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N-to-D movement in the Kipsigis DP

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1 Introduction

- Word order possibilities between the noun, demonstrative, numeral, and adjective in the noun phrase (Universal 20) have played an important role in theories of word order variation (e.g. Cinque 2005, Abels & Neeleman 2012).

    - Cinque (2005) argues that word order in the DP is derived entirely via phrasal movement; Head Movement of the noun is not an option.

- In this talk, I present novel data from Kipsigis (Nilotic; Kenya) that show that:

    - Head Movement captures the word order facts of the Kipsigis DP in a more straightforward way.

    - There is greater cross-linguistic variation in the syntactic structure of demonstratives, numerals etc. than usually assumed in work on Universal 20.

2 Background on Head Movement in the DP

- Early approaches to the relative order of the noun and its modifiers relied on N-to-D movement to account for cross-linguistic variation.

- For example, assuming that adjectives are universally generated higher than the head noun they modify, the difference between pre-nominal and post-nominal adjectives in Germanic and Romance respectively was explained by postulating N-to-D movement in the latter case (e.g. Bernstein 1993, Longobardi 1994).

- Later research, however, highlighted both empirical and theoretical issues with the head movement approach, and Cinque's (2005) influential work on Greenberg's Universal 20 set a trend against head movement accounts of word order variation in the DP (see Alexiadou et al. 2007 and Cinque 2010 for overviews of the arguments against N-to-D movement for at least Romance).

- Cinque (2005) provides a theory of variation in the order of the noun, numeral, adjective, and demonstrative by adopting the following main assumptions:

  – Adjectives, numerals, and demonstratives are merged (as specifiers of dedicated, often silent, functional projections) in this order in a universal hierarchy.

  – Only phrasal movement is allowed.

  – All movement in the DP must include the NP.

  – Movement may be movement of the NP alone, or it could involve pied-piping.

- However, it is not clear that phrasal movement is better-equipped than head movement to account for word order in the DP in all languages; Carstens (2017), for example, argues that word order in the Bantu noun phrase is better explained by head movement.

3   Background on Kipsigis

- Kipsigis is the major variety of Kalenjin, a cluster of dialects of the Southern Nilotic branch of Nilo-Saharan.

- It is is spoken by approximately 2 million speakers in the Rift Valley region of Western Kenya (Eberhard et al. 2020).

- The language has VSO word order in the clausal domain (Bossi & Diercks 2019).

- The language has a system of dominant [ATR] harmony (Hall et al. 1974, Halle & Vergnaud 1981, Lodge 1995, Baković 2000, Nevins 2010): the harmony domain is the phonological word.

- Data in this handout come from original fieldwork with 12 native speakers in Kenya and the US in the period 2016-2019.

4   Head Movement in the Kipsigis DP

4.1   General information on the Kipsigis DP

- Kipsigis lacks articles. It has three basic demonstrative morphemes (proximal vs. medial vs. distal).

- All elements in the DP agree with the head noun in number (there is no gender).

  (1)   a.   là:kwà:-nì   b.   là:ɣó:(k)-tʃù
             child-PROX.SG   children-PROX.PL
             'this child'   'these children'

- The DP is strictly noun-initial; no element can ever precede the noun.

(2)   a.   là:kwɛ́:t agɛ-túɣʊ̀l   b.   *agɛ-túɣʊ̀l là:kwɛ́:t
            child   every   every   child
            'every child'   'every child'

- Adjectives in the language constitute a distinct morphosyntactic category, but can only modify the noun in a relative clause stucture (Kouneli 2019).

(3)   a.   là:kwɛ́:t *(**nè**)   â:-ŋgén   b.   là:kwɛ́:t *(**nè**)   tórô:r
            child   REL.SG 1SG-know   child   REL.SG tall.SG
            'a/the child that I know'   'a/the tall child'

(4)   a.   là:kwà:-nì   (*nè)   â:-ŋgén
            child-PROX.SG REL.SG 1SG-know
            'this child that I know'

        b.   là:kwà:-nì   (*nè)   tórô:r
            child-PROX.SG rel.SG tall.SG
   'this tall child'

- Numerals directly modify the noun.

(5)   là:ɣó:k (*nè)   sómòk
        children REL.SG three
        '(the) three children'

4.2   Noun - Dem - Q - Numeral order

- A problem for Cinque's (2005) analysis comes from the relative order of nominal modifiers in the presence of a universal quantifier.

- Setting aside adjectives for the moment, let's look at the order in the DP when a noun is modified by a numeral, demonstrative, and universal quantifier:

(6)   là:ɣó:(k)-tʃù   túɣʊ̀l sómòk   N - Dem - Q - Num
        children-PROX.PL all   three
        'all these three children'

- Even though Cinque (2005) does not discuss quantifiers, given the semantic interpretation of (6) and the position of universal quantifiers in better-studied languages, the hierarchy that makes sense for (6) is Q > Dem > Num > N.

- Assuming this Merge order (and assuming that all modifiers occupy specifier positions), Cinque's (2005) allowed movement operations cannot derive this order.

- Maintaining this Merge order, the pattern is easily derived if we make the following two assumptions:

  - Demonstratives in Kipsigis are heads (and not phrasal specifiers).
  - There is N-to-D movement.

(7)
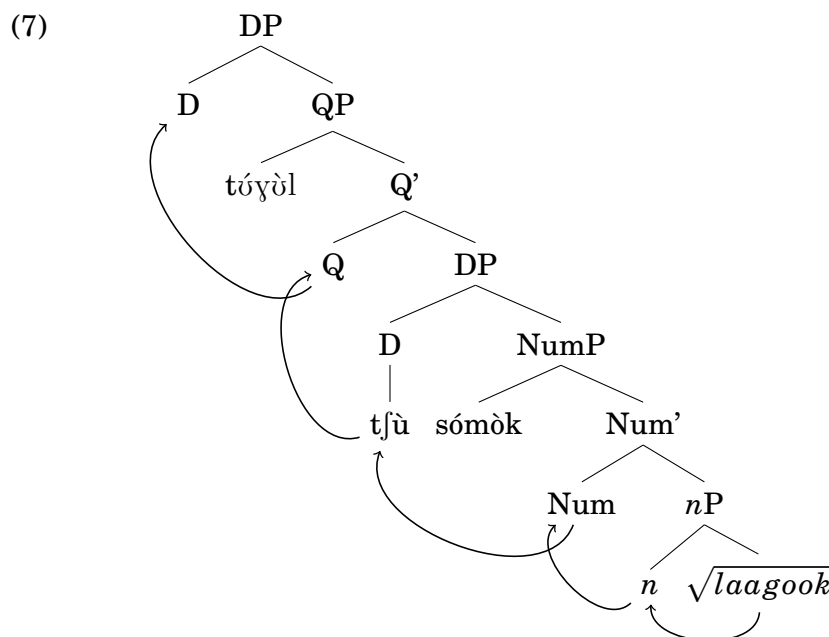
- Demonstratives as heads in Kipsigis:

  - In Kouneli (2019), I argue that demonstratives in Kipsigis are D heads that can (optionally) introduce a relative clause; this explains a complex phenomenon of demonstrative spreading in the language.

  (8)　làːɣóː(k)-│tʃáːn│　sómòk │tʃàːn│-tórôːr-èːn │tʃàːn│-kárâːrán
  　　　children-MED.PL three　MED.PL-tall-PL　MED.PL-beautiful.PL
  　　　'those three beautiful tall children'

  - Demonstratives in Kipsigis are not independent phonological words. Previous descriptions (e.g. Toweett 1979, Creider & Creider 1989) call them 'affixes' (they could also be clitics), since they display certain word-level phonological properties.

  - The proximal demonstrative is obligatorily in the [ATR] harmony domain of the noun (but not the medial/distal demonstratives; more on this in a bit).

  - In the singular at least, the form of the noun that the demonstratives attach to is not a self-standing word.

  - Anecdotal evidence: my consultants often ask why I have a dash between the noun and the demonstrative in my notes, indicating that they probably perceive them as one word.

- Demonstratives as heads coupled with N-to-D movement can explain both the order in DPs with quantifiers and the phonological facts about demonstrative morphemes (e.g. in theories in which wordhood is associated with complex heads; e.g. Embick 2010).

4.3　The small possessee restriction

- Possession in the Kipsigis DP is expressed in a construction where the possessive clitic -aːp attaches to the possessee, which is then followed by the possessor.

(9) làːkwɛ́ːt-àːp Kìbêːt
child-POSS Kibeet
'Kibeet's child'

- The order of elements in (9) is fixed: no modifier of any sort can intervene between the two nouns.

(10) làːkwɛ́ːt-àːp (*agɛːŋgɛ/nè tórôːr) Kìbêːt (agɛːŋgɛ/nè tórôːr)
child-POSS one/REL.SG tall Kibeet one/REL.SG tall
'Kibeet's (one/tall) child'

- These facts are reminiscent of the Semitic construct state.

- The size of the possessee is restricted to either a noun (as in (9)) or a noun with a proximal demonstrative (11). In this case, we see allomorphy of the possessive clitic conditioned by the demonstrative.

(11) làːkwáː- ǹì-ɛ̀ːp Kìbêːt
child-PROX.SG-POSS Kibeet
'this child of Kibeet'

- The restriction in the size of the possessee, as well as the impossibility of intervening material between the two nouns in the possession construction, receive a straightforward explanation if we assume N-to-D movement.

  – The allomorphy of the possessive clitic is also easily accounted for if it forms a complex head with the demonstrative (e.g. Bobaljik 2012).

(12)
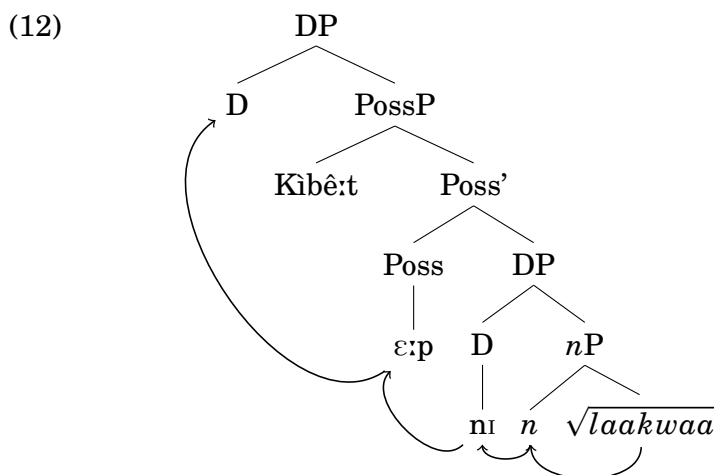
- However, the structure above requires two D layers. This might help explain another curious restriction in the possessee slot: only the proximal demonstrative is allowed; the medial and distal demonstrative are ungrammatical.

(13) *làːkwáː- nɑ́ːn/nɪ́ːn-ɛ̀ːp Kìbêːt
child-MED.SG/DIST.SG-POSS Kibeet
'that child of Kibeet'

- This difference between the proximal demonstrative and the medial/distal ones correlates with a phonological difference: while the former is in the harmony domain of the noun, the latter two are not.

    – Since all demonstratives behave in the same way with respect to other diagnostics that support their analysis as heads (e.g. participation in demonstrative spreading and cliticization), the harmony and possessive facts probably indicate that the two are merged at different heights.

- I conclude that the possessive structure of Kipsigis is best explained by N-to-D movement.

    – It also has important similarities to the Semitic construct state (see Creissels 2009 for a typological perspective on the Nilotic construct state in comparison to Semitic), which is often analyzed in terms of N-to-D movement (e.g. Ritter 1991). Even though phrasal movement accounts of the construct state exist (e.g Shlonsky 2004), they build on certain properties of Semitic that are absent in Kipsigis (e.g. adjectives in Hebrew, but not in Kipsigis, may sometimes head a construct state).

4.4   Strict noun initiality in the Nilotic DP

- There is significant variation in word order within Nilotic in the clausal domain (e.g. VSO in Kipsigis, V2 in Dinka, and the rare OVS in Northern Lwoo).

- In the DP, however, almost all Nilotic languages (with very few exceptions) are strictly noun-initial: no element may ever precede the noun. Furthermore, all of them display a construct state; in many Western Nilotic languages, the noun has a special head-marking inflection in this construction (Creissels 2009, Kouneli 2019).

- Even though most Nilotic languages share the strong noun initiality property, there is flexibility in the order of Num - Dem - Adj, as long (as they follow the noun); different languages display different orders among these three elements.

- As Carstens (2017) also argues for word order flexibility in Bantu, a head movement account captures tendencies of this sort in a more natural way: if N-to-D movement is obligatory in Nilotic, we expect to find noun-initial orders with some flexibility in the order of the modifiers, depending on language-specific constraints.

4.5   Summary

- Even though a phrasal account of word order may in principle be plausible for independent phenomena in the Kipsigis DP, I have argued that N-to-D movement (coupled with the assumption that demonstratives are heads in Kipsigis) provides a straightforward, unified explanation to a range of facts:

    – The (typologically rare) phonological properties of Kipsigis demonstratives.
    – The observed restrictions in the construct-like possessive construction (size of the possessee, position of modifiers, allomorphy of the possessive clitic).
    – The N - Dem - Q - Num word order.

– Variation within Nilotic (somewhat more tentative)

- Finally, it is worth pointing out that Bossi & Diercks (2019) give a series of arguments against phrasal movement and in favor of head movement to account for verb-initiality in the clausal domain, which highlights an interesting parallel with the nominal domain.

5   A previously unattested order

- So far, I have been vague about the relative order of the noun, numeral, adjective, and demonstrative in Kipsigis.

- Demonstrative spreading obscures this question, since two copies of the demonstrative are usually present. However, it turns out that it is the first copy of the demonstrative that is optional, making Kipsigis a language with N - Num - Dem - Adj order.

  (14)   làːɣòːk-(tʃù)   sómòk tʃù-tórôːr-èːn
          children-PROX.PL three   PROX.PL-tall-PL
          'these three tall children'

- This order is ruled out by most theories of word order in the DP (e.g. Cinque 2005, Abels & Neeleman 2012), since it was assumed to be unattested (though Dryer 2018 mentions one language, Haya, with this order).

- In Kouneli (2019), I argue that this rare order arises from three independent properties of Kipsigis: adjectives are always in a reduced relative clause structure, demonstratives are heads that can introduce said relative clauses, and there is an EPP feature on D which triggers N-to-D movement in the simple case and phrasal movement from inside the relative clause in structures with adjectives (along the lines of Alexiadou & Wilder 1998 for Greek determiner spreading).

- Setting the details of the analysis aside, what this type of examples highlight is that the syntax of adjectives and demonstratives is not uniform cross-linguistically. As a result, word order variation in the DP cannot be explained by differences in movement possibilities alone.

6   Conclusion

- Several facts about the Kipsigis noun phrase receive a more straightforward explanation if there is N-to-D movement, rather than (just) phrasal movement.

- There is cross-linguistic variation in the exact syntactic structure of various modifiers. Thus, theories of word order variation in the DP must take into account both different structures (contra Cinque 2005) and different movement possibilities.

- Some open questions:

– Are the two D layers present in my derivations independently motivated and/or do they exist in other languages (e.g. Cinque 2010 proposes a little *d* head in addition to D)?

– Could reprojection (along the lines of Georgi & Müller 2010) account for the same data?

• Studying the structure of noun phrases in other Nilotic languages, which are extremely understudied in the generative literature and differ in interesting ways from Kipsigis, may help shed light on more questions on DP syntax.

References

Abels, Klaus & Ad Neeleman. 2012. Linear asymmetries and the LCA. *Syntax* 15.1. 25–74.

Alexiadou, Artemis, Liliane Haegeman & Melita Stavrou. 2007. *Noun phrase in the generative perspective*. Berlin: Walter de Gruyter.

Alexiadou, Artemis & Chris Wilder. 1998. Adjectival modification and multiple determiners. In Artemis Alexiadou & Chris Wilder (eds.), *Possessors, Predicates and Movement in the DP [Linguistik Aktuell/Linguistics Today 22]*, 303–332. Amsterdam: John Benjamins Publishing Company.

Baković, Eric. 2000. *Harmony, dominance, and control*: Rutgers University dissertation.

Bernstein, Judy. 1993. *Topics in the syntax of nominal structure across Romance and Germanic languages*: City University of New York dissertation.

Bobaljik, Jonathan. 2012. *Universals in comparative morphology: Suppletion, superlatives, and the structure of words*. Cambridge, MA: MIT Press.

Bossi, Madeline & Michael Diercks. 2019. V1 in Kipsigis: Head movement and discourse-based scrambling. *Glossa: a journal of general linguistics* 4.1. 65.

Carstens, Vicki. 2017. Noun-to-Determiner Movement. In *The wiley blackwell companion to syntax, second edition*, 1–26.

Cinque, Guglielmo. 2005. Deriving Greenberg's Universal 20 and its exceptions. *Linguistic Inquiry* 36.3. 315–332.

Cinque, Guglielmo. 2010. *The Syntax of Adjectives*. Cambridge, MA: MIT Press.

Creider, Chet & Jane Tapsubei Creider. 1989. *A grammar of nandi*. Hamburg: Helmut Buske Verlag Hamburg.

Creissels, Denis. 2009. Construct forms of nouns in African languages. In Peter Austin, Oliver Bond, Monik Charette, David Nathan & Peter Sells (eds.), *Proceedings of Conference on Language Documentation & Linguistic Theory 2*, 73–82.

Dryer, Matthew. 2018. On the order of demonstrative, numeral, adjective, and noun. *Language* 94.4. 798–833.

Eberhard, David M., Gary F. Simons & Charles D. Fennig (eds.). 2020. *Ethnologue: Languages of the world. twenty-third edition*. Dallas, Texas: SIL International.

Embick, David. 2010. *Localism versus globalism in morphology and phonology*. Cambridge, MA: MIT Press.

Georgi, Doreen & Gereon Müller. 2010. Noun-Phrase Structure by Reprojection. *Syntax* 13.1. 1–36.

Hall, Beatrice, R.M.R. Hall, Martin D. Pam, Amy Myers, Stephen A. Antell & Godfrey K. Cherono. 1974. African Vowel Harmony Systems from the Vantage Point of Kalenjin. *Afrika und Übersee* 57. 241–267.

Halle, Morris & Jean-Roger Vergnaud. 1981. Harmony processes. In *Crossing the boundaries in linguistics: Studies presented to manfred bierwisch*, 1–22. Dordrecht: Springer.

Kouneli, Maria. 2019. *The syntax of number and modification: an investigation of the Kipsigis DP*: New York University dissertation.

Lodge, Ken. 1995. Kalenjin phonology and morphology: A further exemplification of underspecification and non-destructive phonology. *Lingua* 96.1. 29–43.

Longobardi, Giuseppe. 1994. Reference and proper names: A theory of N-movement in syntax and logical form. *Linguistic Inquiry* 609–665.

Nevins, Andrew. 2010. *Locality in vowel harmony*. Cambridge, MA: MIT Press.

Ritter, Elizabeth. 1991. Two functional categories in noun phrases: evidence from Modern Hebrew. *Syntax and Semantics* 25. 36–72.

Shlonsky, Ur. 2004. The form of Semitic noun phrases. *Lingua* 114.12. 1465–1526.

Toweett, Taaitta. 1979. *A study of Kalenjin linguistics*. Nairobi: Kenya Literature Bureau.