

Head Movement in Bantu DPs

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§1. Introduction to word order in Bantu DPs.

- (1) (a) N...X...(Dem)...Y OR (b) Dem N...X...Y...
consistently available *an option in some languages*

-No articles.

-Limited inventory of adjectives.

-Mirror image modifier order preferred but many post-nominal alternatives occur.

- (2) Ndi-cha-ku-pa zvipunu zvikuru zvitatu izvi [Shona]
I-FUT-you-give spoons big 3 these [N Adj Num Dem]
'I will give you these three big spoons.'

What word orders are acceptable in responses?

- (3) Aiwa, Ha-ndi-d-i izvi. Ndi-noda...
No. Neg-I-want-Neg these. I-want...
'No, I don't want THESE. I want... THOSE three big spoons.'
- (4) a. zvipunu zvikuru zvitatu izvo. [N Adj Num Dem] OK
b. izvo zvipunu zvikuru zvitatu. [Dem N Adj Num] OK
c. zvipunu izvo zvikuru zvitatu. [N Dem Adj Num] OK
d. zvipunu zvitatu zvikuru izvo. [N Num Adj Dem] OK
e. izvo zvipunu zvitatu zvikuru. [Dem N Num Adj] OK
f. zvipunu izvo zvitatu zvikuru. [N Dem Num Adj] OK
- (5) Aiwa, Ha-ndi-d-i zvipunu zvikuru. Ndi-noda...
No. Neg-I-want-Neg spoons BIG I-want those 3 SMALL spoons.
- (6) Aiwa. Ha-ndi-d-i zvipunu zvitatu. Ndi-noda...
No. Neg-I-want-Neg spoons THREE I-want those TWO big spoons.

The orders allowed in responses to (3) are also felicitous responses to (5) and (6).

§2. Theoretical Qs and As.

Questions

- a. How best to explain these word orders? In particular:
b. Are modifiers always left Specs of FPs (Cinque 2005)? *and*
c. Is there head movement of N, or only XP movement (Cinque 2005, Shlonsky 2004)?
d. If there is head movement, is it syntactic or phonological?

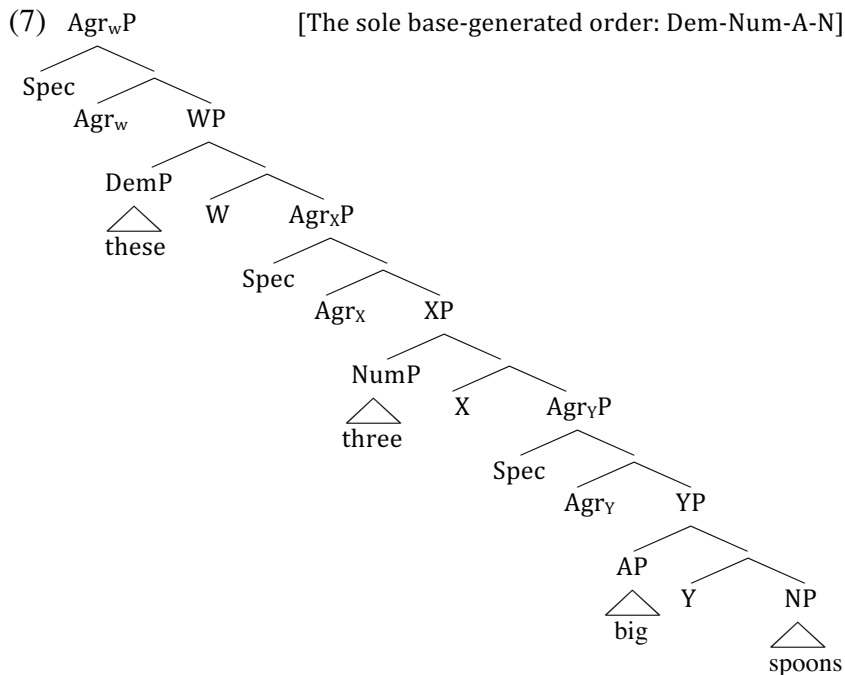
My answers

- a. A head-movement account best captures the regularities of Bantu noun placement.
- b. The approach of Cinque (2005) fares poorly at dealing with the Bantu facts.
- c. N-to-D adjunction is key to explaining broad patterns of Bantu agreement and A-movement (Carstens to appear).
- d. The same “big picture” factors strongly argue that Semitic N adjoins to D like in Bantu, as in Ritter (1991), Fassi Fehri (1994) and contra Shlonsky (2004).
- e. Syntactic consequences of N-to-D argue that it is a syntactic process.

Talk structure

- §3 illustrates a Cinque-style approach and its shortcomings in relation to Bantu.
- §4 shows that symmetric base-generation options for modifiers is insufficient on its own to account for the facts.
- §5 proposes N-to-D, symmetric base-generation options and an optional higher location for a raised demonstrative.
- §6 shows the “big picture” advantages for explaining Bantu agreement and movement.
- §7 sketches an extension of the approach to Semitic.
- §8 summarizes some theoretical consequences, including the syntactic nature of N-to-D.

§3. The cartographic model (Cinque 2005). Universal hierarchy and word order; no head-movement; only leftwards XP movement.



- (8) $[_{NP} \text{spoons}] \text{ these } t_{NP} \text{ three } t_{NP} \text{ big } t_{NP}$ (= 4f; complete NP-movement)
- (9) $\text{these } [_{NP} \text{spoons}] \text{ three } t_{NP} \text{ big } t_{NP}$ (= 4e; Cinque: very rare) →
- (10) $[_{AgrXP} [_{NP} \text{spoons}] \text{ three } t_{NP} \text{ big } t_{NP}] \text{ these } t_{AgrXP}$ (= 4d; NP moves x2 followed by roll-up)

- (11) a. *these three [_{AgrXP} [_{NP} spoons] big *t*_{NP}] *NP can't surface in Spec, Agr_YP unless...→*
 b. these [_{AgrYP} spoons big *t*_{NP}] three *t*_{AgrYP} (=4b; Agr_YP rolls up to Spec, Agr_XP, or...) →
 c. [_{AgrWP} [_{AgrXP} [_{AgrYP} spoons big *t*_{NP}] three *t*_{AgrYP}] these *t*_{AgrXP}] (=4a; mirror order via successive roll-ups)
- (12) [_{NP} spoons] these [_{AgrYP} *t*_{NP} big *t*_{NP}] three *t*_{AgrYP} (=4c; roll-up part way & sub-extract NP. Cinque: very few languages; possibly spurious)

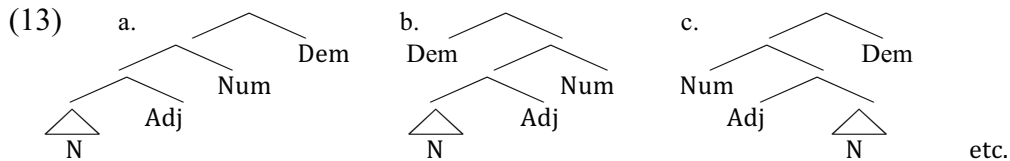
Drawbacks:

- The consistent aspects of word order in Bantu DPs are an accidental outcome of different derivations and landing sites.
- What's the motivation for these movements?
- Orders that are disallowed in Bantu: What rules them out?

*Dem Num A N Universally base-generated but never surfacing in Bantu
 *Dem Num N A An intermediate step (=11a) that can't surface
 *Num N A Dem No less plausible than the attested orders, under this approach: raise NP to Spec Agr_YP; then raise XP or Agr_XP to Spec, Agr_WP

§4. Symmetric base-generation options for adjuncts.

A universal hierarchy [Dem>Num>Adj>N], not a universal linear order.



On its own, this approach to flexible Bantu modifier order fails in two ways.

- Over-generation problems: the following must be weeded out.

- (14) a. Dem-Num-Adj-N *We want Num>Adj sometimes, but only after N*
 b. Num-N-Adj-Dem *As above*
 c. Dem-Adj-N-Num *This would be okay if N were further left*
 d. Dem-Num-N-Adj *As above*
 e. Num Adj-N-Dem *Medial N again no good*

- Under-generation problem where Dem is neither initial nor final.

- (15) N-Dem-Adj-Num (= 4c) N-Dem-Num-Adj (=4f)

The generalization: a Bantu noun is in a sufficiently high left-peripheral position that only a demonstrative can licitly precede it, despite much word order freedom.

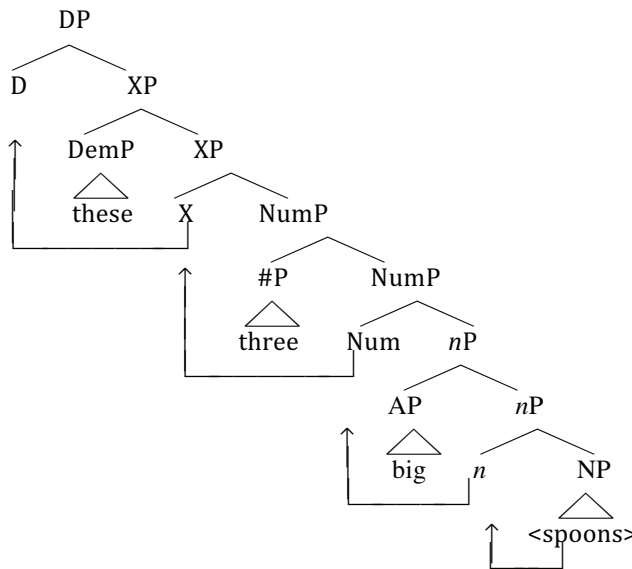
§5. **Proposal.**

- a. Spec, head-complement order and leftwards movement are universal.
- b. But modifiers can be adjoined to the left or to the right, constrained by universal hierarchy only (see Abels & Neeleman 2007 for more arguments for a & b).
- c. N always raises and adjoins to D in Bantu.
- d. Dem is an adjunct base-generated below DP but higher than Num and A. Its features cause it to enter a relationship with D that can yield Dem raising to Spec, DP (see also Giusti 1997; Alexiadou, Haegeman & Stavrou 2007 among others on the two Dem positions in other languages).

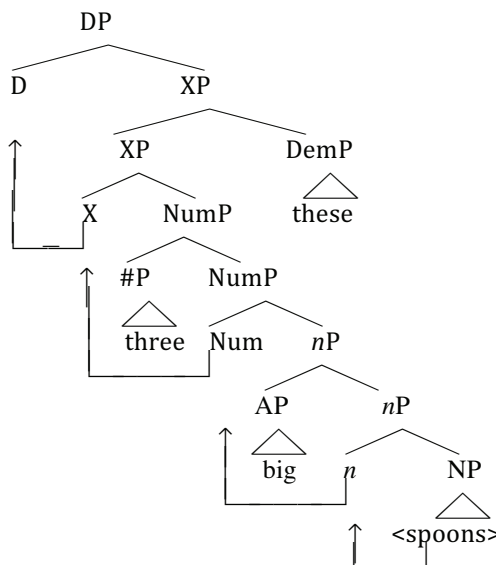
- (16) a. $[_{DP} N+D [_{XP} Dem \dots t_N \dots]]$ *Aforementioned in Shona & Kirundi*
 b. $[_{DP} Dem N+D [_{XP} t_{Dem} \dots t_N \dots]]$ *First-mention in Shona & Kirundi*

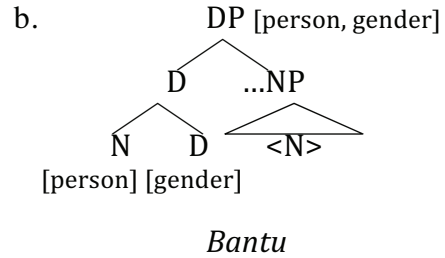
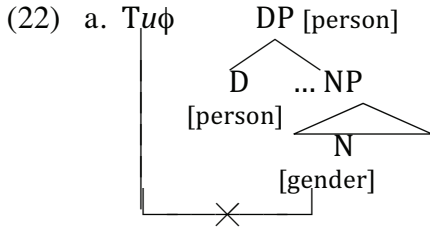
These assumptions derive (4a-f). Two examples:

- (17) a. [N-Dem-Num-A]



- b. [N-Num-A-Dem]





(23) a. l'invasione italiana dell'Albania [Italian; Cinque 1994]
the invasion Italian of Albania
'the Italian invasion of Albania'

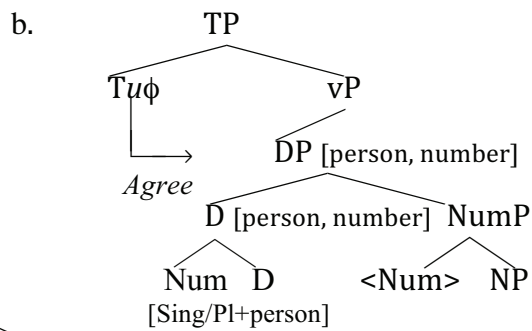
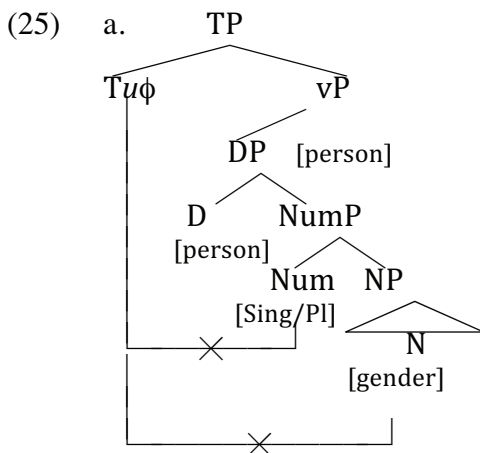
b. [_{DP} I' [_{FP} invasion+F [_{NP} Italiana t_N dell'Albania]]] *N in DP's middle field*

IE participles can agree in gender because as a lexical property they are blind to [person]. The complementary distribution of person/gender agreement in languages without N-to-D adjunction is not an accident but a striking locality effect.

Note that an external probe cannot agree with Spec, DP (24), so NP-movement to Spec DP would not suffice to yield the desired results for Bantu. N and D must amalgamate morphologically:

(24) My mother is/*am nice

The ubiquity of number agreement obscures the role of locality in determining agreement features. But number is a quantifier, and Qs raise for scope. *Anti-locality* (Grohmann 2000, Abels 2003) prevents NumP raising to Spec, DP, so Num's features adjoin to D.



Locality predicts agreement only in person but in a featural instance of QR, Num always raises, making number agreement widely available. See Pesetsky & Torrego 2001 and Matushansky 2006 on anti-locality feeding head-movement).

(b) Hyperagreement Part II: Super-abundant agreement.

(26) [Yule mtu mrefu] a-li-kuwa a-ki-soma. [Swahili]
1that 1man 1tall 1SA-PST-be 1SA-PROG-read
'That tall man was reading'

(c) Hyperactivity: Unusually free A-movements.

- (27) a. Mutu t-á-ku-sol-ág-á maku wéneéne. [Kilega]
 1person NEG-1SA-PROG-drink-HAB-FV 6beer alone [SVO]
 ‘A person does not usually drink beer alone.’
- b. Maku ta-má-ku-sol-ág-á mutu wéneéne
 6beer NEG-6SA-PROG-drink-HAB-FV 1person alone [OVS]
 ‘No one usually drinks beer alone.’
 [Lit: beer doesn’t usually drink a person alone]
- (28) Ku-Lúgushwá kú-kili ku-á-twag-a nzogu maswá. [Kilega]
 17- Lúgushwá 17SA-be.still 17SA-A-stampede-FV 10elephant 6farm
 ‘At Lugushwa elephants are still stampeding (over the) farms.’

See Kinyalolo (1991); Ndayiragije (1999) for persuasive arguments that the fronted expression in these constructions is in the canonical subject position, an A-position.

- (29) The Activity Requirement: each participant in an Agree relation must have an unchecked uninterpretable feature.
- (30) The gender of nouns is meaningless, hence uninterpretable, hence an Activity feature just like a DP’s abstract Case feature.
- (31) **Goal Deactivation Principle:** Agree only deactivates *u*Fs that it values, because PF can read only a single value for a given formal feature. And feature values cannot be licitly erased or over-written (cf Epstein, Kitahara, & Seely 2010: Law of the Conservation of Features).
- (32) a. [$He_{NOM} T_{3S}$ seems [$<3^{rd}S_{uCase}>$ to have left]]
 b. * [$He_{NOM, NOM} T_{3S}$ seems [$<He_{NOM}> T_{3S}$ has left]]

N-to-D gives every Bantu DP an Activity feature that is never deactivated, so DPs can continue to value agreement and to A-move when their IE counterparts would already be deactivated by Case-valuation.

§7. Semitic.

- Left edge nouns like Bantu.
- Grammatical gender a component of subject agreement, as in Bantu.
- Iterating subject agreement, as in Bantu.

The same big- picture motivation for assuming N amalgamates with D.

- (33) a. daxal-tu daar-a r-rajul-i-n waasi^cat-a-n [Standard Arabic]
 entered-I house-ACC the-man-GEN-n large-ACC-n
 ‘I entered a large house of a man’ (Fassi Fehri 1993:219)
- b. [$DP_{\emptyset_D-\emptyset_{Gen}} \text{ daar-a } [GenP \text{ r-rajul-i-n } t_{Gen} [NP \text{ waasi}^c\text{at-a-n } t_N]]$

- (34) a. daxal-tu d-daar-a
entered-I the-house-ACC
'I entered the house' (Fassi Fehri 1993:215)
- b. [DP d-daar-a [NP t_N]]
the-house-ACC
- (35) a. al-ʔawlaadu qadim-uu SA includes grammatical gender
the-boys came-3 MASC.PL
'The boys came'
- b. al-bint-aani qadim-ataa
the-girls-3.DUAL came-3.FEM.DUAL
'The girls came'
- (36) al-bint-aani kaan-ataa ta-ktub-aani darsa-humaa SA iterates
the girls(F)-3D be+past-3FD 3F-write-D lesson-FD (D = dual)
'the two girls were writing their lesson'

However Shlonsky (2004) shows that in numerous Arabic dialects cardinal numbers come between the article and the noun, and rejects the head-movement account.

- (37) el xamas banaat [Cairo, Tomiche 1964]
the five girls
'the five girls'

But this apparent problem disappears under the view that DP is actually a set of categories (cf Rizzi 1997 on CP; Aboh 2004 for extension to DP). Where Bantu fronts demonstratives to Spec, DP, Semitic fronts cardinals to a Spec intermediate between Def(initeness)P and PersonP (Spec Top? Spec Foc?). It is adjunction of N to the head bearing person features that is crucial to predict gender in SA and iteration of SA.

- (38) [DP el [TopP xamas [FocP [PersonP N+Num+Person [NumP <xamas> <Num>... [NP <N>].....

A point of contrast: Bantu has “hyperactivity”; Semitic does not.

Diercks (to appear): Case is/is not present in a given language. Bantu has no Case. Arguments: (i) The central role of gender in Bantu Activity; (ii) lack of evidence for any relationship between T and logical SU in inversion constructions; (iii) absence of morphological case; (iv) licit appearance of DPs in canonically Case-less positions such as subject of infinitive or object of passive verb.

- (39) I-na-wezakana (*kwa) Maiko ku-m-pig-i-a Tegani simu [Swahili]
9SA-PRS-possible for Michael INF-1OA-beat-APPL-FV Tegan phone
'It is possible *(for) Michael to call Tegan'
- (40) kw-á-uray-iw-a murúme né-shumba [Shona]
17SA-PAST-kill-PASS-FV 1man by-9lion
'There was a man killed by a lion at the river'
[Lit: there was killed a man by a lion]

Note Semitic has case morphology. Proposal: Bantu-style inversion constructions would expend Semitic T's ability to value the subject's uCase feature, leading to a crash.

§8. Some implications.

- Head-movement exists in grammar.
- Head-movement has syntactic consequences; it is part of narrow syntax.
- For modifiers at least, order and hierarchy are distinct.
- μ Fs need not be deactivated and deleted from the syntactic object bound for the Conceptual-Intentional interface, where material that isn't semantic is ignored (Epstein, Kitahara, & Seely 2010).

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