Shortest Attract and both OVS and TECs would always be excluded. This apparent problem can be solved without any changes to (73), however. Indeed, recall that, in Chomsky's (1995) theory, covert attraction of FFs takes place at LF, to check a weak FF in the functional domain, whereas overt attraction of lexical items takes place before Spell-Out, to check a strong FF. Now consider OVS. Given that nominative Case (and EPP) features of T are strong in Kirundi, they must be checked prior to Spell-Out—that is, by overt raising of lexical items. Therefore, prior to Spell-Out the FFs of the trace in [Spec, VP] are not the closest target for overt Shortest Attract. Hence, they do not block overt attraction of Obj, since they cannot do the work themselves at this relevant step of the derivation. The same explanation extends to TECs. The strong EPP feature of T forces Merge of the expletive in [Spec, TP] prior to Spell-Out. The FFs of the trace in [Spec, VP] will only be relevant at LF, to check the weak Case and agreement features of T in Icelandic TECs.

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