# Remarks and Replies

## Concord in Minimalist Theory

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Concord within DP argues that movement is driven by uninterpretable features of either the target or the moved item, contra Chomsky 1995. The uninterpretable ϕ-features of which concord consists must be eliminated by LF, to satisfy Full Interpretation. But raising of inflected APs and KPs into checking relations with $N^0$ cannot be motivated, in Chomsky's system, since $N^0$ has no uninterpretable features that these items can check. Assuming Kayne's (1994, 1998) proposal for APs, the problem can be partially overcome, but inflected 'of' constructions still lack an account. Chomsky's (1998) probe-goal approach applied to concord also encounters difficulties, avoided under revision of the (1995) system: if the ϕ-features of APs and KPs drive them to raise for checking, correct results are obtained.

*Keywords:* concord, agreement, feature checking, movement (theory), Greed, Attract, Enlightened Self-Interest

### 1 Introduction

Many studies reduce ϕ-feature agreement to the structural relation between heads and their specifiers (see, e.g., Chomsky 1986, Koopman 1992, Kinyalolo 1991). In the framework of Chomsky (1995), the specifier-head relation is one that allows for features to be *checked.* Checking in turn makes possible elimination from LF of features lacking interpretations, which are illicit at that level; this elimination is termed *erasure.* I illustrate with French subject and predicate adjective agreement in (1).[1]

(1) a. Elle est belle. [French]
she is beautiful-FEM.SG
'She is beautiful.'

b. $[_{IP}$ elle $[_{I'}$ est $[_{VP}\ t_V\ [_{AP}\ t'_{elle}\ [_{A'}$ bell*e* $t_{elle}]]]]]$

*checking relation* *checking relation*

*Result: both agrs erase*

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[1] Nothing in principle forces *elle* in (1) to raise through [Spec, VP] en route to [Spec, IP], but whether or not this happens is irrelevant here.

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Like many aspects of sentence-level syntax, agreement of this type has a counterpart within the noun phrase (see, e.g., Chung 1982, Abney 1987): a head noun may agree with its highest argument (2a–d).[2] The account of (1) extends naturally, assuming a specifier-head relation between nouns and their ''subjects,'' as in (2e).

(2) a. a Péter-Ø kalap-ja [Hungarian]
the Peter-NOM hat-POSS.3SG
'Peter's hat'

b. angute-t kuiga-t [Yup'ik]
man-PL river-PL
'the men's river'

c. (sen-in) el-in [Turkish]
(you-GEN) hand-2SG
'your hand'

d. i bisita-na si Francisco as Teresa [Chamorro]
the visit-3SG UNM[3] Francisco to Teresa
'Francisco's visit to Teresa'
*NSO order = N-raising to D; see Carstens 1991 after Ritter 1998*

e. $[_{XP}$ Subject [ . . . N + agr . . . ]]
*checking relation*
*Result: agr on N erases*

A specific account: I follow Abney (1987) in analyzing noun phrases as DPs; Ritter (1991), Carstens (1991), Picallo (1991), Siloni (1997), and others in assuming that a mid-level functional projection FP intervenes between DP and NP.[4] Noun phrases thus contain counterparts to the sentential constituents $[_{CP}[_{TP}[VP]]]$. The surface position of $N^0$ varies crosslinguistically because $N^0$ raises to $F^0$ and $F^0$ to $D^0$ either overtly (as happens in (2d)) or at LF. Turning to N's arguments, I assume that all objects originate in complement position (see Chomsky 1970). With Sportiche (1990) and Valois (1991), I consider that an agent is generated in a ''shell'' above the NP core; following Chomsky's (1995) treatment of external arguments of verbs, I analyze this as *n*P, projected by a ''light'' noun. Possessors and agents can cooccur in some languages (see Giorgi and Longobardi 1991, Valois 1991); when they do, possessors asymmetrically c-command agents, and both asymmetrically c-command themes (see section 6.3.2). In light of this I propose that DP can contain two *n*Ps, the higher of which is the base position of the possessor.[5] The highest

[2] (2a–c) are examples given by Abney (1987), who cites Underhill 1976 for Turkish and Szabolcsi 1987 for Hungarian. (2d) is from Chung 1982.

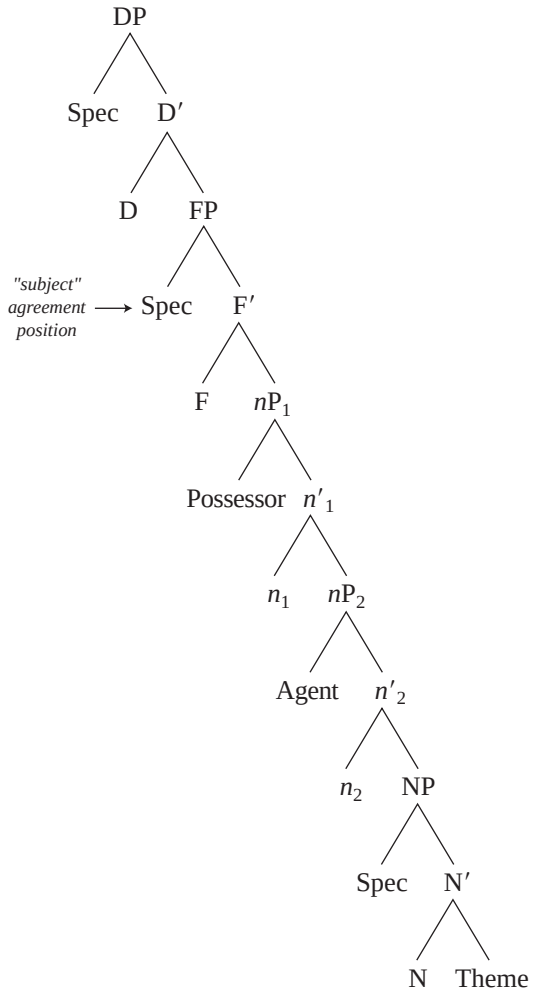
[3] UNM = ''unmarked''; the particle precedes proper nouns (Chung 1982:126).

[4] This might be NumberP (Ritter 1991, Carstens 1991) or, if number is a feature of nouns, GenP (Picallo 1991) or $Agr_{gen}$P (Siloni 1997). See section 3 and in particular the discussion of (27) and (28). Additional categories argued for within DP include PersonP (Koopman 1997) and KP (Mallén 1997). These possibilities are compatible with the account, and I ignore them for simplicity's sake.

[5] Ura (1996) proposes that double object constructions involve a mid-level *v*P in addition to that housing the agent; thus, structural parallelism of nominal and sentential domains is possible on this point as well.

nominal argument present raises to [Spec, FP] overtly, in many languages; in Carstens 1991 I propose that ''subject'' agreement on $N^0$ is checked in FP and thus is a diagnostic for this occurrence.[6] These points are illustrated in (3).

(3)




The kind of agreement in DP found in Turkish, Hungarian, and Yup'ik is thus comparable to specifier-head agreement in other categories. Within DPs of a language with grammatical gender, however, a different pattern is found: agreement appears on modifiers and arguments, controlled by features of the head noun. The Spanish data in (4) exemplify this well-known fact, for determiners and adjectives.

[6] See Carstens 1991 for arguments that the controllers of agreement on N appear in the specifier of this mid-level functional projection, for Case reasons.

(4) a. *la* casa blanc*a* [Spanish]
the-FEM house white-FEM
'the white house'
b. *el* coche blanc*o*
the-MASC car white-MASC
'the white car'
c. *las* casas blanc*as*
the-FEM.PL houses white-FEM.PL
'the white houses'
d. *los* coches blanc*os*
the-MASC.PL cars white-MASC.PL
'the white cars'

Genitive pronouns also agree in many languages. In Spanish this agreement is in number only, whereas in Italian and Bantu it also reflects the gender features of the head noun.[7]

(5) a. mi hermano/a [Spanish]
my-SG sibling-MASC.SG/FEM.SG
'my sibling'
b. mi*s* hermanos/as
my-PL sibling-MASC.PL/FEM.PL
'my siblings'

(6) a. la mi*a* casa [Italian]
the-FEM.SG my-FEM.SG house-FEM.SG
'my house'
b. il mi*o* gatto
the-MASC.SG my-MASC.SG cat-MASC.SG
'my cat'
c. le mi*e* case
the-FEM.PL my-FEM.PL house-FEM.PL
'my houses'
d. i mi*ei* gatti
the-MASC.PL my-MASC.PL cat-MASC.PL
'my cats'

(7) a. kiti *ch*angu [Swahili]
7chair 7my
'my chair'

[7] Numbers preceding Bantu glosses indicate noun classes; for arguments that these signify gender + number, see Carstens 1991, 1993, 1997. Note also that Spanish postnominal genitives agree in gender and number; see Torrego 1986.

b. viti *vy*angu
8chair 8my
'my chairs'
c. ndizi *y*angu
9banana 9my
'my banana'
d. ndizi *z*angu
10banana 10my
'my bananas'

Finally, 'of' agrees in Bantu and some Afro-Asiatic languages ((8) from Tuller 1986).

(8) a. gidaa *n*a Aisha [Hausa]
house-MASC of-MASC Aisha-FEM
'Aisha's house'
b. mootaa *t*a Ali
car-FEM of-FEM Ali-MASC
'Ali's car'

(9) a. kikombe *ch*a kahawa [Swahili]
7cup 7of 9coffee
'this cup of coffee'
b. vikombe *vy*a kahawa
8cup 8of 9coffee
'my cups of coffee'
c. picha *y*a Mariamu
9picture 9of Mariamu
'a picture of Mariamu'
d. picha *z*a Mariamu
10picture 10of Mariamu
'pictures of Mariamu'

The term *concord* traditionally distinguishes this pattern of agreement within DP from the canonical specifier-head type; agreement theory as developed in Chomsky 1993 and related work accounts only for the latter. Whether or not the more articulated feature-checking theory developed in Chomsky 1995 provides an account of concord has not been established.[8] I argue here that it can do so, because checking relations are more numerous in this framework and are intrinsically symmetrical (Chomsky 1995:259).

Extension of Chomsky's (1995) checking theory to (4)–(9) raises interesting questions for the theory of movement, however. Chomsky hypothesizes that movement happens only when a

[8] See Mallén 1997, Bosque and Picallo 1996 on agreement in DP in terms of Chomsky 1993, involving AgrPs and lacking the interpretable/uninterpretable distinction (and Attract; see below).

category with an uninterpretable feature *attracts* some feature into its checking domain; for example, the heads $T^0$ and $v^0$ have uninterpretable Case, category, and ϕ-features, which trigger raising of arguments and verbs. In contrast, the items that undergo raising cannot do so to satisfy their own requirements. The privileged role of the target in this regard shapes the principle Attract.

(10) K *attracts* F if F is the closest feature that can enter into a checking relation with a sublabel of K. (Chomsky 1995:297)

Chomsky rules out attraction by interpretable features (1995:283).

On the basis of (4)–(9) I argue that the uninterpretable ϕ-features of modifiers and arguments of nouns initiate checking with interpretable features of a target. I propose to replace Chomsky's Attract with (11).[9]

(11) *Move*
For instantiations $F_1$, $F_2$ of a feature F, $F_2$ a sublabel of K, $F_1$ raises to K only if $F_1$ or $F_2$ is uninterpretable.

Under (11), the features of the target have no special status in the motivating of movement; if a category has uninterpretable features, it may either raise itself or ''attract'' raising for checking purposes.

The structure of this article is as follows. In section 2 I summarize the checking theory developed in Chomsky 1995. In section 3 I demonstrate its application to gender and number agreement in DP, and in section 4 its implications for movement theory. In section 5 I provide an account of the failure of an agreeing $K^0$ to inflect for the features of its complement DP, rather than the head noun. In section 6 I consider and reject an Attract-based approach to agreement in DP based on Kayne's (1994, 1998) proposals for DP syntax. In section 7 I review the account of agreement in Chomsky 1998 and show that it does not extend successfully to the facts of concord. In section 8 I summarize the conclusions reached in the article.

I abstract away from variation in the feature content of concord, that is, whether it includes number or gender or both. I also assume from 'of'-agreement in Bantu and Afro-Asiatic that checking relations are generally available between 'of' and a head noun, crosslinguistically. That this does not yield agreement on 'of' in Romance DPs is likely a matter of low-level morphological idiosyncrasy; in any event it is not of concern here.

## 2 Overview of Checking Theory

In the minimalist framework outlined in Chomsky 1995, lexical insertion (*Merge*) introduces a small number of meaningless features to syntax: Case, agreement, and the categorial subcategorization features of heads (see (12)). At LF only interpretable elements belong. Elimination of an uninterpretable feature—in Chomsky's terminology, *erasure*—is contingent upon its being *checked*, that is, paired with a matching feature in an appropriate structural relation. Features with interpretations need not be checked, since they must be present in LF and thus cannot be erased.

[9] (11) is a version of Lasnik's (1995) Enlightened Self-Interest, on which see section 4.

(12)

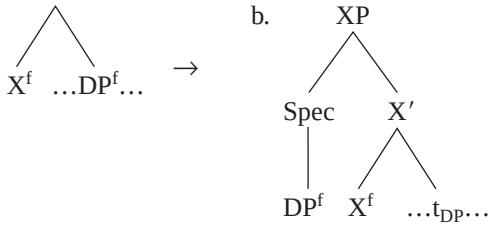
| *Feature* | *Interpretable* | *Uninterpretable* |
|---|---|---|
| ϕ | D(P), N(P) | agreement |
| Case | inherent | structural |
| category[10] | intrinsic | subcategorized |

The checking relation holds in three configurations of overt syntax: (a) between specifier and head; (b) between two heads α and β, α adjoined to β; (c) between the adjoined α and γP in [Spec, β] (see (13), (14), and (15b), respectively). LF checking differs slightly; I discuss it below.

Chomsky (1995) observes that uninterpretable features are typically associated with targets of movement. For example, categorial features of $T^0$ (which he views as uninterpretable) drive both verb movement and subject raising; similarly, object raising is driven by the agreement and accusative Case features of $v^0 + V^0$.

In light of this pattern Chomsky proposes that items move only when *attracted* by uninterpretable features of a target (see (10)). The target's features may be ''strong'' and thus require immediate checking via overt movement. There are two subcases of this, represented in (13) and (14): DP-movement to [Spec, X], and Y-raising to adjoin to X. In (13) feature *f* of X is uninterpretable and strong; in a checking relation with $DP^f$, it deletes and erases. In (14) feature *f* of X is also uninterpretable and strong; in a checking relation with $Y^f$, it also deletes and erases.

(13)

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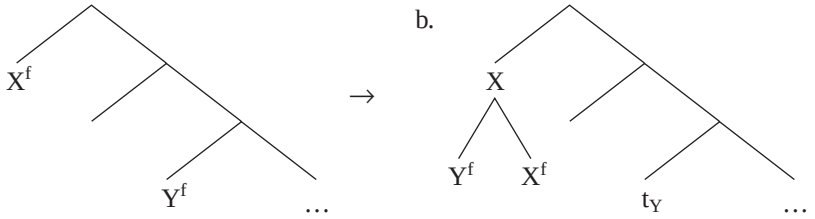
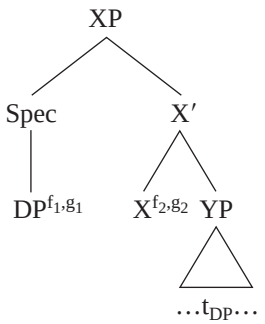



A weak feature *f* may be checked in overt syntax as a ''free rider'' if a strong feature *g* forces overt raising of a category bearing *f* and *g* both. The free rider *f* may be intrinsic to the checking head $X^0$ as in (15a) or to a head adjoined to $X^0$ (15b–c). In (15a–b) $f_2$ and $g_2$ are uninterpretable; $g_2$ is strong. DP raises to check $g_2$ and $f_1$ checks $f_2$ as a ''free rider.'' In (15c) $f_2$ and $g_2$ are again uninterpretable; $g_2$ is strong. X raises to check $g_2$ and $f_1$ checks $f_2$ as a ''free rider.''

[10] Following Chomsky, I treat the EPP (Extended Projection Principle) as subcategorization for a category feature, despite some unresolved problems (see Collins 1996 on locative inversion).

(15) a.

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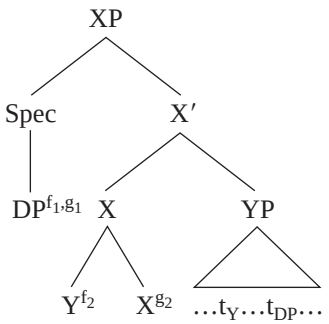
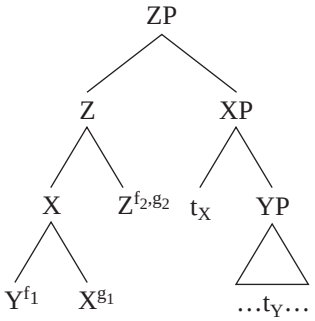
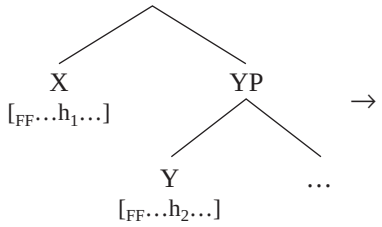



c.




Apart from the ‘‘free rider’’ circumstance, economy demands that a category that checks a weak feature stay in situ until LF. Then an item’s morphosyntactic features [FF] may raise unencumbered by lexical material to adjoin to the target, as in (16). In (16) $h_1$ is uninterpretable and weak. [FF]Y adjoins to X at LF; $h_2$ checks $h_1$, which then erases.

(16) a.

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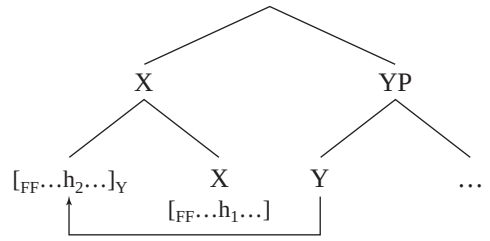



Feature checking is symmetrical; this means that in (13)–(16) each member of the feature pairs *f*, *g*, and *h* is checked. The symmetricality of checking relations permits, for example, the structural

Case features of a DP and an ''assigning'' head to check each other; in Chomsky's view both are uninterpretable, so must be erased.

Recall that, on the other hand, an interpretable instantiation $F_1$ of feature F cannot erase. Because it is present and available throughout the derivation, $F_1$ can check more than one uninterpretable instantiation of F, ($F_2 \ldots F_n$). This happens in the French (1a), repeated below: the interpretable ϕ-features of the subject check the gender and number features of agreement on the predicate adjective; then, after raising to [Spec, TP], they check person and number agreement on $T^0$ as well, as shown in (17). Chomsky proposes that movement is prerequisite to checking. This accounts for the absence of subject agreement on verbs, checked by the subject (trace) in its *v*P-internal base position (see (18)).

(1) a. Elle est belle.
she is beautiful-FEM.SG
'She is beautiful.'

(17) $[_{IP}$ elle $[_{I'}$ *est* $[_{VP}$ $t_V$ $[_{AP}$ $t'_{elle}$ $[_{A'}$ bell*e* $t_{elle}]]]]]$

*subject checks agreement on $A^0$ and $V^0$*

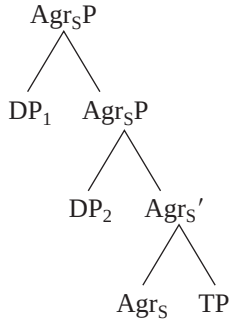
(18) $[_{IP}[_{I'}$ $[_{vP}$ Subject $[v$ [VP]]]]]

**checking by subject in situ*

Specifiers may iterate in Chomsky's system, enabling a target feature that does not erase to check multiple items. Multiple subject constructions are analyzed as such a case by Ura (1994) and Chomsky (1995). When more than one *ga*-marked DP occurs in the Japanese (19a), this indicates that the nominative Case feature of $Agr_S$ enters into multiple checking relations as shown in (19b), according to Ura.[11]

(19) a. Zoo-ga hana-ga nagai.
elephant-NOM nose-NOM long
'Elephants' noses are long.'

b.



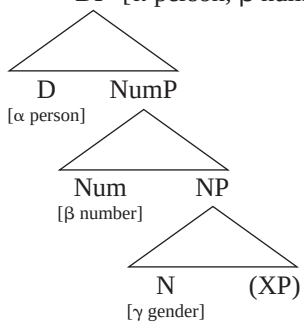

[11] See Whitman 1998 for a different view of the syntax of such constructions, however.

## 3 Concord in DP

### *3.1 If $F^0$ Is Number$^0$*

Let us now consider the gender and number agreement exemplified in (4)–(9) in relation to Chomsky's (1995) theory. I assume that person features are a property of the determiner $D^0$ (see Ritter 1991, Postal 1969, Abney 1987) and that grammatical gender is a lexical property of nouns. Suppose FP in (3) is NumberP (NumP) headed by singular and plural features, as shown in (20) (cf. Ritter 1991, Carstens 1991).

(20)




Thus, the heads within DP have interpretable ϕ-features, which, by assumption, must check the uninterpretable ϕ-features of agreeing determiners, modifiers, pronouns, and 'of' in (4)–(9).[12] The symmetricality of the checking relation and the syntax of DPs together make this possible, in principle.

To see how this works, consider first the Italian example in (21). $N^0$ raises overtly to $Num^0$ in Italian, as (22) shows.[13] This can be motivated by assuming that $n^0$ subcategorizes morphologically for $N^0$, and $Num^0$ for $n^0$; that is, $n^0$ has ''N-features'' and $Num^0$ ''*n*-features.'' Genitive pronouns follow $D^0$ and precede adjectives because they occupy [Spec, NumP] (see Ritter 1991, Carstens 1991).[14] I follow Valois (1991), Cinque (1994), and Crisma (1996) in treating adjectives as parallel to adverbs, attached to various projections in DP; in Chomsky's (1995) terms they are specifiers. Since they precede lexical possessors and agents, I assume they originate higher than these items in the structure.[15]

[12] The status of gender requires some comment. I class the gender of nouns as interpretable as opposed to the uninterpretable gender of agreement, but the distinction is more accurately one of [+/−inherent] features, as an anonymous *LI* reviewer points out. The gender of nouns might also be analyzed as an uninterpretable feature that does not erase, with identical results. I leave the question aside.

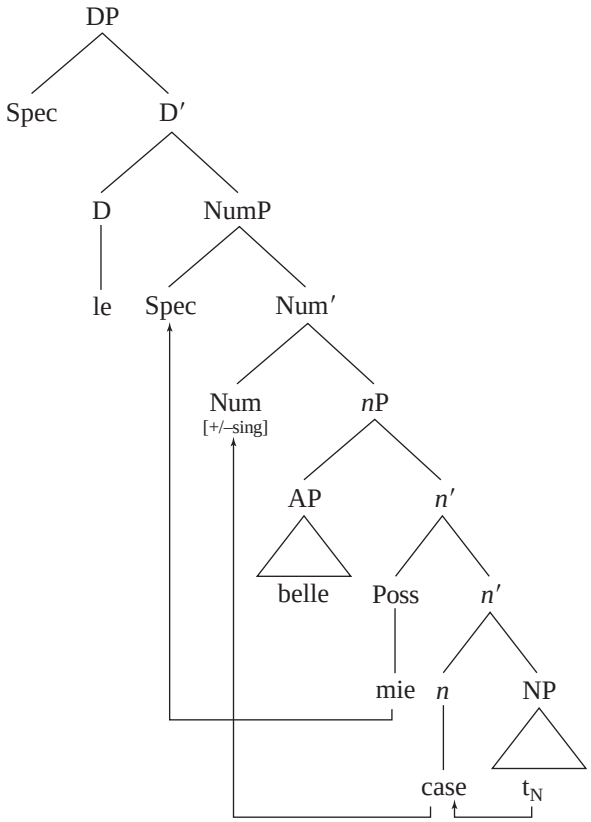
[13] . . . and sometimes higher, if it is a proper name; see Longobardi 1994.

[14] It is argued that clitic pronouns are attached to $D^0$; see Valois 1991 and others. This is irrelevant for purposes of the present discussion.

[15] The option of base-generating APs as outer specifiers to *n*Ps places them in the same minimal domain with a possessor or agent, thereby permitting these arguments to raise to [Spec, NumP] when they are pronouns despite the presence of c-commanding APs. For Cinque (1994), APs are specifiers of distinct heads; how pronouns raise across them is not clear.

(21) le mie case belle [Italian]
the-FEM.PL my-FEM.PL house-FEM.PL nice-FEM.PL
'my nice houses'

(22)



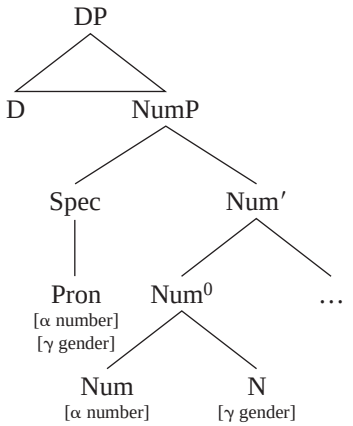

Checking of number and gender inflection on the determiner *le* is straightforward in Chomsky's (1995) theory. *Le* bears uninterpretable gender and number features, which can motivate raising to check them. $D^0$ might also have a number feature, that is, subcategorize morphologically for $Num^0$; in other words, plausible motivation for raising to $D^0$ is not hard to find. The fact that overt raising of $[_{Num}$ Num + N] to $D^0$ is not found in Italian argues that these features are weak, therefore checked by LF raising of the formal features of $[_{Num}$ Num + N]. $D^0$ agreement is thus a subcase of (16), fed by overt head adjunction as in (15b–c).

Turning to pronoun inflection, ''weak'' pronouns vacate their base positions overtly for reasons independent of agreement.[16] This leads to a specifier-head relation between a genitive pronoun and $Num^0$, permitting the pronoun's uninterpretable features of number and gender

[16] Pronoun raising is a challenge in itself for Attract, since movement correlates with lexical properties of the nontarget element. Cardinaletti (1994) proposes that weak pronouns do not contain N(P) and are accordingly (like English auxiliaries) too semantically ''light'' to be raised in LF. Thus, a target's Case feature can only be checked via overt movement of the pronoun, in favor of which result Procrastinate goes unmet.

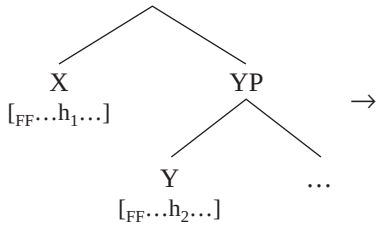
agreement to be checked as ''free riders'' by $Num^0$ and $N^0$ (see (23)).[17] The structural relations are those of (15b), although the distribution of interpretable and uninterpretable features differs.

(23)

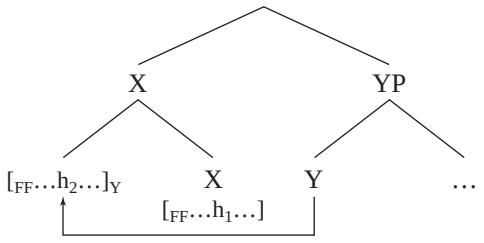



Agreement on adjectives, on the other hand, constitutes a problem for Attract. Checking requires movement, but N's interpretable gender feature does not need checking and therefore cannot motivate $A^0$- or AP-raising. Nor does $N^0$ check a Case or category feature of AP, on standard assumptions. It appears that the only uninterpretable feature that can motivate A(P)-raising into a checking relation with $N^0$ is the gender feature of the adjective itself.[18] For the same reason, $A^0$'s features must be assumed to raise to $Num^0$ without motivation in the features of $Num^0$. The result is an inversion of (16), namely, (24). In (24) $h_2$ is uninterpretable and weak. [FF]Y therefore adjoins to X at LF; $h_1$ checks $h_2$, which then erases.

(24) a.




b.

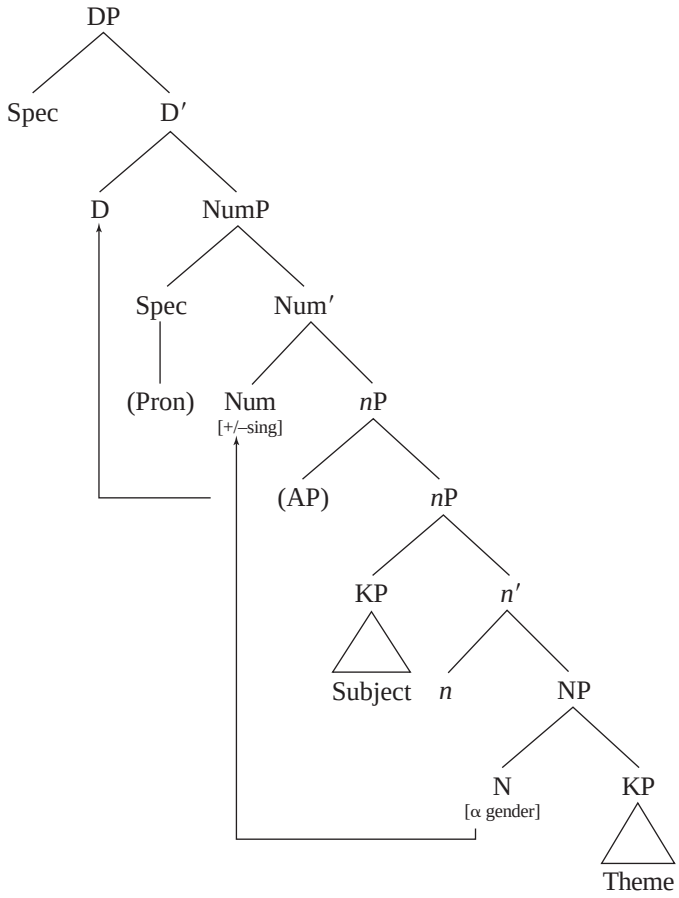



[17] The pronoun also has an interpretable number feature, irrelevant here.

[18] Whether this is overt movement or covert feature raising is not clear, given that AP originates as an outer specifier to N and might therefore move string-vacuously (see (22)).

I turn to agreement on 'of', illustrating with Swahili data. Subject and theme arguments in (25) are KPs, as (26) shows. Bantu DPs are N-initial owing to overt $N^0$-to-$Num^0$-to-$D^0$ raising.

(25)




(26) a. picha za Amira [Swahili]
10picture 10of Amira
'Amira's pictures'
(*Amira* = agent, possessor, or theme)

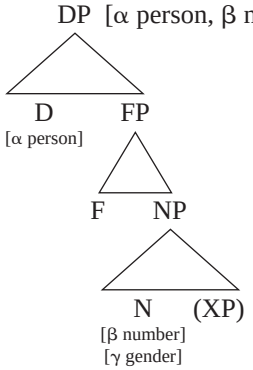
b. picha zangu nzuri za Amira
10picture 10my 10good 10of Amira
'my nice pictures of Amira'
(*Amira* = theme)

Like an AP, a KP argument is low in the structure and raising of its features has no apparent motivation, unless to check uninterpretable agreement features as in (24).

### *3.2 If F Is Uninterpretable and FP Iterates*

An alternative analysis of DP's feature composition views number as a feature of nouns and identifies FP as some other functional category, as shown in (27).

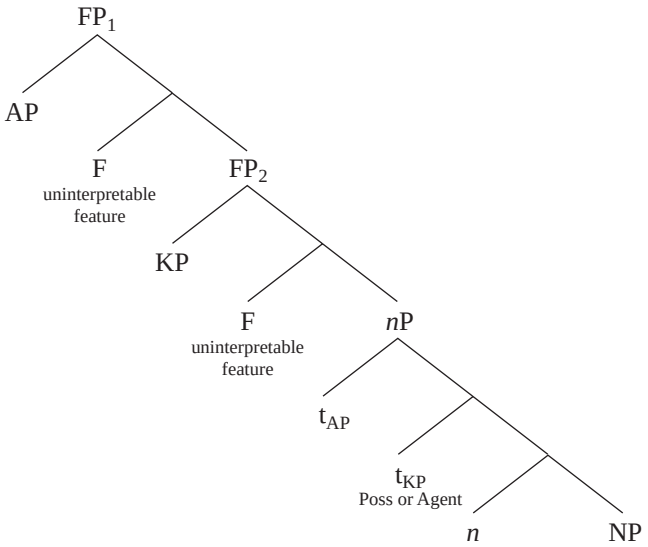
(27)




Owing to the assumption that checking entails raising, attributing both number and gender to $N^0$ does not eliminate the need for KPs and APs to leave their base positions for checking; the problem of motivating these movements thus remains.

There is a version of this proposal that might yield quite different results, however. If FP does not correspond to a unitary interpretable feature of DPs like number, then it is possible that multiple FPs occur (see (28)).[19] We might suppose that each FP has some uninterpretable feature that attracts a KP or AP. Continuing to assume that $N^0$ raises to $F^0$ in Romance and to $D^0$ in Bantu, this could put all KPs and APs in checking relations with the gender and number features of $N^0$, motivated by features of the FP target.

(28)




The problem with this approach is the absence of a suitable feature and identity to attribute to $F^0$. Possibilities are restricted to members of the small, finite set in (12). Of these, Case is perhaps

[19] My thanks to an anonymous *LI* reviewer for pointing out this possibility.

the most likely; it has often been suggested that FP in (27) is the checker/assigner of genitive Case (see Picallo 1991, Siloni 1997). But the distribution of arguments within DPs suggests that genitive Case is of limited availability, like other Cases (see Siloni 1997 for discussion); moreover, although APs in some languages inflect for Case, they tend to agree with the Case specification of head nouns rather than exhibiting independent Case requirements. These are unexpected states of affairs, if concord features of adjectives check as free riders on genitive Case. And KPs are by assumption Case-assigning/checking categories, making the analysis even more doubtful where they are concerned. Of the available features, nothing else suggests itself as head of FP and attractor of agreeing APs and KPs. Without identification of a truly plausible feature, the approach has the fatal flaw of unfalsifiability. Given this weakness, I put it aside.

To sum up, concord on adjectives and 'of' arguments can be accounted for under Chomsky's (1995) checking theory: the interpretable, thus nonerasing $\phi$-features of gender and number enter into multiple checking relations with modifiers and arguments inflected for these features, much as the Japanese $Agr_S$ checks multiple nominatives under Ura's (1994) view of (19). But the analysis rests crucially on the assumption that requirements of a nontarget element can motivate movement, contra Chomsky's (1995:282) conclusion.

## 4 Implications for Movement Theory

The idea that movement of some $\alpha$ occurs to satisfy $\alpha$'s needs is of long standing, underlying the Case theory presented in Chomsky 1981. It is generalized and strengthened in Chomsky 1993 as *Greed*, the view that items move only to satisfy their own needs.

Illustrating with the contrast in (29), Lasnik (1995) points out that Greed leaves many movements unaccounted for. (29a) demonstrates that the associate of an expletive in an existential construction may remain in situ. Given this, Lasnik observes that (29b) cannot be ruled out on the basis of unfulfilled needs of the associate. Lasnik adopts Belletti's (1988) proposal that *be* assigns inherent Case to $\alpha$; thus, $\alpha$ has no need to raise.

(29) a. There is [$_\alpha$ a strange man] in the garden.
b. *Is [$_\alpha$ a strange man] in the garden.

The EPP/D-feature of T apparently forces raising in (29b); Lasnik argues that the affixal character of *there* drives LF raising in (29a). Thus, raising happens only to fulfill the needs of the target, in (29), but Lasnik suggests that requirements of both targets and moved categories can motivate movement, a hypothesis that he dubs Enlightened Self-Interest.

Under Chomsky's (1995) principle Attract the function is shifted entirely to the target. This greater restrictiveness seems incompatible with the facts of concord. A return to Enlightened Self-Interest, with reference to interpretability added as in (11) (repeated here), results in a theory that explains how concord can be checked.

(11) *Move*
For instantiations $F_1$, $F_2$ of a feature F, $F_2$ a sublabel of K, $F_1$ raises to K only if $F_1$ or $F_2$ is uninterpretable.

## 5 A Loose End

A puzzle remains under the proposed checking account: the fact that 'of' never agrees with its object rather than with the head noun. Thus, we only find (30b), never (30a).

(30) a. * kiti *wa* mtoto [Swahili]
7chair 1of 1child
'the child's chair'
b. kiti *cha* mtoto
7chair 7of child
'the child's chair'

Note that the difficulty of accounting for this aspect of agreement on $K^0$ is not a consequence of (11). Under Attract, only $K^0$'s object would be expected to check $K^0$'s features.

Adapting an idea of Chomsky's (1995, 1998), I propose that checking between $K^0$ and its object (in (30), the possessor DP) fails because the two items are co-terms of Merge. Chomsky (1995) observes that a subject cannot check object agreement and accusative Case on $v^0$ in its base position [Spec, $v^0$]. To account for this, he rules out checking triggered by Merge of one category to the checking domain of another. My suggestion goes a step further in also prohibiting the structural complement of a head from checking its features.

(31) Merge ($x$, $y$) does not trigger a checking or movement relation between $x$ and $y$.

Note that (31) does not preclude head-head checking of morphological subcategorization features, since a given head and the head of its complement are not co-terms of Merge. Accordingly, if a KP were embedded in another functional category, call it *k*P, $K^0$ could raise to check a K-feature of $k^0$. Then the uninterpretable features of $K^0$ adjoined to $k^0$ could target $K^0$'s object to raise and check them. But apparently no such category as $k^0$ exists.[20]

## 6 An Alternative and Its Problems

### *6.1 APs: Kayne 1994*

Kayne (1994) proposes that adjectival modification has a structure quite different from that sketched in section 3. $D^0$ takes a sentential complement containing the head noun as subject and the AP as predicate (see (32a)). AP raises overtly to [Spec, CP], yielding the English order (see (32b)). In French, nouns then raise from [Spec, IP] to $C^0$, and $N^0 + C^0$ then raises to a higher functional head $F^0$, as in (32c) ((32a–c) adapted from Kayne 1994:97–101).

(32) a. $[_{DP}$ the $[_{CP}[_{IP}$ book I $[_{AP}$ yellow]]]] [Universal Grammar]
b. $[_{DP}$ the $[_{CP}[_{AP}$ yellow] $[C^0$ $[_{IP}[$book] $[I^0$ $t_{AP}]]]]]$ [English]
c. $[_{DP}$ le $[_{FP}$ F + C + livre $[_{CP}[_{AP}$ jaune] $[t_C$ $[_{IP}[t_{livre}]$ [French]
$[I^0$ $t_{AP}]]]]]]$

[20] Something along these lines is entailed for predicate adjective agreement as in (1), however, or perhaps it is checked in VP (see footnote 1); I will not pursue this here.

Where concord on adjectives is concerned, this analysis permits a viable alternative to the change in checking theory that I have proposed: *book* can be analyzed as a deep object of the adjective, as in Chomsky's account of (1b). En route to [Spec, IP], it will move to [Spec, AP] and check the adjective's features.

If an alternative account can be provided for the checking of concord on 'of', modification of movement theory is not motivated by concord phenomena. In what follows, however, I argue that concord on 'of' does not find a satisfactory account within Kayne's framework. Attract must therefore be rejected whether or not the above approach to APs ultimately proves correct.

### *6.2 'of' Constructions: Kayne 1994*

With respect to concord, Kayne's (1994) proposal for 'of' constructions is initially promising as well. Following Szabolcsi's (1981, 1983, 1994) treatment of Hungarian possessive constructions, Kayne argues that in (33) an abstract, definite $D^0$ Case-licenses the possessor *John.* An indefinite counterpart to this $D^0$ fails at Case licensing, however.

(33) $D^0_{def}$ [John ['s [two pictures]]]
*Case licensing*

(34) $D^0_{indef}$ [John ['s [two pictures]]]
**Case licensing*

English has a strategy for salvaging (34), according to Kayne: inserting *of* into the silent indefinite $D^0$, and raising the constituent $\alpha$ = *two pictures* to [Spec, DP]. This explains why a possessor can follow the possessed noun in English.[21]

(35) $[_{DP}[_{\alpha}$ two pictures$]_i$ $[[_{D_{indef}}$ of] [John ['s [e]$_i$ ]]]]
*Case licensing*

Koopman (1996a) points out that the specifier-head relation between the possessed NP and *of* in (35) can explain agreement on 'of' in Bantu. I illustrate this idea in (36).

(36) a. picha mbili za Juma [Swahili]
10picture 10two 10of Juma
'two pictures of Juma('s)'
b. $[_{DP}$ $D^0_{indef}$ [Juma [[picha mbili]]]]
c. $[_{DP}[_{\alpha}$ picha mbili$]_i$ $[[_{D_{indef}}$ *z*-a] [Juma [[e]$_i$]]]]
*specifier-head checking relation*

[21] Kayne (1994) proposes that only complements can follow heads in underlying structure.

Since [$_{\alpha}$ picha mbili] enters a checking relation with *-a* in overt syntax in (36), it is not surprising that the ϕ-features of *-a* are checked by [$_{\alpha}$ picha mbili] under this analysis, rather than by the apparent object *Juma*.

But aspects of the analysis are left open, undermining its ability to account for 'of'-agreement. It is not clear why α raises to [Spec, DP] in (35) and (36c), or what relation underlies Case licensing of the possessor *John* by $D^0$ in (33) and (35). There is more to be said, then, before (35) and (36) can be adopted.

A minimalist interpretation might suppose that α raises to [Spec, DP] in (35) and (36c) to check a strong feature F (≠ Case) of the morpheme 'of'. The Case feature of 'of' is universally weak; it checks when the features of the possessor raise and adjoin to it at LF. Problems exist for this version of Kayne's proposal, however. *John* is closer to $D^0_{indef}$ than α, raising movement-theoretic questions. And it is not clear how it can account for cases in which a noun has two arguments, such as (37) and (38). For example, [$_{\alpha}$ two pictures] must originate in the complement position to *'s* in (37), under Kayne's analysis. A derivation must accordingly be found to raise [$_{\alpha}$ two pictures] to the left of both 'of'Ps. Technical difficulties exist, as I will show.

(37) a. two pictures of Mary of John's
b. John's two pictures of Mary
c. two pictures of John's of Mary

(38) un portrait de Rembrandt d'Aristote [French; Valois 1991]
a picture of Rembrandt of Aristotle
'a picture by Rembrandt of Aristotle'

We might hypothesize a derivation for multiple 'of'Ps in which DPs iterate, as in (39).[22] The derivation would proceed as in (35) through α's raising to [Spec, DP], and then a second indefinite $D^0$ would presumably be merged (see (39a–d)). A second *of* would then be inserted, yielding (39e). How to proceed from this point is uncertain. Raising α to [Spec, $DP_2$] as in (39f) is consistent with Kayne's derivation for an NP with one *of*, but yields the unsalvageable **two pictures Mary of of John's*. Instead raising *two pictures* and stranding [$_{\alpha}$ t Mary] as in (39g) yields the right output, but is a significant departure from (35). No motivation suggests itself.[23] In light of its problems I leave this account—and my speculative extension of it—aside.

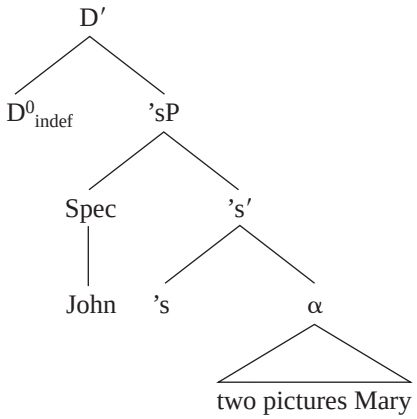
[22] An anonymous *LI* reviewer points out that the *of* preceding a possessor and the *of* preceding a theme argument might not be the same sort of syntactic item. As the reviewer notes, the absence of a possessor reading for *which person* in (i) is suggestive of this, since a theme reading is available (cf. Chomsky 1986).

(i) Which person did you see [two pictures of t]?

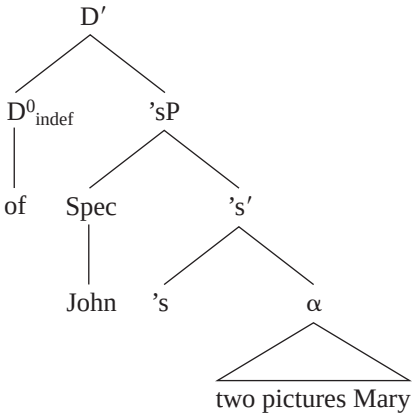
If a difference in the status of *of* in the two cases underlies this phenomenon, then Kayne's approach, and Koopman's extension of it to agreement on 'of', may be ruled out for a significant class of the cases considered, independently of the problems I raise here.

[23] An alternative might be for *Mary* to raise to [Spec, $DP_2$] in (39g), followed by raising of *of* to a functional head preceding $DP_2$; the remnant α would then raise to precede this. This derivation would be expected to yield agreement in Bantu between the leftmost 'of' and its complement rather than, or in addition to, agreement with the head noun. Judgments on multiple 'of' constructions vary, but such agreement is uniformly impossible. See section 6.3.3 for data and discussion.

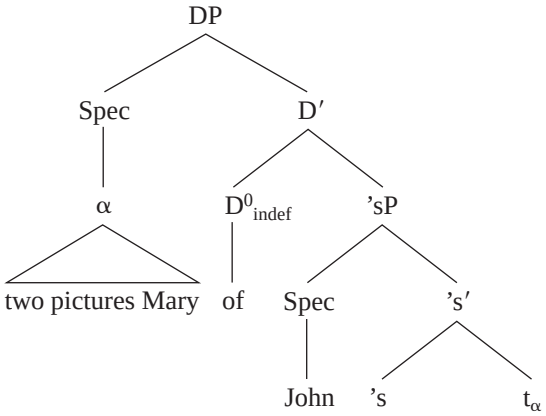
(39) a.


D′
D0indef
’sP
Spec
’s′
John
’s
α
two pictures Mary

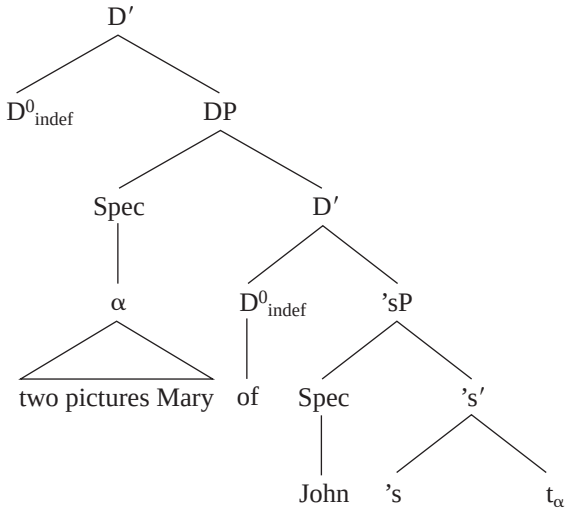
b.


D′
D0indef
’sP
of
Spec
’s′
John
’s
α
two pictures Mary

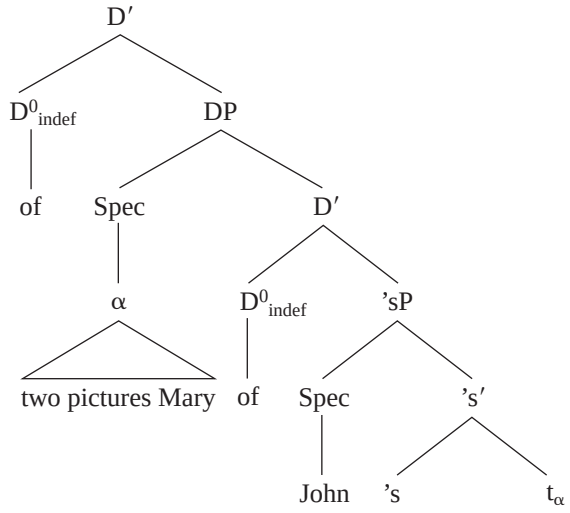
c.


DP
Spec
D′
α
D0indef
’sP
two pictures Mary
of
Spec
’s′
John
’s
tα

d.



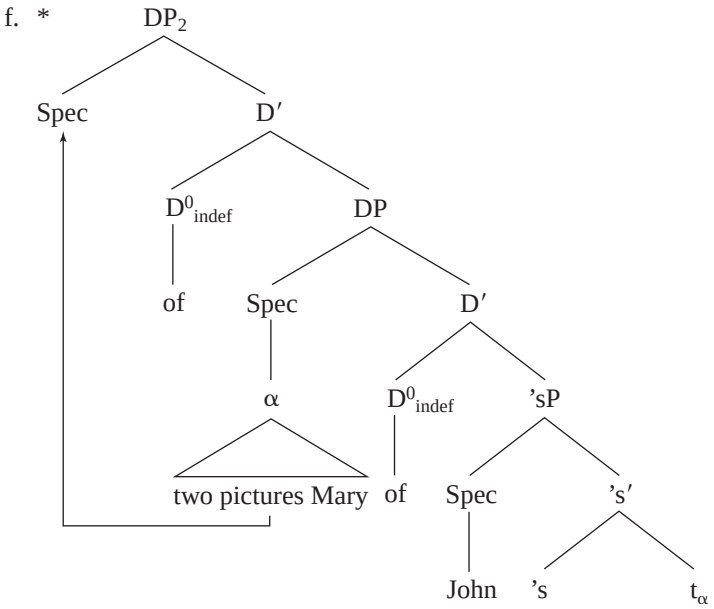

e.



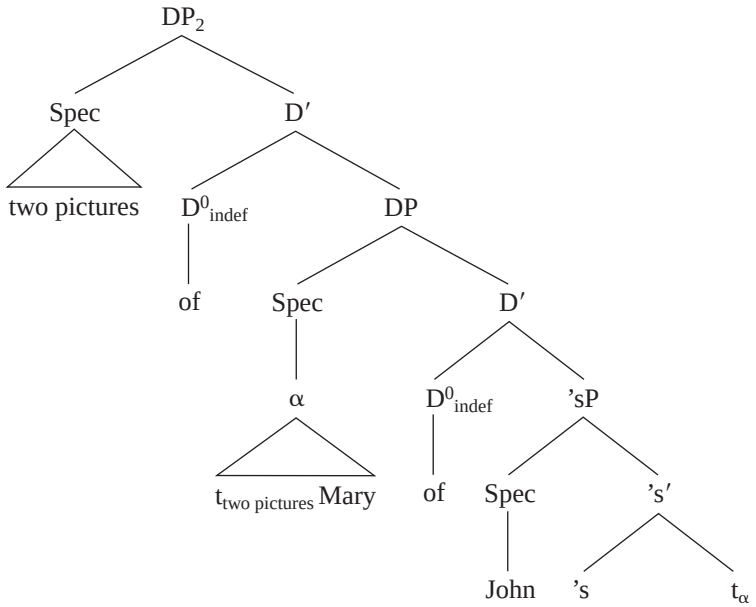

*6.3 ‘of’ Constructions: Kayne 1997, 1998*

*6.3.1 The Analysis* Kayne (1997, 1998) revises this analysis and extends it to complement ‘of’ constructions, as follows. A constituent α is first formed of the DP [John(’s)] and the NP [a picture], as in (40a). Merging of *of* follows (40b). [John(’s)] raises and checks Case in [Spec, of] (40c). Kayne posits subsequent merger of a head X as in (40d), which triggers *of*-raising (40e) and raising of α to [Spec, XP] (40f); this yields the surface word order. Kayne’s analysis extends to French and Spanish *de*, to Italian *di*, and presumably to comparable items in other languages.

f. *

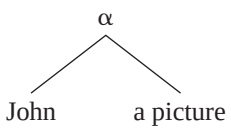



g.

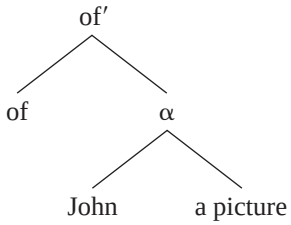



Raising of [$_{\alpha}$ $t_{John}$ a picture] to [Spec, X] in (40f) places it in the checking domain of *of*. Following Koopman's insight, we may analyze Bantu agreement as in (41). This revision of Kayne's (1994) analysis also faces problems, both general and particular to the account of Bantu agreement. I describe each type in turn.

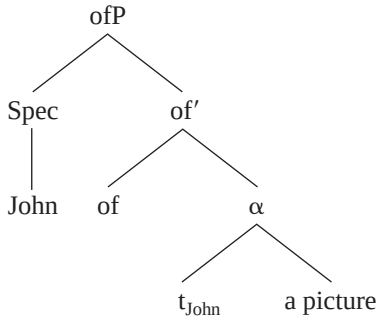
(40) a.


α
John
a picture

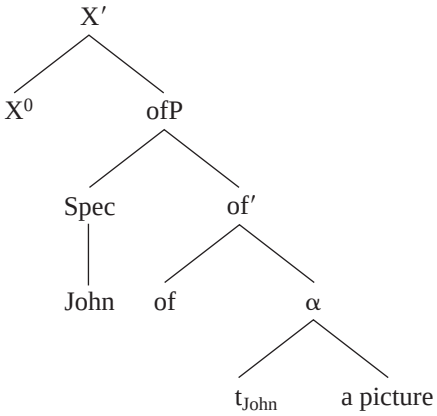
b.


of′
of
α
John
a picture

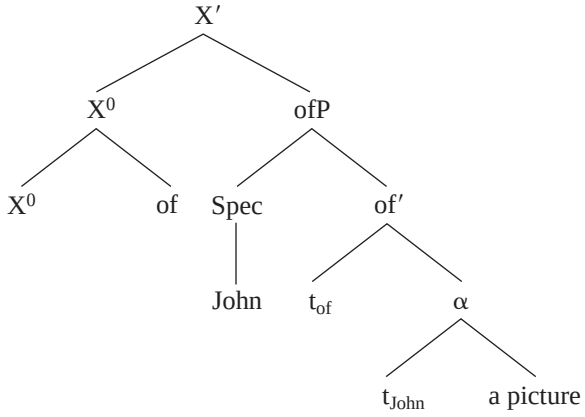
c.


ofP
Spec
of′
John
of
α
t John
a picture

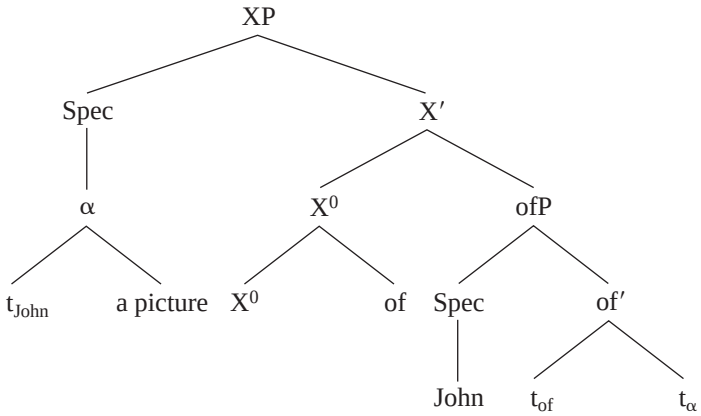
d.


X′
X0
ofP
Spec
of′
John
of
α
t John
a picture

e.

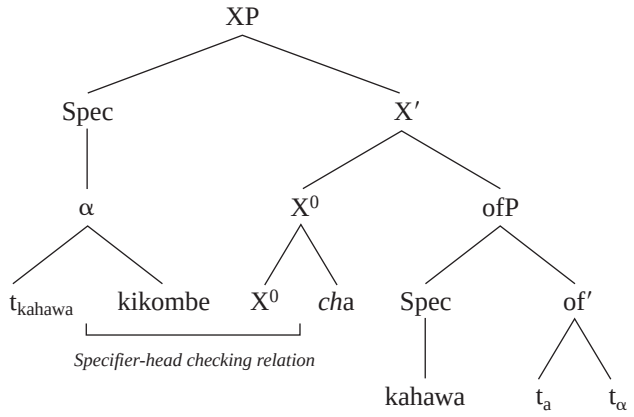

X′
X0
ofP
X0
of
Spec
of′
John
t of
α
t John
a picture

f.


XP
Spec
X′
α
X0
ofP
t John
a picture
X0
of
Spec
of′
John
t of
t α

(41) a. kikombe *ch*a kahawa [Swahili]
7cup 7of 9coffee
'cup of coffee'

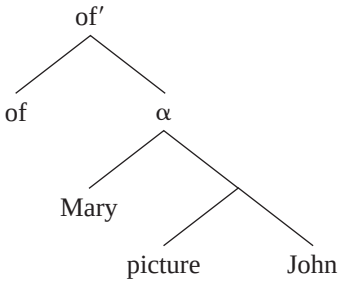
b.



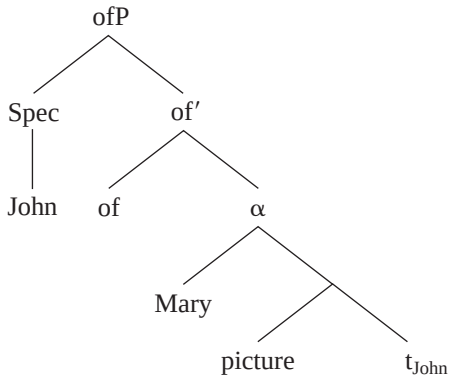

*6.3.2 General Problems* Consider again a noun phrase containing two arguments, such as *Mary's picture of John.* Kayne's proposal applied to this phrase yields the derivation in (42). The theme DP *John* raises to [Spec, of] across the base position of the ''subject'' DP *Mary* (42a–b). X is merged, and *of* raises to it (42c–d). $\alpha = [_{nP}$ Mary *n* $[_{NP}$ picture $t_{John}]]$ raises to [Spec, X] (42e). The head *'s* is merged, and *Mary* raises to its specifier for Case checking (42f–g). (42a–c) are reminiscent of object raising to outer [Spec, *v*P] (Chomsky 1995:354), across the base position of the VP-internal subject. There are crucial differences, however.

First, under the representation of DP adopted here, raising of the object *John* across the subject *Mary* in (42b) violates Shortest Move (Chomsky 1993, 1995) and thus should be impossible. Shortest Move rules out raising of an element $\epsilon$ over a c-commanding $\gamma$ that is *closer* to $\tau$, the target of movement, with *closer* defined as in (43). Chomsky defines *minimal domain* as in (45), where *domain* is as in (44).

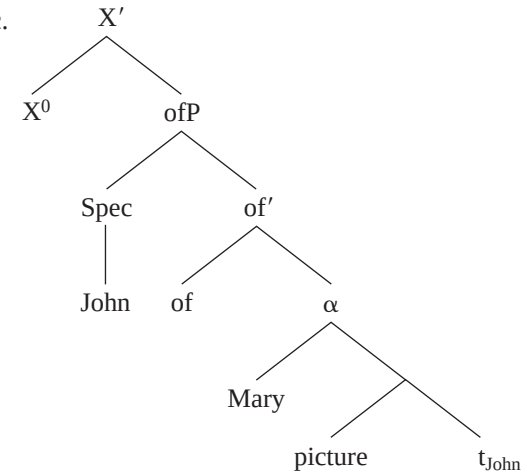
(42) a.



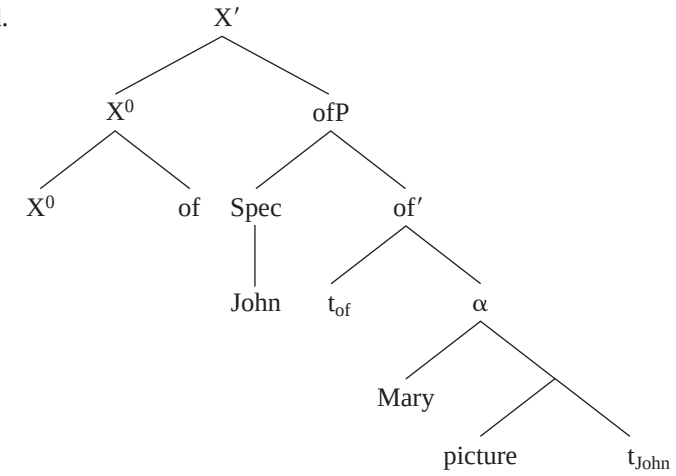

b.



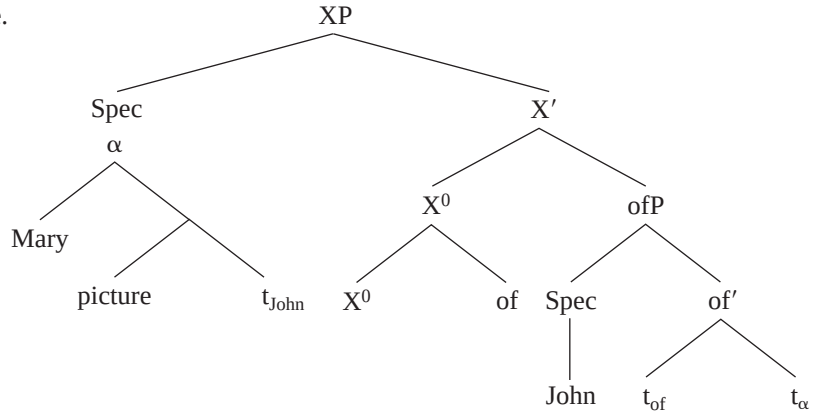
c.


X′
X0
ofP
Spec
of′
John
of
α
Mary
picture
tJohn

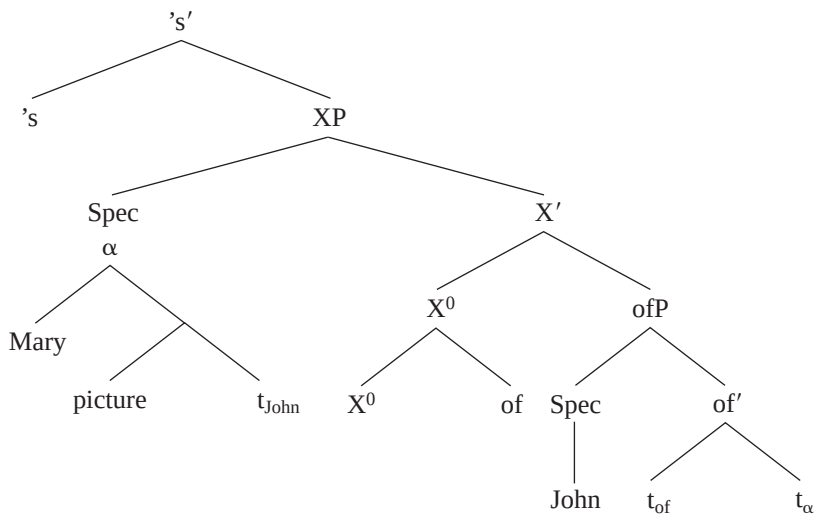
d.


X′
X0
ofP
X0
of
Spec
of′
John
tof
α
Mary
picture
tJohn

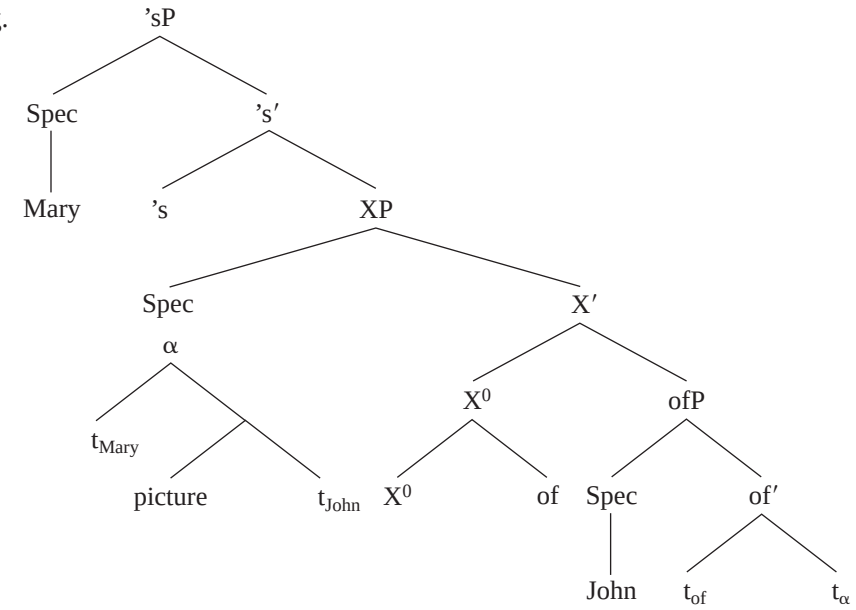
e.


XP
Spec
α
X′
Mary
picture
tJohn
X0
ofP
X0
of
Spec
of′
John
tof
tα

f.




g.



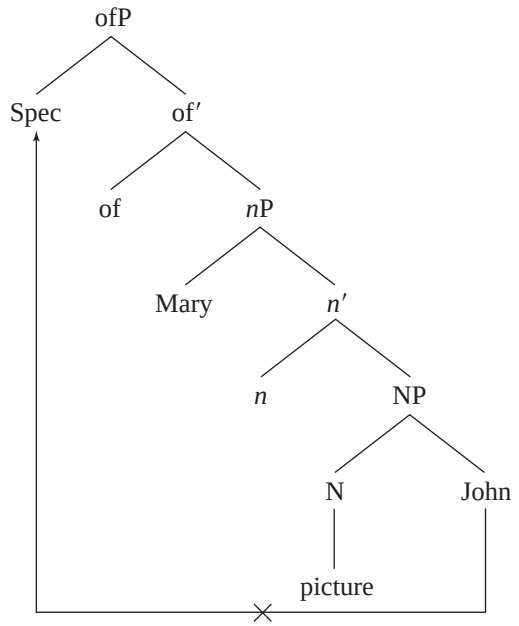

(43) γ is *closer* to K than ϵ unless γ is in the same minimal domain as (a) τ or (b) ϵ.

(44) The *domain* of α is the set of nodes contained in Max(α) that are distinct from and do not contain α (Chomsky 1993:11).

(45) The *minimal domain* of (α) is the smallest subset K of α's domain such that for any γ in the domain, some β in K reflexively dominates γ (adapted from Chomsky 1993: 12, 1995:299).

*Mary* in (46) not only c-commands *John* in its base position; it is in a different minimal domain from both *John* and the target of movement, [Spec, ofP]. *Mary* is thus closer to [Spec, ofP] than *John* is, and raising is ruled out.[24]

(46)

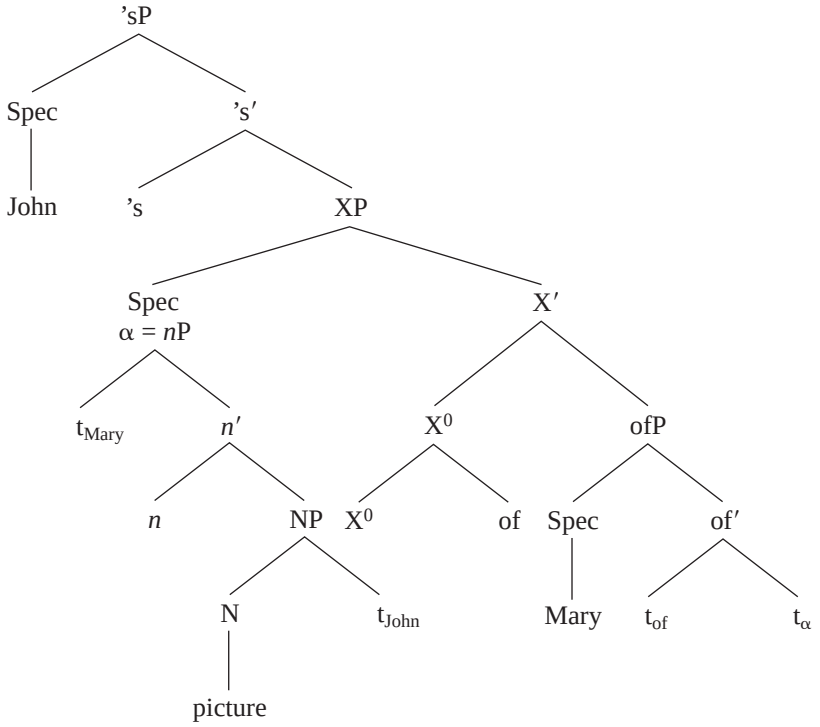



Admittedly this problem arises from the structure I propose; assuming a possessor or agent is merged to [Spec, NP] rather than to a separate *n*P, no violation would occur. Parallels in the argument structure of verb phrases and noun phrases would be less well represented, however. And additional, unrelated problems also necessitate rejection of Kayne's approach.

First among these is the absence of any obvious motivation for *John* to raise across *Mary*. A derivation in which *Mary* gets Case in [Spec, of] seems entirely plausible: the remnant $\alpha$ = *n*P containing *John* might raise over *Mary;* then *John* would move to [Spec, 's] and check Case (see (47)). Why this derivation should fail and raising of *John* across *Mary* instead succeed is not clear. A related problem arises where both subject and object of the noun are 'of'Ps, as happens in French. Consider again (37b), repeated here as (48).

[24] The account of Shortest Move violations is different within the Agr-based theory developed in Chomsky 1993, since raising and adjunction of a head $\gamma$ extends the minimal domain of items within $\gamma$'s maximal projection. But the result is the same for the cases in question, since N does not incorporate to *of* as the verb does to $Agr_O$ in Chomsky 1993.

(47)



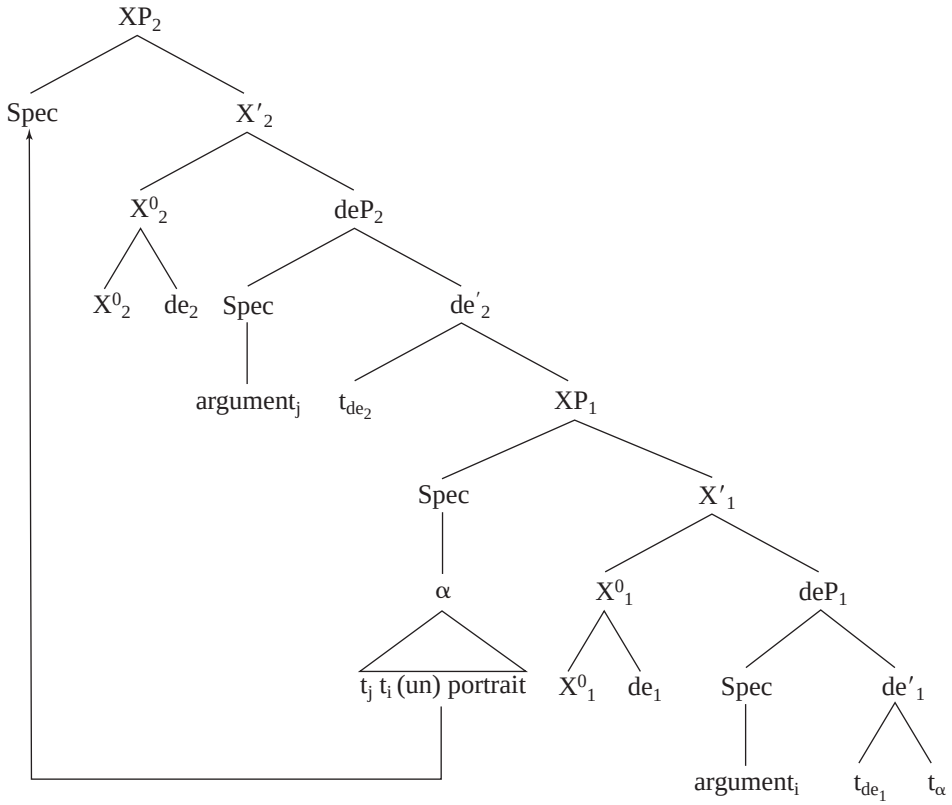

(48) un portrait de Rembrandt d'Aristote [French; Valois 1991]
a picture of Rembrandt of Aristotle
'a picture by Rembrandt of Aristotle'

Suppose that such cases involve iteration of Kayne's (1997, 1998) basic approach as in (49), derived as follows. When the lowest *de*, call it $de_1$, is merged with α, an argument raises out of α to $de_1$'s specifier. $X_1$ is then merged, $de_1$ raises and adjoins to it, and the remnant α moves to [Spec, $X_1$]. $de_2$ is merged next and the remaining argument raises to its specifier. Finally $X_2$ is merged, $de_2$ adjoins to it, and $\alpha = [t_{Rembrandt}\ t_{Aristote}$ portrait] proceeds to [Spec, $X_2$]. Which argument raises first? Valois (1991:18–19) shows that, although word order is somewhat variable, a noun's theme argument is always c-commanded by any agent or possessor (see (50) and (51); see also Giorgi and Longobardi 1991). (52) shows that possessors c-command agents. Combining these facts with Kayne's assumptions, we derive the result that the theme argument must always exit α first in multiple 'of' constructions, just as in (42). Thus, $argument_i$ in (49) can only correspond to *Aristote* of (48); otherwise, the theme would c-command the agent or possessor. A principled account of this is lacking.

Pronominalization facts make the same point. Constraints on pronominalization of arguments of $N^0$ are well established (see Cinque 1980, Giorgi and Longobardi 1991, Valois 1991, Carstens 1991, and many others). Typically, pronominalization of only one argument is possible at a time,

and this respects the same thematic hierarchy: a theme may be pronominalized only in the absence of a possessor or agent.[25]

(49)




(50) a. la photo de chaque$_i$ partisan des Canadiens de son$_i$ joueur favori
the picture of each fan of the Canadiens of his player favorite
POSSESSOR THEME
'each Canadiens fan's picture of his favorite player'

b. *la photo de son$_i$ instructeur de chaque$_i$ joueur favori
the picture of his coach of each player favorite
POSSESSOR THEME
'the coach's picture of each favorite player'

c. la photo de son$_i$ joueur favori de chaque$_i$ partisan des Canadiens
THEME POSSESSOR

[25] The cooccurrence of possessor, agent, and theme is ruled out for reasons of Case, according to Valois (1991:16). The examples in (53) are adapted from Valois's (1), (16), and (17).

(51) a. la maquette de chaque$_i$ architecte de son$_i$ édifice préféré
the scale model of each architect of his building favorite
AGENT THEME
'each architect's scale model of his favorite building'

b. *la maquette de son$_i$ concepteur de chaque$_i$ édifice
the scale model of its creator of each building
AGENT THEME
'its creator's scale model of each building'

c. la maquette de son$_i$ édifice préféré de chaque$_i$ architecte
THEME AGENT

(52) a. le portrait de chaque$_i$ collectionneur de son$_i$ artiste favori
the portrait of each collector of his artist favorite
POSSESSOR AGENT
'each collector's portrait of his favorite artist'

b. *le portrait de son$_i$ mécène de chaque$_i$ artiste favori
the portrait of his benefactor of each artist favorite
POSSESSOR AGENT
'his benefactor's picture of each favorite artist'

c. le portrait de son$_i$ artiste favori de chaque$_i$ collectionneur
AGENT POSSESSOR

(53) a. un portrait de Rembrandt d'Aristote 'a portrait of Aristotle by Rembrandt'
b. son portrait 'his portrait' (*son* = agent, possessor, or theme)
c. son portrait d'Aristote 'his portrait of Aristotle' (*son* = agent or possessor)
d. *son portrait de Rembrandt 'his portrait by Rembrandt' (*son* = theme)
e. un portrait de ce collectionneur d'Aristote 'a portrait of this collector's of Aristotle'
f. *son portrait de ce collectionneur 'his portrait of this collector' (*son* = agent or theme)

These asymmetries suggest that genitive pronominalization involves a raising operation that is blocked by a higher argument (see Giorgi and Longobardi 1991, Valois 1991).[26] Assuming Kayne's approach, however, it seems that lower arguments necessarily raise across higher ones. The pronominal argument must be that argument which exits NP last. How to account for this is unclear.

[26] Giorgi and Longobardi (1991) note that only an overt higher argument blocks a lower one; PRO does not, perhaps because only overt arguments compete for genitive Case. Thanks to an anonymous *LI* reviewer for pointing this out.

*6.3.3 Problems for the Account of Concord* Let us return to agreement on 'of' in Bantu. Under Kayne's (1997, 1998) proposal, a checking relation is established between 'of' and the head noun's argument DP prior to the checking relation between 'of' and α (see (40c)). Thus, in (41b) Swahili α 'of' has the object *kahawa* 'coffee' in its specifier, before α occupies [Spec, X]. Therefore, we expect agreement on *a* with *kahawa,* contrary to the facts.

(54) *kikombe *ya* kahawa [Swahili]
7cup 9of 9coffee
'cup of coffee'

Even if agreement with α is obligatory on $X^0$ for some reason, agreement with the head noun should nonetheless be possible. It is common in Bantu for a head to agree with a local specifier position, then raise to a null head and agree again with the contents of that head's specifier. In the Swahili (55) the inner layer of agreement on the embedded verb reflects the features of its class 1 object *Halima.*[27] Object agreement is checked when *Halima* occupies [Spec, *v*P] and the inflected verb adjoins to $v^0$ (Chomsky 1995). The verb's outer layer of agreement encodes the features of the subject *Juma,* checked in TP.

(55) a. Na- taka Juma *a-mw*-on-e Halima. [Swahili]
I + PRES want Juma $1_{AGR_S}$-$1_{AGR_O}$-see-SUBJ Halima
'I want Juma to see Halima.'
b. nataka [$_{TP}$ Juma [*1agr$_S$-1agr$_O$*-see [$_{vP}$ Halima [$t_{Juma}$ [$t_v$ [$_{VP}$ $t_V$ $t_{Halima}$]]]]]]

Swahili relativization also involves multiple agreement morphemes on a single head. In (56) the verb *soma* 'read' agrees with both the subject and the relative clause's head.

(56) a. kitabu *a*-soma-*cho* Amira [Swahili]
7book $1_{AGR_S}$-read-$7_{AGR_{rel}}$ Amira
'the book Amira reads'
b. [$_{CP}$ 7book [$_{C'}$ *Cl1agr$_S$*-read-*7agr$_{rel}$*- [$_{TP}$ $Amira_{Cl_1}$ [$t_T$ [$_{vP}$ $t_{Amira}$ $t_v$ [$_{VP}$ $t_V$ $t_{book}$]]]]]]

Following the pattern (55) and (56), we expect ''inner'' agreement on 'of' with the possessor and ''outer'' agreement controlled by the possessed. But this is impossible.

(57) a. cha < ki + a [Swahili]
7of $7_{AGR}$ + of
'of' (possessed in class 7)
b. la < li + a
5of $5_{AGR}$ + of
'of' (possessed in class 5)

[27] This is obligatory since *Halima* is animate, leading Keach (1997) to argue that the Swahili object marker in such cases is true agreement rather than an incorporated pronoun.

c. kiti cha gari
7chair 7AGR + of 5car
'the car seat'

d. * kiti ki-la/li-cha gari
7chair 7AGR-5AGR + of/5AGR-7AGR + of 5car
'the car seat'

(58) a. za < zi + a
10of 10AGR + of
'of' (possessed in class 10)

b. wa < wa + a
1of 1AGR + of
'of' (possessed in class 1)

c. picha za Juma
10picture 10AGR + of Juma
'a picture of Juma'

d. *picha zi-wa/wa-za Juma
10picture 10AGR-1AGR/1AGR-10AGR + of Juma
'picture of Juma'

Although Bantu languages spell out checking relations quite reliably, it is in principle possible that the absence of agreement with the possessor on *a* 'of' is an accidental morphological gap. But such an account does not predict the systematicity of the phenomenon: the impossible combinations in (57) and (58) seem not to be attested in any language, Bantu or otherwise. Under Kayne's analysis, this is inexplicable.

To sum up, locality, word order, pronominalization, and binding asymmetries all raise problems for the application of Kayne's theory to a broader range of data, and it does not explain Bantu 'of'-agreement.

## 7 Chomsky 1998

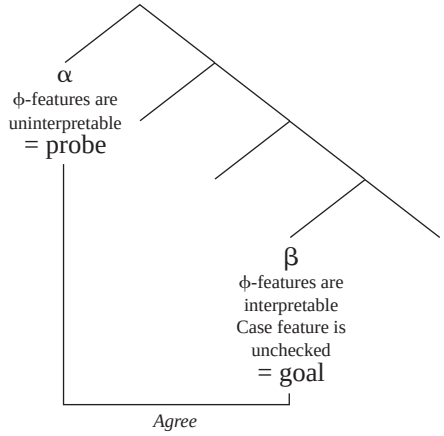
Chomsky (1998) proposes that ϕ-feature checking consists of a process called *Agree*, which operates between two items, a *probe* and a *goal*. The probe is the agreeing item: it has uninterpretable ϕ-features that match the interpretable ϕ-features of the goal. As long as the goal has an unchecked Case feature as well, it is ''active'' in being able to check the features of the probe under appropriate locality. The conditions governing Agree are summarized in (59) and the relation is illustrated in (60) (see Chomsky 1998:35ff.).

(59) Agree operates between a probe α and a goal β iff
a. α has uninterpretable ϕ-features;
b. β has identical, interpretable ϕ-features;
c. β has an unchecked feature of structural Case;
d. α c-commands β;

e. there is no potential alternative goal γ such that α c-commands γ and γ c-commands β;

f. the structural relation between (α, β) was not created by Merge (α, β).

(60)



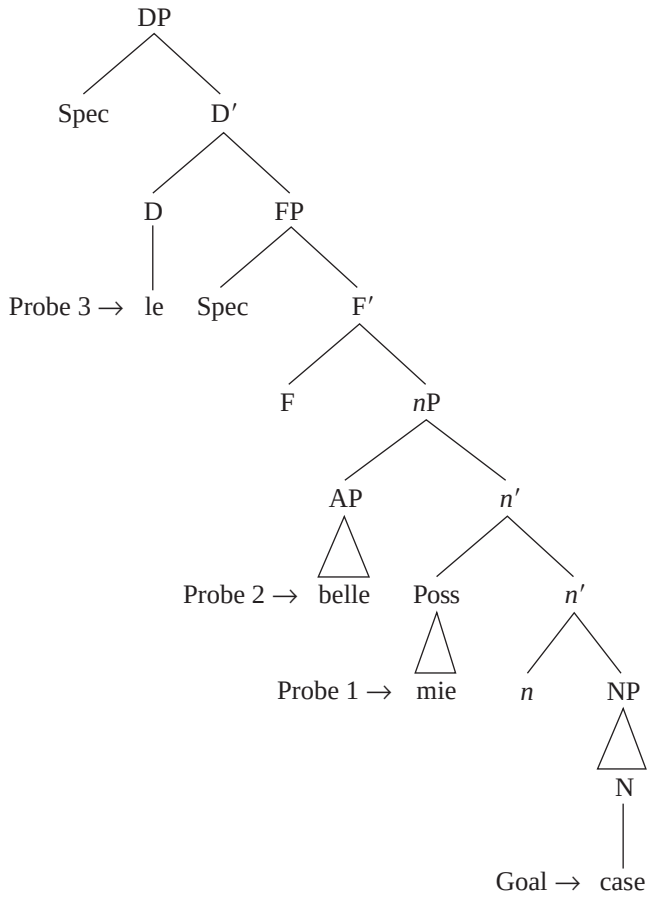

There is no feature raising in the system developed in Chomsky 1998; the only checking relations are those established in surface syntax.

Consider again the representation of the Italian *le mie case belle* 'my nice houses'. $D^0$ *le*, the possessor *mie*, and the adjective *belle* bear uninterpretable features. These, then, could perhaps be construed as the probes, taking $N^0$ as goal. A goal must have Case; under the common assumption that the Case of, for example, an accusative or nominative DP is a morphological property of its head $N^0$, this requirement is met. We can imagine Agree applying cyclically as in (61), first between Poss and $N^0$ upon Merge of Poss; next between A(P) and $N^0$; and finally between $D^0$ and $N^0$. $N^0$'s Case feature should erase when Agree applies, according to Chomsky's system. This is not possible, if $N^0$ is to serve as goal iteratively within DP, and if DP is subsequently to be goal for $v^0$ or $T^0$. Since concord excludes person features, we might suppose that ϕ-incompleteness prevents it from deleting $N^0$'s Case, following Chomsky (1998). But $N^0$ also lacks person features, assuming (20) or (27); in the cases that Chomsky discusses, the goal's features clearly exceed those of the probe.

And problems arise in connection with concord on a KP complement to $N^0$. To account for the failure of $K^0$ to agree with its object DP, it is necessary to exclude its object as goal (see section 5). Since KP agrees with N (see (8) and (9)), we must assume that KP can be probe, taking $N^0$ as goal. The probe-goal relation between $K^0$ and $DP^0$ is disallowed since they are co-terms of Merge, as desired (see (63a)). But this means that the same relation is disallowed between KP and $N^0$, in (63b). KP must therefore vacate its base position and raise to a different, c-commanding position in order to take $N^0$ as goal. It cannot do this without first serving as goal itself.

This might be accomplished as follows. The fact that Merge does not trigger Agree precludes not only the checking of concord between $K^0$ and its object DP, but also the checking of Case. $K^0$ thus cannot be analyzed as the assigner/checker of DP's Case in (63a). We might accordingly

(61)

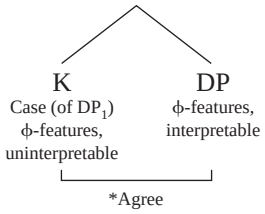



suppose that $K^0$ is instead the manifestation of its complement's Case feature, like a Case affix but morphologically free. This makes K(P) ''active,'' in Chomsky's sense—it may be the goal element for Agree or undergo Move, unlike its complement. The fact that its ϕ-features are uninterpretable makes it unlike other goals, however. This has no precedent and seems unmotivated: it is clear that uninterpretable ϕ-features do not check each other. Thus, (62) holds.

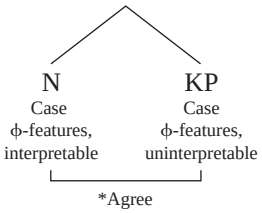
(62) Uninterpretable ϕ-features are checked by interpretable ϕ-features, under identity.

Continuing in this vein nonetheless, suppose $n^0$ is merged, bearing an EPP feature that causes KP to raise to [Spec, *n*P] as shown in (63d). Once here, K(P) can itself function as probe, taking $N^0$ as goal. But KP is an atypical probe owing to its internal, phrasal structure; probes in Chomsky's system are $C^0$, $T^0$, $v^0$, and exceptionally an $X^0$-level expletive in [Spec, TP]. In addition, (63d) is not a licit step unless $n^0$ has uninterpretable ϕ-features; there is no reason to think that it does. To sum up, Chomsky's (1998) agreement theory requires that participants in the Agree relation have characteristics that elements related by concord do not share. Forcing an analysis of concord in terms of this theory necessitates rather anomalous and unconvincing stipulations, which would

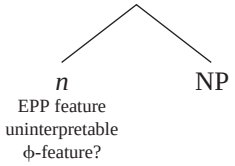
(63) a. *Merge* (K, DP)



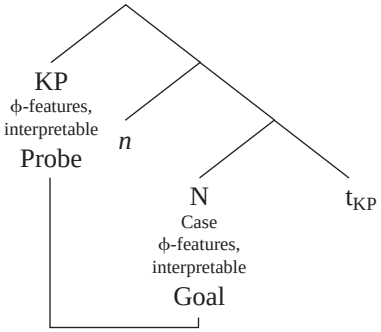

b. *Merge* (KP, N)




c. *Merge* (*n*, NP)




d. *Move* KP → [Spec, *n*P]




seem to undermine it. Whether the framework can ultimately be broadened to accommodate concord remains to be seen.

## 8 Conclusion

Concord in DP consists of uninterpretable ϕ-features. Under minimalist assumptions, these must be checked and eliminated for LF structures to be well formed. I have shown that the checking theory outlined in Chomsky 1995 can accomplish this for concord on determiners, adjectives, and 'of' in terms of symmetrical checking relations between heads and their specifiers, between two adjoined heads, and between an adjoined head and the specifier of its host. The fact that

specifiers agree with heads rather than vice versa is no problem, under checking theory, nor is concord on the head $D^0$ with lower head(s) $N^0$ and perhaps $Num^0$. This constitutes a gain over prior versions of agreement theory, in which only the specifier-head relationship licenses agreement.

A single well-constrained innovation to the theory of movement completes the account of concord in DP—namely, a loosening to permit features of an item $\alpha$ to motivate $\alpha$'s movement.

Chomsky (1995, 1998) argues that Merge does not trigger checking, to account for the fact that subjects do not check agreement or Case features of $v^0$ despite being generated in its checking domain. I have extended this notion to preclude instances of Merge triggering Move.

I have shown that Kayne's (1994) analysis of APs provides a viable alternative to my approach. His proposals for 'of' constructions do not, however.

Finally, I have argued that Chomsky's (1998) system applied to concord raises more questions than it answers.

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