Phaseology

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1. Preliminaries

(1)   objective: modeling linguistic competence
(2)   target: all-and-only grammatical sentences
(3)   model must be generative and recursive (finite means/rules > infinite output)

(4)   move from an unordered set of elements to a structure (= narrow syntax)
(5)   simplest procedure: merge (further question: what is simplest merge?)
(6)   assume: a binary branching structure is what you need to interpret sound/meaning properties

(7)   derivation: numeration > narrow syntax > interfaces

(8)   you get asymmetries for free (c-command)(Epstein 1999)

(9)   hidden assumption: there is presyntactic information > what kind, and how much?
        (typically: argument structure, category labels, but also: functional information)
(10)   important for this talk: elements in the numeration may be **output of previous derivation**

2. Locality

(11)   dependencies are subject to locality constraints:

(12)   a. You saw [Mary and Bill]   >   Who did you see [e] / *Who did you see [Mary and [e]]
        b. Who did you say [you saw [e]] / * Who did you wonder when [you saw [e]]
        c. John (*said Mary likes) himself

(13)   You need to define **local domains** > how does that fit with the model of the derivation (7)

(14)   my answer: the derivation is oblivious of locality constraints (it just merges away)

(15)   **principle of generalized integrity**
        Merge only elements that are in the numeration
        (i.e. not subparts of elements that are in the numeration)

(16)   if X = ab is the output of a previous derivation D_1 (merging *a* and *b* to yield *ab*),
        and if X is in the numeration for the next derivation D_2
        you cannot merge *a* or *b* in D_2

(17) D_1 numeration = { hand, book }, narrow syntax yields *handbook*
        D_2 numeration = { [handbook], ... }
                 > you cannot merge either *hand* or *book* in D_2, only *handbook*

(18)   this much is trivial and 'free', so the ideal situation would be to explain locality by (15)

(19)   seems to work well for (12a,b), (12c) is arguably different

(20)   **dependency theory**
       dependency is a function of merge

(21)   this requires that merge of *a,b* creates an ordered pair ⟨a,b⟩ rather than a set {a,b}
       > dependency may be defined as a function of the asymmetric ordering (= c-command)
       (Zwart 2011 and earlier work)

(22)   reflexivity
       John + [likes 3SG]   >   John + [likes 3SG]REFL
       + language specific realization of the feature [reflexive] (special pronoun, verbal affix, etc.)
(23)   locality of binding (12c): *John* not merged with *likes 3SG*, so no dependency


3. Phases

(24)   the current theory of locality in minimalism is different (Chomsky 2001)
       1. the derivation (7) is bottom up (crucially)
       2. once you reach a certain extension, the derivation stalls
       3. most of the structure created at that point is transfered to the interfaces
       4. only the edge of that structure remains for further computation in narrow syntax

(25)   those extensions (24.2) are called **phases**
       > defined as vP or CP (and some might say DP also) = propositional units

(26)   this requires that subjects are generated internal to vP (external arguments)

(27)   taking this further: the phase heads **C** and **v** are syntactic primitives
       (the rest (**T**, **V**) is subsidiary)

(28)   locality effects explained
       (12a): [DP Mary and Bill] is a phase
       (12b): [CP (when) you saw who] is a phase
          > you can move *who* through the phase edge, but not if *when* is there
       (12c): [CP Mary likes himself] is a phase

(29)   but given the principle of generalized integrity, phase theory is a complication
       (driven by what needs to be explained, but not conceptually necessary)

(30)   > defenses of phase theory are interesting

(31)   two examples:
       - Bruening on Principle C (interpretation of R-expressions)
       - Van Urk & Richards on wh-movement through the edge (in Dinka, Western Nilotic)

(32)   conclusions:
       - Principle C-effects are not sensitive to phases
       - Western Nilotic languages have no wh-movement

4. Case 1, phase-command

(33) Bruening (2014) 'Precede-and-command revisited' (B14)
    a. dependency is basically precedence
    b. constrained by 'phase command'

(34) phase-command
    α phase-commands δ iff there is no phasal node γ such that γ dominates α but not δ

(35) no dependency
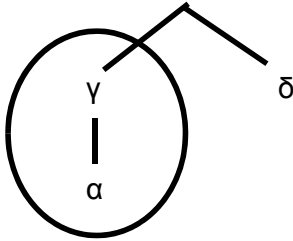
    a. c-command theory: ever
    b. phase-command theory: if γ is a phasal node

(36) Principle C (Chomsky 1981)
    a. (c-command) An R-expression is free (not coreferential) from a c-commanding antecedent
    b. (phase-command) An R-expression is free from a **preceding** and **phase-commanding** antecedent

(37) a.   *He$_i$ loves John$_i$
    b.   *I met him$_i$ in Ben$_i$'s office
    c.   *He$_i$ said that John$_i$ is an idiot

(38) [$_{DP}$ His$_i$ mother] loves John$_i$
    ✓c-command theory
    ✓precede-and-command theory (if **DP** = phasal node)

(39) a. *I [$_{vP}$ met him$_i$ in Ben$_i$'s office]   (=[37b])
    b. People [$_{vP}$ worship him$_i$] in Kissinger$_i$'s native country
    ✗ c-command theory (*him* not a c-commander in either case)
    ✓ precede-and-command theory (*him* inside a **vP**-phase in b. only)

(40) a. *[$_{IP}$ He$_i$ has a lot of talent] and [$_{IP}$ Peter$_i$ should go far]
    b. Mary said [$_{CP}$ that he$_i$ has a lot of talent] and [$_{CP}$ that Peter$_i$ should go far]
    ✗ c-command theory (*he* not a c-commander in either case)
    ✓ precede-and-command theory (*him* inside a **CP**-phase in b. only)

(41) relevance of discourse
    Principle C-effect is a function of left-to-right reference tracking
    - we have **active** and **background** discourse referents
    - Principle C is about **active** discourse referents only
    - we move discourse referents from active to background **at the right edge of a phase**

(40b) Mary said [CP that he$_i$ has a lot of talent] and [CP that Peter$_i$ should go far]
                      | | |
                active   *he* > background   active

(42) The intuition about reference tracking is probably right, but are phases really relevant?

(43) *Bolinger 1977 'Pronouns and repeated nouns'*
   a. default: use a pronoun instead of a repeated noun
   b. use a repeated noun to reintroduce the referent as a topic
   c. there can be 'distractors' increasing the need to be clear about the identity of a discourse referent
   d. this mechanism is not sensitive to phrasal status

(44) a. i) *He$_i$ flunked when John$_i$ cheated
      ii) He$_i$ usually flunks when John$_i$ tries to cheat
   b. i) *He$_i$ was just a little boy when I saw John$_i$
      ii) He$_i$ was just a little boy when I first saw John$_i$
   c. i) *I bought him$_i$ the house that John$_i$ wanted
      ii) I bought him$_i$ the house that John$_i$ always wanted
   d. i) *He$_i$ looks at the wall and John$_i$ throws the ball at it
      ii) He$_i$ looks at me and John$_i$ goes out of his mind
   e. i) *Either he$_i$ eats or John$_i$ sleeps
      ii) Either he$_i$ does what I say or John$_i$ loses his job
   f. i) *He$_i$ lost the money and John$_i$ found it again
      ii) He$_i$ lost the money and then John$_i$ found it again
   g. i) *He$_i$ is not to be believed when John$_i$ tells a story
      ii) He$_i$ is not to be believed when John$_i$ tells a crazy story like that
   h. i) *He$_i$ didn't mind, when I blamed John$_i$ for it
      ii) He$_i$ didn't seem to mind, when I blamed John$_i$ for it
   i. i) *He$_i$'s going to be flunked, if John$_i$ cheats
      ii) He$_i$'s going to get flunked, if John$_i$ cheats
   j. i) *It surprises him$_i$ that John$_i$ is so well liked
      ii) It surprised him$_i$ that John$_i$ was so well liked
(45) The contrasts in (44) are subtle [like in (40)], but phases are **not relevant**.

(46) Bolinger's observation applies to the earlier cases also.
   (39b) People [$_{vP}$ worship him$_i$] in Kissinger$_i$'s native country
         Kissinger can be usefully reintroduced as the discourse topic because his identity is crucial to the reference of *native country*.
   (40b) Mary said [$_{CP}$ that he$_i$ has a lot of talent] and [$_{CP}$ that Peter$_i$ should go far]
         Distractor = the circumstance that the quote is ascribed to Mary, so we need to keep track of who the speaker has in mind, as well as of who the speaker thinks Mary has in mind (and the speaker has to anticipate that)

(47) In fact, the Principle C-effects can be lifted under relevant conditions as well:
   (39a) [Ben is such a private person that he won't let anyone in his office] So it was quite a thrill to actually meet him$_i$ in Ben$_i$'s OFFICE.
   (40a) [We spent all afternoon discussing draft picks, and noone generated more heated discussion than the shortstop from Kansas, Peter. But in the end we reached a consensus.] He$_i$ has a lot of talent and Peter$_i$ should go far. [But who needs another shortstop?]

(48) Conclusion for Principle C
   a. not an absolute principle (use a pronoun for a known discourse referent)
   b. phases irrelevant

5. Case 2: successive-cyclic wh-movement

(49) outline of the Van Urk/Richards analysis
1. Dinka (W. Nilotic) is a V2 language (also embedded V2) > Spec,CP must be filled
2. spec,vP must also be filled (double EPP-effect)
3. exception: object A'-movement > movement through Spec,vP and Spec,CP

(50) V2 in Dinka (topicalization > subject-verb inversion)

a. **láy   à-kuáạŋ**   b. **raạan   à-kuáạŋ**   SV
   animal DECL-swim   human   DECL-swim
   'The animal is swimming.'   'The human is swimming.'

c. **láy   à-nàk   raạan**   d. **raạan   à-nàk   láy**   SVO
   animal DECL-kill human   human   DECL-kill animal
   'The animal is killing the human.'   'The human is killing the animal.'

e. **raạan à-nɛ́ɛk   làːy**   f. **láy   à-nɛ́ɛk   raậan**   OVS
   human DECL-kill:INV animal:GEN   animal DECL-kill:INV human:GEN
   'The animal is killing the human.'   'The human is killing the animal.'

NB case only expressed in postverbal subject (and obliques), inversion marked phonologically
NB this holds for both main and embedded clauses

(51) first position *must* be filled, except with wh-movement
    ye-ŋà   cúkkừ   luéel [(*kìtáp) cị́i   (kìtáp)   γɔ̀ɔc] ?
    YE-who PRF.PL say   book   PERF book   buy
    'Who did we say bought a book?'

(52) two problems
1. not clear that V2 implies movement to C in all clauses (rather than just with inversion)
2. not clear that (51) involves movement of the wh-element (instead of base-generation)

(53) traditional V2-analysis (Den Besten):
1. V-to-C (always)
2. something must move to Spec,CP ("V2 constraint")
neither movement is very well understood (explained)

(54) minimalist analysis (Zwart 1993)
1. subject is always in Spec,TP (structural subject position)
2. in case something moves to Spec,CP (for whatever reason), the verb follows suit (=V2)
(later: verb placement is 'phonological' linearization, no bearing on syntactic position)

(55) diagnostics: special morphology of the verb in inversion (can be shown in Dutch)
a. Dinka inversion morphology (50e,f)
b. Dinka verbal deixis (centrifugal/centripetal) only marked in straight order (SVO)
   (i) **dhɔ̀ɔk à-bɔ̀ɔk   doọot**   (Anderson 1991:269f)
        boy   DECL-throw:CP   stone
        'The boy is throwing the stone.' [towards the speaker]
   (ii) **doọot à-bɔ́ɔk   dhɔ̀ɔk**
        stone   DECL-throw:INV boy
        'The boy is throwing the stone.' [deixis not specified]

(56) wh-interrogatives in Western Nilotic languages are invariably wh-in-situ constructions
(Crazzolara 1933:81f on **Nuer**, Crazzolara 1955:96 on **Acoli**, Kohnen 1933:71 on **Shilluk**,
Tucker 1994:186 on **Luo**, Noonan 1992:173 on **Lango**, Reh 1996:428 on **Anuak**)

    a.   **ŋɔ́r cí ŋɔ̣́ kuɟ̰ɛn ?**   (Dinka)
        Ngor PERF what read:INF
        'What did Ngor read?'

    b.   **ye-ŋɔ̣́ cį́i ŋɔ́r kuɟ̰ɛn ?**
        YE-what PERF:NTS Ngor read:INF
        'What did Ngor read?'

(57) the fronted wh-element shows signs of base-generation:
    1. the element *ye* (etymology unclear, possibly [derived from] a 3SG pronoun or copula)
    2. no case (not even when the fronted element is an oblique)
    3. triggers number agreement on the auxiliary (just like a preverbal subject)

(58) Western Nilotic languages also typically feature an alternative construction to the wh-in-situ
construction, involving a relative marker (i.e. clefts)

    a.   **è na mè cí wɔ ?**   (Nuer, Crazzolara 1933:81)
        COP:3SG who:SG REL:SG PERF go
        'Who has gone?'

    b.   **ā ŋɔ́ nì tháal-ō̄ ?**   (Anuak, Reh 1996:431)
        COP what REL cook-2PL
        'What are you cooking?'

    NB Dinka does not have an overt relative marker (Tucker and Bryan 1966:423)

(59) Van Urk & Richards argue against a clefting analysis, as clefts have different properties: they
feature a personal pronoun. But this is only true of declarative clefts, not of interrogative
clefts, as can be seen in Lango

    a.   **é Bòl *yêen* à-cɛ̣́ lɔ̀ Boston**   (Dinka)
        COP:3SG Bol 3SG DECL-PERF go Boston
        'It is Bol who went to Boston.' [lit. is Bol he went to Boston]

    b.   **òkélò *ɛ́nn* àmɛ̂ òpíô òjwàtò**   (Lango, Noonan 1992:234)
        Okelo 3SG REL Opio 3SG:hit:PERF
        'It's Okelo that Opio hit.'

    c.   **ŋà àmɛ̂ lócè ònɛ̀nò ?**   (Lango, Noonan 1992:235)
        who REL man 3SG:see:PERF
        'Who did the man see?'

(60) so a plausible analysis is that fronted wh-interrogatives are wh-clefts *cum* (free) relatives
is-what [REL] AUX Ngor read (= (56b))
    > cf. Rudnev (2015) for a similar analysis of wh-constructions in Avar (N. Caucasian)

(61) object relatives in Dinka require inversion (Anderson 1991:288-290)

    a.   **jɔ̣́ŋ cɛ̣́ mẹ̀th cậam**   (subject relative)
        dog:CS PERF child eat:INF
        'the dog which has bitten the child'

    b.   **mạ́nh cį́i jɔ̀ŋ cậam**   (object relative)
        child:CS PERF:INV dog:GEN eat:INF
        'the child whom the dog has bitten'

    > "extraction" only from preverbal position
    > this suffices to explain (51), the exception to V2 with long-distance interrogatives

(62) no evidence here for successive cyclic movement, let alone for the relevance of phases

(63) Van Urk & Richards: phenomena of CP (more or less) replicated at the vP-phase
    1. preverbal position must be occupied
    2. preverbal position must be empty with fronted wh-elements (i.e. = phase edge)

(64) a. **ɣɛ̂ɛn cɛ̣́ Ayén yiɛ̣n kìtáp**   (Dinka, vU/R 124-125)
        I   PERF Ayen give book
        'I gave Ayen a book.'
    b. **ɣɛ̂ɛn cɛ̣́ kìtáp yiɛ̣n Ayén**
        I   PERF book   give Ayen
        'I gave Ayen a book.'
    c. * **ɣɛ̂ɛn cɛ̣́   yiɛ̣n Ayén kìtáp**   *no empty object position*
        I   PERF   give Ayen book
    d. **ye-ŋà cɪ̣́i   môc   (*kìtáp) yiɛ̣n (kìtáp) ?**   *empty object position*
        YE-who PERF:INV man:GEN book   give book
        'Who did the man give the book to?'

(65) but CP and vP are not entirely the same:
    1. the preverbal position is filled again when the wh-element is oblique
    2. vP must have multiple specifiers, and (64c) can only be blocked by additional assumptions keeping *all* specifiers empty ('multitasking')
    3. when the wh-element is plural, a quantifier *ke* appears preverbally (in both the matrix clause and the embedded clause), but never in Spec,CP

(66) the plausibility of successive cyclic movement through Spec,vP is reduced quite a bit, when it is unclear that there is successive cyclic movement through Spec,CP to begin with

NB, the analysis of Van Urk and Richards moves beyond what we've discussed here in arguing that extraction out of an embedded clause requires movement of that clause to Spec,vP; this is obscured by a spell-out rule linearizing the clause to the right of the verb (extraposition).

6. Conclusion

(67) Two seemingly compelling arguments supporting a phase-based theory of locality, Bruening (2014) on binding and Van Urk and Richards (2015) on successive cyclic wh-movement, on closer scrutiny appear to be problematic:
    a. Principle C can be overruled when distractors favor reestablishing the identity of a referent; there is no evidence that this is conditioned by phase structure
    b. Western Nilotic languages like Dinka arguably use a clefting *cum* relativization strategy instead of wh-movement; no conclusions as to the relevance of phases for movement are allowed

References

Andersen, Torben. 1991. Subject and topic in Dinka. *Studies in Language* 15, 265-294.

Andersen, Torben. 2002. Case inflection and nominal head-marking in Dinka. *Journal of African Languages and Linguistics* 23, 1-30.

Den Besten, Hans. 1977. On the interaction of root transformations and lexical deletive rules. Ms., University of Amsterdam. Published 1981 in *Groninger Arbeiten zur germanistischen Linguistik* 20.
http://gagl.eldoc.ub.rug.nl/root/1981-20/01/

Bolinger, Dwight. 1977. *Pronouns and repeated nouns*. Bloomington: Indiana University Linguistics Club.

Bruening, Benjamin. 2014. Precede-and-command revisited. *Language* 90.342-388.

Chomsky, Noam. 1981. *Lectures on government and binding*. Dordrecht: Foris.

Chomsky, Noam. 2001. Derivation by phase. In Michael Kenstowicz, ed., *Ken Hale: a life in language*, 1-52. Cambridge: MIT Press.

Crazzolara, J.P. 1933. *Outlines of a Nuer grammar*. Mödling: Anthropos.

Crazzolara, J.P. 1955. *A study of the Acooli language*. London: International African Institute/Oxford University Press.

Epstein, Samuel D. 1999. Un-principled syntax: the derivation of syntactic relations. In Samuel D. Epstein and Norbert Hornstein, eds., *Working minimalism*, 317-345. Cambridge: MIT Press.

Kohnen, Bernard. 1933. *Shilluk grammar*. Verona: Missioni africane.

Reh, Mechthild. 1996. *Anywa language: description and internal reconstruction*. Cologne: Rüdiger Köppe Verlag.

Rudnev, Pavel. 2015. *Dependency and discourse-configurationality: a study of Avar*. Dissertation, University of Groningen.

Noonan, Michael. 1992. *A grammar of Lango*. Berlin: Mouton de Gruyter.

Tucker, A.N. 1994. *A grammar of Kenya Luo (Dholuo)*. Cologne: Rüdiger Köppe.

Tucker, A.N. and M.A. Bryan. 1966. The Nilotic languages. In *Linguistic analyses: the non-bantu languages of North-Eastern Africa*, pp. 400-442. London: International African Institute/Oxford University Press.

van Urk, Coppe and Norvin Richards. 2015. Two components of long-distance extraction: successive cyclicity in Dinka. *Linguistic Inquiry* 46, 113-155.

Zwart, Jan-Wouter. 1993. *Dutch syntax: a minimalist approach*. Dissertation, University of Groningen.

Zwart, Jan-Wouter. 2011. Structure and order: asymmetric merge. In Cedric Boeckx, ed., *The Oxford handbook of linguistic minimalism*, 96-118. Oxford: Oxford University Press.

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