Case study: Defaka (and Dinka)

Before looking at Defaka and Dinka, let's look at two other properties of $\overline{\text{A}}$-movement.

1 Two other properties of $\overline{\text{A}}$-movement

1.1 Subject/non-subject asymmetries

Subjects can be harder to extract out of:

(1) **Sentential subject constraint (Ross, 1967, sec. 4.4)**
   a. The teacher [who the reporters expected [that the principal would fire ____]] is a crusty old battleax.
   b. * The teacher [who [that the principal would fire ____] was expected by the reporters] is a crusty old battleax.
   c. The teacher [who it was expected by the reporters [that the principal would fire ____]] is a crusty old battleax.

One way that the sentential subject constraint can manifest itself is in requiring clausal pied-piping:

(2) **Imbabura Quechua (Cole and Hermon, 1981; Hermon, 1984):**
   a. *Ima*-ta-taj Maria-ka [Juzi ____ miku-shka]-ta kri-n?
      what-ACC-Q Maria-TOP José eat-NMNLZR-ACC believe-AGR
      'What does Maria believe that José ate?' obj-*wh*, no pied-piping
   b. [*Ima*-ta wawa miku-chun]-taj Maria ____ kri-n?
      what-ACC child eat-FIN-Q Maria believe-AGR
      Lit.: '[What the child eat] does Maria believe?' obj-*wh* with CP pied-piping
   c. * *Pi*-taj Maria-ka [____ chayamu-shka]-ta kri-n?
      who-Q Maria-TOP arrive-NMNLZR-ACC believe-AGR
      'Who does Maria believe (that) has arrived?' subj-*wh*, no pied-piping
   d. [*Pi* chayamu-shka]-ta-taj Maria ____ kri-n?
      who arrive-NMNLZR-ACC-Q Maria believe-AGR
      Lit.: '[Who has arrived] does Maria believe?' subj-*wh* with CP pied-piping

Subject extraction often affects the form of the complementizer:

(3) **English T-to-C and *do*-support: (exx from Bruening, last week):**
  a. Who (*did) ____ ate the Lucky Charms?
  b. What *(did) the leprechaun eat ____?

(4) **English *that*-trace effect (Perlmutter, 1968):**
  a. What did he say (that) Laura hid ____?
  b. Who did he say (*that) ____ hid the rutabaga?

(5) **French *que*/*qui* alternation:**
  a. Qui penses-tu [*que* Marie a rencontré ____]?
  who think-you that Marie has met
  'Who do you think Marie has met?'
  b. Qui penses-tu [*qui* ____ a rencontré Marie]?
  who think-you that has met Marie
  'Who do you think has met Marie?'

Subject extraction can trigger changes in agreement ("anti-agreement"):

(6) **Trentino and Fiorentino dialects of Italian (Brandi and Cordin, 1989):**
  a. Preverbal subjects agree with the verb: Fiorentino
  Le ragazze l' hanno telefonato.
  the girls CL_{3pl} has_{3pl} phoned
  'The girls have phoned.' (Campos, 1997)
  b. No (default) agreement with postverbal subjects:
  i. Gl'- ha telefonato delle ragazze. Fiorentino
  ii. ∅ Ha telefona qualche putela. Trentino
  CL_{3sm} has_{3sm} telephoned some girls
  'Some girls have telephoned.'
  c. Default agreement with *wh*-fronted subjects:
  i. Quante ragazze gli ha parlato con te? Fiorentino
  ii. Quante putele ∅ ha parlá con ti? Trentino
  How many girls CL_{3sm} has_{3sm} spoken with you
  'How many girls talked to you?'
  d. Agreement with *wh*-fronted subjects is ungrammatical:
  i. * Quante ragazze le hanno parlato con te? Fiorentino
  ii. * Quante putele le ha parlá con ti? Trentino
  How many girls CL_{3pf} has_{3pf} spoken with you

There are various approaches out in the literature to why "subjects are special" when it comes to extraction:

- *Condition on Extraction Domains (CED):* "A phrase A may be extracted out of a domain B only if B is properly governed" (≈ Case-licensed by a lexical head) (Huang, 1982)
- *C-T interaction:* C triggers movement of a constituent with T features, which could either be the subject (Case = T feature) or T itself (Pesetsky and Torrego, 2001); or the features of T are inherited from C (Chomsky, 2008).
- *Criterial Freezing:* The subject moved to a position which satisfies an EPP requirement (a requirement that a particular projection have a specifier) and is therefore unable to move further (Rizzi and Shlonsky, 2007).
- *Anti-locality:* The subject in Spec,TP is "too close" to the edge of the clause to be extracted (Erlewine, to appear).
- *Subjects are not in the lower phase:* Subjects are unique among arguments in not being inside the complement of v, a phase head. **We will see this today.**

(Not all of these approaches are designed to (or able to) account for the same sets of data.)

1.2 "Footprints" of successive-cyclic movement

$\overline{\text{A}}$-movement can be long-distance, through successive-cyclic movement:

(7) [$_{CP}$ *What* do you think [$_{CP}$ ____ (that) he'll say [$_{CP}$ ____ (that) we should buy ____?

☞ We can sometimes actually *see* $\overline{\text{A}}$-movement moving through each of these positions.

(8) **West Ulster English (McCloskey, 2000):**
   a. *What* **all** do you think (that) he'll say (that) we should buy ____?
   b. *What* do you think **all** (that) he'll say (that) we should buy ____?
   c. *What* do you think (that) he'll say **all** (that) we should buy ____?
   d. *What* do you think (that) he'll say (that) we should buy **all** ____?

(9) **Irish (Carnie, 2001):**

a. Bíonn fios agat i gconaí [$_{CP}$ **go** bhuailfidh an píobaire an t-amhrán].
be.HAB know at.2.S always that play.FUT the piper the song
'You always know that the bagpiper will play the song.'

b. Bíonn fios agat i gconaí [$_{CP}$ *caidé* **aL** bhuailfidh an píobaire ____].
be.HAB know at.2.S always what aL play.FUT the piper
'You always know what the bagpiper will play.'

c. [$_{CP}$ *Cáidé* **aL** bhíonn fios agat i gconaí [$_{CP}$ _ **aL** bhuailfidh an píobaire _]]?
What aL be.HAB know at.2.S always aL play.FUT the piper
'What do you always know the piper will play?'

Successive cyclic movement is ensured by **Subjacency**, or its modern incarnation:

(10) **Phase Impenetrability Condition (Chomsky, 2000):**
In phase α with head H, the domain of H is not accessible to operations outside α, only H and its edge [specifiers and adjuncts] are accessible to such operations.

In particular, CP is a phase, just as $\overline{\text{S}}$ was a "bounding node" in Chomsky (1977).

2 Defaka (Bennett, 2009; Bennett et al., 2012)

Defaka (Ijoid; Southern Nigeria) has focus fronting, with the markers *kò* and *ndò...kè*:

(11) **Baseline, discourse-neutral:**
ì Bòmá ésé-kà-rè.
I Boma see-FUT-NEG
'I will not see Boma.'

(12) **Subject focus:**
ì **kò** Bòmá ésé-kà-rè.
I KO Boma see-FUT-NEG
'[I]$_F$ will not see Boma.'

(13) **Object focus:**
Bòmá **ndò** ì ésé-kà-rè-**kè**.
Boma NDO I see-FUT-NEG-KE
'I will not see [Boma]$_F$.'

"Our consultants noted that the DP followed by *ko* or *ndo* is somehow 'emphasized,' and they typically translate them into English as cleft constructions." (Bennett, 2009, p. 9)

It is impossible to use both at the same time:

(14) * Boma **ko** Tonye **ndo** baa-**ke**
Boma KO Tonye NDO kill-KE
Intended: '[Boma]$_F$ killed [Tonye]$_F$'

(15) * Tonye **ndo** Boma **ko** baa-**ke**
Tonye NDO Boma KO kill-KE

Kò is used for subject focus; *ndò...kè* is used for all other types of focus fronting:

(16) [*tàá*$_{DO}$] **ndò** Àmànyà ____ sónò á àmà-**kè** kí^{l}á ^{l}té?
what NDO Amaya buy her give-KE market P
'What did Amaya buy ____ for her at the market?' DO *wh*

(17) [*tárì*$_{IO}$] **ndò** Àmànyà ómgbìnyà sónò ____ àmà-**kè** kí^{l}á ^{l}té?
who NDO Amaya shirt buy give-KE market P
'Who did Amaya buy a shirt for ____ at the market?' IO *wh*

(18) [ŋmgbóò nám] **ndò** Tónyè kárá-rè-**kè**
fishing.net mend NDO Tonye want-NEG-KE
'Tonye does not want to [mend the fishing net]$_F$.' complement VP focus

(19) [Bruce á ésé-mà] **ndò** Bòmá jírí-**kè**
Bruce her see-NFUT NDO Boma know-KE
'Boma knows [(that) Bruce saw her]$_F$.' complement CP focus

(20) [ándù kìkìà] **ndò** à èbèrè rì bòì-mà-**kè**
canoe under NDO the dog -RE hide-NFUT-KE
'The dog is hiding [under the canoe]$_F$.' locative PP focus

Defaka has both in-situ and fronted *wh*-questions:

(21) Boma *ndia* *ngi* ete?
Boma how.many axe have?
'How many axes does Boma have?'

(22) [*ndia* *ngi*] **ndo** Boma ete-**ke**?
how.many axe NDO Boma have-KE
'How many axes does Boma have?'

(23) Amanya *ndeka* *lee* iya?
Amaya which place go?
'Where did Amaya go?'

(24) [*ndeka lee*] **ndo** Amanya iya-**ke**?
which place NDO Amaya go-KE?
'Where did Amaya go?'

(25) Boma *taa* *koko* ese?
Boma what all see
'What did Boma see all of?'

(26) [*taa* *koko*] **ndo** Boma ese-**ke**?
what all NDO Boma see-KE
'What did Boma see all of?'

☞ Things get really fun with long-distance movement.

(27) **Long-distance object focus movement ⇒ *ndo* high; *ke* on both verbs:**
[áyá jíkà] **ndò** Bòmá ì bíè-***(kè)** [ì ísò ____ sónó-mà-***(kè)**]
new house NDO Boma I ask-KE I -ISO buy-MA2-KE
'Boma asked me if I'm going to buy [a new house]$_F$.'

(28) **Long-distance subject focus movement ⇒ *ndo* high; *ke* high but not low:**
Bruce **ndò/*kò** Bòmá jírí-***(kè)** [____ á ésé-mà]
Bruce NDO/*KO Boma know-KE her see-NFUT]
'Boma knows (that) [Bruce]$_F$ saw her.'

So there are two kinds of subject/non-subject asymmetries in Defaka:

(29) **The second-position focus marker (Bennett, 2009, p. 24):**
   a. *ko* if focus is the *local subject*;
   b. *ndo* otherwise

(30) **Verbal suffix (*ke*):**
   For each verb/clause, if a non-subject is being extracted (through), realize *-ke*.

The behavior of *ke* can be captured by the idea that ***v*P is a phase**. Therefore $\overline{\text{A}}$-movement must move through intermediate Spec,*v*P, not just intermediate Spec,CP.

(Chomsky (2000, 2001) claimed that active transitive *v*P (*v**P) is a phase, whereas passive and unaccusative *v*P are not, but Legate (2003) has argued that all *v*P are phases. The idea that successive cyclic movement passes through the VP edge actually goes back to Chomsky (1986).)

(31) **Anaysis for *ke* (Bennett, 2009, p. 21):**
   a. If focus movement crosses a *v*P phase, then *-ke* appears (objects, adjuncts to VP, subjects extracted from embedded CPs, etc.)
   b. If focus movement does not cross a *v*P phase boundary, *-ke* does not appear (local focused subjects)

(32) Bennett (2009):

a. $[_{\text{FocP}}$ Spec Foc$^{\text{o}}$ … $[_{\text{vP}}\ t_{\text{Sbj}}$ (v$^{\text{o}}$) $[_{\text{VP}}$ V$^{\text{o}}$ $[_{\text{CP(ForceP)}}$ … $[_{\text{vP}}\ t_{\text{Sbj}}$ (v$^{\text{o}}$) $[_{\text{VP}}$ V$^{\text{o}}$]

   Subject DP … *-ke* triggered … (no *-ke*)

b. $[_{\text{FocP}}$ Spec Foc$^{\text{o}}$ … $[_{\text{vP}}\ t_{\text{Obj}}$ (v$^{\text{o}}$) $[_{\text{VP}}$ V$^{\text{o}}$ $[_{\text{CP(ForceP)}}$ … $[_{\text{vP}}\ t_{\text{Obj}}$ (v$^{\text{o}}$) $[_{\text{VP}}$ V$^{\text{o}}$ t_{Obj}]

   Object DP … *-ke* triggered … *-ke* triggered

☞ **Defaka *ke* shows the "footprint" of movement at the *v*P edge** (cf Irish above).

3 Dinka (Van Urk and Richards, to appear)

Dinka is a Nilotic language of South Sudan. It is V2 with a Germanic feel: a constituent is in initial position, followed by the auxiliary, with the main verb lower down.

There's a lot to say about $\overline{\text{A}}$-movement in Dinka, but today we will focus on *the immediately preverbal position*.

(33) **Dinka immediately preverbal position must be filled:**

a. ɣɛ̀n cí **Ayén** yiḛ̱n kitàp̱.
I PRF Ayen give book
'I gave Ayen a book.'

b. ɣɛ̀n cí **kitàp̱** yiḛ̱n Ayén.
I PRF book give Ayen
'I gave Ayen a book.'

c. * ɣɛ̀n cí ____ yiḛ̱n Ayén kitàp̱.
I PRF give Ayén book

d. * ɣɛ̀n cí ____ yiḛ̱n kitàp̱ Ayén.
I PRF give book Ayen

(34) **Direct and indirect object extraction requires empty preverbal position:**

a. *Yeŋà* cíi mòc ____ yiḛ̱n kitàp̱?
who PRF.NS man give book
'Who did the man give the book to?'

b. *Yeŋǫ̱́* cíi mòc ____ yiḛ̱n Ayén?
what PRF.NS man give Ayen
'What did the man give to Ayen?'

c. * *Yeŋà* cíi mòc **kitàp̱** yiḛ̱n?
who PRF.NS man book give

d. * *Yeŋǫ̱́* cíi mòc **Ayén** yiḛ̱n?
what PRF.NS man Ayen give

Similarly, long-distance extraction requires intermediate Spec,CP (clause-initial positions) to be empty. (Embedded clauses are also V2.)

(35) **Subject extraction requires Spec,CP but not preverbal position to be empty:**
Yeŋà cúkkú luéel, [$_{CP}$ ____ cíi [$_{vP}$ **kitàp̱** ɣòoc̄?
who PRF.1pl say PRF.NS book buy
'Who did we say bought a book?'

☞ The immediately preverbal position is Spec,*v*P. The subject is generated above this position. Extraction of non-subject arguments must move through Spec,*v*P.

(36) **Extraction of plurals triggers obligatory *ke*-stranding:**

a. *Yeŋà* cíi Bôl̄ [$_{vP}$ ____ tḭ̈ŋ?
who PRF.NS Bol̄.GEN see
'Who did Bol see?'

b. *Yèyîŋa* cíi Bôl̄ [$_{vP}$ ***(ké)** tḭ̈ŋ?
who.PL PRF.NS Bol̄.GEN PL see
'Who all did Bol see?'

(37) **Long-distance object *wh*-movement ⇒ *ke* in each intermediate *v*P edge:**

a. *Yeŋà* yḛ̀ [$_{vP}$ ____ tàak [$_{CP}$ cíi Bôl [$_{vP}$ ____ tḭ̀ŋ?
who IMPF.2sg think PRF.NS Bol.GEN see
'Who do you think Bol saw?'

b. *Yèyîŋa* yḛ̀ [$_{vP}$ ***(ké)** tàak [$_{CP}$ cíi Bôl [$_{vP}$ ***(ké)** tḭ̀ŋ?
who.PL IMPF.2sg PL think PRF.NS Bol.GEN PL see
'Who all do you think Bol saw?'

(38) **Long-distance subject *wh*-movement ⇒ *ke* at higher but not lower *v*P edge:**
[*Ye kɔ̂ɔc-kó*] yṵkkṵ **kê** tàak, [$_{CP}$ càm [$_{vP}$ ____ cuḭ́n?
[Q people-which] IMPF.1pl PL think eat food
'Which people do we think are eating food?' (Coppe van Urk, p.c.)

☞ **Dinka *ké* shows the "footprint" of movement of plurals at the *v*P edge** (cf Defaka above, as well as the West Ulster English *all*-stranding).

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