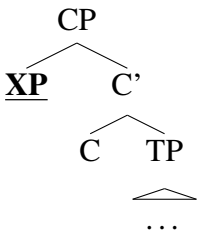
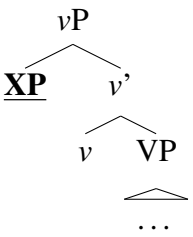
Dinka and the architecture of long-distance extraction*

Coppe van Urk (cvanurk@mit.edu)
Norvin Richards (norvin@mit.edu)
Massachusetts Institute of Technology

GLOW 36, Lund University

In the Nilotic language Dinka Nyarweng, both C and *v* have the **EPP property**: one XP *must* sit in their specifier (1) and (2):

(1)


(2)


In this talk, we show that this system provides strong support for successive-cyclic movement through Spec-*v*P and Spec-CP (Chomsky 1986, 2000, 2001, 2008), because long-distance movement satisfies this property on the way, so that these positions appear empty.

There is an important complication, however. We demonstrate that, in cases of long-distance extraction through Spec-*v*P, any finite CP from which extraction takes place must move to Spec-*v*P, followed by obligatory extraposition. We argue that, in these instances, it is the finite CP, and *not* the *wh*-phrase, that leaves Spec-*v*P empty. Thus, Dinka offers evidence that long-distance extraction requires **a syntactic relation between the CP and *v*** (Rackowski and Richards 2005; Den Dikken 2009, 2012a,b).

Main claim: Long-distance movement involves *both* of these two components: successive-cyclic movement and an Agree relation between *v* and the CP from which extraction takes place.

The talk is divided into two parts. We first detail how Dinka provides evidence for successive cyclicty:

- Section 1 outlines the properties of two positions in the Dinka clause, Spec-*v*P and Spec-CP, that are the focus on this talk.
- In section 2, we show that these positions provide strong evidence for the successive-cyclic nature of long-distance movement (Chomsky 1977, 1986, 2000, 2001, 2008).
- Section 3 offers an argument for this view, drawn from monoclausal PP extraction.

*We thank Noam Chomsky, Marcel den Dikken, David Pesetsky, and Omer Preminger for comments and discussion. We are indebted to Abiar Makɔ̈ɔ̈r Guɔt for sharing her language with us, as well to the Dinka community at the Grace Episcopal Church in Everett, MA. Our thanks finally to audiences at talks at ACAL 44, MIT, NELS 43, and Utrecht University, and to everyone in the Fall 2012 24.942 class at MIT. We use the following abbreviations: 1/2/3 = 1st/2nd/3rd person, DTR = ditransitive, GEN = genitive case, FUT = future, IMPF = imperfective, LOC = locative case, NEG = negation, NS = non-subject voice, OBL = oblique voice, PL = plural, PRF = perfect, SG = singular, TR = transitive.

The second part of this talk argues that long-distance extraction requires Agree between the embedding verb and the complement CP (Rackowski and Richards 2005; Den Dikken 2009, 2012a,b):

- Section 4 builds the case for the proposal that finite CP from which extraction takes place must move to Spec-*v*P and extrapose in Dinka.
- Section 5 proposes a modification of Rackowski and Richards (2005) that incorporates both successive-cyclic movement and the need for Agree between *v* and CP.
- In Section 6, we discuss extraction from extraposed clauses and the role it plays in our analysis.

Part 1: Successive cyclicity in Dinka

1 Two EPP positions in Dinka

Dinka is a Nilo-Saharan language, spoken in South Sudan by the Dinka people. Dinka Nyarweng is a southeastern variety. In this talk, we will mainly be concerned with two positions in the Dinka clause, which we identify as Spec-CP and Spec-*v*P. See work by Andersen (1991, 2002, 2007, 2012) for other aspects of Dinka syntax.

Spec-CP:

- Dinka is a V2 language (Andersen 1991):

(3) **Matrix clauses are V2**

Subject first:

a. [Cän] a-bí Bòl ɣòc aléth rɔ̀ɔk.
Can 3SG-FUT Bol buy.DTR clothes town.LOC
'Can will buy Bol clothes at the town.'

Direct object first:

b. [Aléth] aa-bíi Cän ké ɣòc Bòl rɔ̀ɔk.
clothes 3PL-FUT.NS Can.GEN PL buy.DTR Bol town.LOC
'Can will buy Bol clothes at the town.'

Locative first:

c. [Rɔ́k] a-bíi Cän aléth ɣòc Bòl.
town 3SG-FUT.NS Can.GEN clothes buy.DTR Bol
'Can will buy Bol clothes at the town.'

- Dinka is V2 in all finite embedded clauses as well:

(4) **Embedded clauses are V2**

Subject first:

a. A-cíi Majók yôk [ké [Cän] bí Bòl ɣòc aléth rɔ̀ɔk].
3SG-PRF.NS Majok find.out C Can FUT Bol buy.DTR clothes town.LOC
'Majok found out that Can will buy Bol clothes at the town.'

Direct object first:

b. A-cíi Majók yö̱k [ké [aléth] bíi Cä̱n ké ɣɔ̱̀c Bɔ̱̀l
3SG-PRF.NS Majok find.out C clothes FUT.NS Can.GEN PL buy.DTR Bol
rɔ̱̀ɔ̱k].
town.LOC
'Majok found out that Can will buy Bol clothes at the town.'

Locative first:

c. A-cíi Majók yö̱k [ké [rɔ́k] bínnë̱ Cä̱n aléth ɣɔ̀c Bɔ̱̀l
3SG-PRF.NS Majok find.out C town FUT.OBL Can.GEN clothes buy.DTR Bol
thín].
in.it
'Majok found out that Can will buy Bol clothes in the town.'

- We take matrix and embedded V2 to be C level in Dinka. The following facts argue for this:
  - The V2 position hosts agreement that is sensitive to clause type.
  - V2 is restricted to embedded clauses that can be headed by an overt complementizer.
  - (Some) complementizers block V2.
  - The first position is the landing site for *wh*-fronting.

  As a result, we take overt complementizers in examples like (4a–c) to be part of an extended left periphery, along the lines of Rizzi (1991). This issue is discussed in more detail in the appendix.

- As in other V2 languages, Spec-CP is not allowed to be empty (5a–b).

(5) *Spec-CP cannot be empty:*

a. *[___] cí Bô̱l kurá cák.
PRF Bol.GEN bowl make
'Bol made a bowl.' (OK as *yes-no* question: 'Did Bol make a bowl?')

b. *A-yé Bô̱l tà̱ak, [___] cí Áyèn kità̱p ɣɔ̀o̱c].
3SG-IMPF.NS Bol.GEN think PRF Ayen.GEN book buy
'Bol thinks that Ayen bought a book.'

Spec-*v*P:

- There is a position in the verbal domain that must also be filled, which we identify as Spec-*v*P. This position precedes the Dinka verb cluster (i.e. where verbs that are not the highest verb/auxiliary sit).

- For example, in (6a–b), the auxiliary *cí* occupies the V2 position. As a result, the main verb *tíŋ̈* ('see') does not raise to C. The position before *tíŋ̈* must be occupied by the direct object (6a–b):

(6) *Postion before verb cluster must be occupied:*

a. ɣɛ̀n cí [mîi̱r] tíŋ̈.
I PRF giraffe see
'I saw a giraffe.'

b. *ɣɛ̀n cí [____] tíŋ̈ mîi̱r.
I PRF see giraffe
'I saw a giraffe.'

- That one object must always proceed the verb cluster is also evident in ditransitives. One object surfaces before the verb and one follows it (7a–b).

(7) *One object is preverbal and one postverbal:*

a. ɣɛ̀n cí [Ayén] yiɛ́n kitə̀p.
I PRF Ayen give book
'I gave Ayen a book.'

b. ɣɛ̀n cí [kitə̀p] yiɛ́n Ayén.
I PRF book give Ayen
'I gave a book to Ayen.'

- In such cases, it is never possible for the Spec-*v*P position to be empty (8a–b):

(8) *Position before verb cluster cannot be empty:*

a. *ɣɛ̀n cí [___] yiɛ́n kitə̀p Ayén.
I PRF give book Ayen
'I gave Ayen a book.'

b. *ɣɛ̀n cí [___] yiɛ́n Ayén kitə̀p.
I PRF give Ayen book
'I gave a book to Ayen.'

An important restriction on Spec-*v*P: Unlike Spec-CP, Spec-*v*P only hosts *nominals*. Low adjuncts, for example, may not occur before the verb cluster (9a–b):

(9) *Adjuncts cannot occupy Spec-vP:*

a. ɣɛ̀n cí [___] nín ɣɔ̈̀ɔ̈t.
I PRF sleep house.LOC
'I slept in the house.'

b. *ɣɛ̀n cí [ɣɔ̈̀ɔ̈t] nín.
I PRF house.LOC sleep
'I slept in the house.'

We identify this position as Spec-*v*P, because it appears to be a position for nominal objects and because we will see that it functions as an edge position, both properties generally ascribed to Spec-*v*P (e.g. Chomsky 1995, 2000, 2001; Wurmbrand 2001).

Picture so far: There are two positions in the Dinka clause, which we identify as Spec-CP and Spec-*v*P, which are EPP positions in declarative sentences (i.e. they must be occupied if possible).

2 The signature of successive-cyclicity

Long-distance movement affects these positions in two ways:

- Spec-*v*P and Spec-CP positions on the path of movement appear empty.
- Plural *wh*-phrases leave behind the clitic *ke* when they move through Spec-*v*P.

2.1 EPP effects and long-distance extraction

EPP and long-distance movement: Long-distance extraction blocks movement to Spec-CP or Spec-*v*P, so that the EPP effects just described appear at the surface to be absent.

Spec-*v*P:

- We saw previously that one object appears before and one after the verb cluster in ditransitives (e.g. 7a–b). Now observe that, when either object is extracted, it is must come from the Spec-*v*P position (10a–d). Contrast this with (8).

(10) *Object extraction requires empty Spec-vP:*

a. Yeŋà cíi mòc [___] yiɛ́n kitàp?
who PRF.NS man give book
'Who did the man give the book to?'

b. *Yeŋà cíi mòc [kitàp] yiɛ́n?
who PRF.NS man book give
'Who did the man give book to?'

c. Yeŋǫ́ cíi mòc [___] yiɛ́n Ayén?
what PRF.NS man give Ayen
'What did the man give Ayen?'

d. *Yeŋǫ́ cíi mòc [Ayén] yiɛ́n?
what PRF.NS man Ayen give
'What did the man give Ayen?'

- We have now seen that monoclausal extraction of DPs empties Spec-*v*P. In sections 3 and 4, we discuss two instances in which the facts are different: PP extraction, and long-distance extraction. The full range of facts will be part of our argument that extraction from a finite CP is only possible if the CP moves to Spec-*v*P and extraposes.

Spec-CP: Spec-CP is affected uniformly by extraction. Any Spec-CP position on the path of movement must appear empty.

- This is true in the clause from which extraction takes place (11a–d).

(11) *Extraction blocks occupation of Spec-CP:*

a. Yeŋà cúkkú luéél [[___] cí kitàp ɣòoc]?
who PRF.1PL say PRF book buy
'Who did we say [*t* bought a book]?'

b. *Yeŋà cúkkú luéél [[kitàp] (a-)cíi ɣòoc]?
who PRF.1PL say book 3SG-PRF.NS buy
'Who did we say [*t* bought a book]?'

c. Yétenô cúkkú luéél [___] cíi wɔ̀k kitàp ɣɔ̀oc]?
where PRF.1PL say PRF.NS we book buy
'Where did we say [that we bought a book *t*]?'

d. *Yétenô cúkkú luéél [kitàp] (a-)cúkkú ɣɔ̀oc]?
where PRF.1PL say book 3SG-PRF.1PL buy
'Where did we say [that we bought a book *t*]?'

- And the effect extends to intermediate clauses (12a–d):[1]

(12) *Extraction affects intermediate Spec-CP:*

a. Yeŋà yé Yàar tàak, [ké ___ cíi Bôl luéél, [ye ___ cúkkú
who IMPF Yaar think C PRF.NS Bol.GEN say C PRF.1PL
tíŋ]]?
see
'Who does Yaar think [that Bol said [that we saw *t*]]?'

b. *Yeŋà yé Yàar tàak, [ké Bòl] (a-)cí luéél, [ye ___ cúkkú tíŋ]]?
who IMPF Yaar think C Bol 3SG-PRF say C PRF.1PL see
'Who does Yaar think [that Bol said [that we saw *t*]]?'

c. *Yeŋà yé Yàar tàak, [ké ___ cíi Bôl luéél, [ye wɔ̀k] cí tíŋ]]?
who IMPF Yaar think C PRF.NS Bol.GEN say C we PRF see
'Who does Yaar think [that Bol said [that we saw *t*]]?'

d. *Yeŋà yé Yàar tàak, [ké Bòl] (a-)cí luéél, [ye wɔ̀k] cí tíŋ]]?
who IMPF Yaar think C Bol 3SG-PRF say C we PRF see
'Who does Yaar think [that Bol said [that we saw *t*]]?'

- We propose that these facts obtain because **Spec-CP and Spec-*v*P are on the edge of a phase**, so that extraction must proceed through them. *At the relevant stage of the derivation*, Spec-CP and Spec-*v*P in Dinka are then occupied. Apparent exceptions appear only because the XP that does so subsequently undergoes movement.

First effect of successive-cyclicity: Long-distance movement passes through Spec-CP and Spec-*v*P, causing these positions to be empty when they lie on the path of movement.

2.2 Ke-stranding

There is a second way in which the effects of successive-cyclicity are evident in Dinka, which is by means of a process we call ***ke*-stranding**.

- In Dinka, plural *wh*-phrases strand a morpheme *ke* in each Spec-*v*P along the path of movement (*cf.* McCloskey 2000). The paradigm in (13a–b) illustrates.

[1] These examples contain overt complementizers. These complementizers are all from the set that do not block V2, so that these examples indeed illustrate emptying. See the appendix for discussion.

(13) *Extraction of plural XP strands plural morpheme in Spec-vP:*

a. Yeŋà cíi Bôl ___ tíŋ?
who PRF.NS Bol.GEN see
'Who did Bol see?'

b. Yèyíŋa cíi Bôl ké tíŋ?
who.PL PRF.NS Bol.GEN PL see
'Who all did Bol see?'

- This process is obligatory. Omitting *ke* is ungrammatical (14).

(14) *Ke-stranding is obligatory:*

*Yèyíŋa cíi Bôl ___ tíŋ?
who.PL PRF.NS Bol.GEN see
'Who all did Bol see?'

- *Ke*-stranding happens in long-distance extraction also (15a–b).

(15) *Plural morpheme in every Spec-vP:*

a. Yeŋà yè ___ tàak, [___ cíi Bôl ___ tíŋ]?
who IMPF.2SG think PRF.NS Bol.GEN see
'Who do you think [Bol saw *t*]?'

b. Yèyíŋà yè ké tàak, [___ cíi Bôl ké tíŋ]?
who.PL IMPF.2SG PL think PRF.NS Bol.GEN PL see
'Who all do you think [Bol saw *t*]?'

- As in cases of local extraction, *ke*-stranding is obligatory (16a–c).

(16) *Ke-stranding is obligatory in every Spec-vP:*

a. *Yèyíŋà yè ___ tàak, [___ cíi Bôl ___ tíŋ]?
who.PL IMPF.2SG think PRF.NS Bol.GEN see
'Who all do you think [Bol saw *t*]?'

b. *Yèyíŋà yè ___ tàak, [___ cíi Bôl ké tíŋ]?
who.PL IMPF.2SG think PRF.NS Bol.GEN PL see
'Who all do you think [Bol saw *t*]?'

c. *Yèyíŋà yè ké tàak, [___ cíi Bôl ___ tíŋ]?
who.PL IMPF.2SG PL think PRF.NS Bol.GEN see
'Who all do you think [Bol saw *t*]?'

The process of *ke*-stranding offers additional evidence for successive cyclicity, because it shows us that features of the *wh*-phrase end up in every Spec-*v*P position on the path of movement.

Second effect of successive-cyclicity: Plural *wh*-phrases leave the morpheme *ke* in every Spec-*v*P they pass through.

In this way, Dinka provides strong evidence for the idea that long-distance dependencies involve a sequence of movement steps through the edge of each verb phrase and the edge of each clause (Chomsky 1986, 2000, 2001, 2008).

3 PP extraction and a case restriction on Spec-*v*P

In this section, we look at the profile of PP extraction, which differs from DP extraction in illuminating ways. We will show that it provides support for the view of Dinka developed so far. In addition, it will set the stage for Part 2 of the talk.

- Recall from section 1 that low adjuncts cannot appear in Spec-*v*P (17a–b):

  (17) *Adjuncts cannot occupy Spec-vP:*
  *ɣɛ̀n cí [yɔ̈ɔ̈t] nín.
  I PRF house.LOC sleep
  'I slept in the house.'

- We propose that **only XPs that are assigned case by *v* can satisfy its EPP property**. Since PPs cannot be assigned case by *v*, they cannot move to Spec-*v*P.

- This restriction also shows up under extraction, so that an object must appear in Spec-*v*P when a low adjunct is extracted (18a–b):

  (18) *Locatives and instrumentals do not empty local object position:*
  a. Yétenô cín [thɔ̈k] ɣɔ̀oc?
  where PRF.2SG goat buy
  'Where did you buy a goat?'
  b. Yeŋɔ́ cín [kɔ̀ɔ̈r] nɔ̀k?
  what PRF.2SG lion kill
  'What did you kill a lion with?'

- A similar pattern arises with PP arguments, like the locative argument of *tuɔɔc* 'send'. This argument cannot appear in Spec-*v*P in declaratives (19a–b).

  (19) *Inaminate goals cannot appear in Spec-vP:*
  a. Bɔ̀l a-cí [Dɛ̀ŋ] tuɔ̀ɔc wɨ́ɨ̈t.
  Bol 3SG-PRF Deng send cattle.camp.LOC
  'Bol sent Deng to the cattle camp.'
  b. *Bɔ̀l a-cí [wɨ́ɨ̈t] tuɔ̀ɔc Dɛ̀ŋ.
  Bol 3SG-PRF cattle.camp.LOC send Deng
  'Bol sent Deng to the cattle camp.'

- And, when such locatives are extracted, Spec-*v*P remains occupied (20).

  (20) *Locative arguments do not empty Spec-vP:*
  Yétenô cénné Bôl [Dɛ̀ŋ] tuɔ̀ɔc?
  where PRF.OBL Bol.GEN Deng send
  'Where did Bol send Deng?'

- Extraction of these XPs, then, does not empty the specifier of *v*P, despite the fact that some of them clearly begin the derivation within *v*P; the locative argument of *tuooc*, at least, must be VP-internal.

Are these XPs simply not required to exit via the edge of *v*P?

That would be surprising, given what we think we understand about phase impenetrability.

In addition, these XPs, when plural, **obligatorily strand a *ke* in Spec-*v*P**, which appears alongside the object (21a–b):

(21) *Plural instrumentals and locatives strand a ke in Spec-vP:*

a. Ye bɛ̤ɛ̤i kó̱ cénne nyanká̤i [**ké** wanmá̤th tu̱ɔ̱̀ɔc]?
Q villages which PRF.OBL sister PL brother send
'Which villages did my sister send my brother to?'

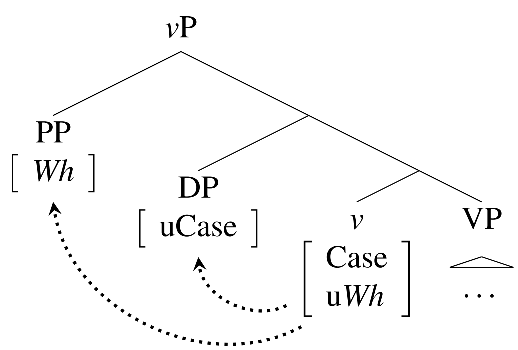
b. Ye piú kée-dì cíi Bô̱l [**ké** bàmbée̱ thà̱al]?[2]
Q water much-how PRF.NS Bol.GEN PL sweet.potatoes cook.TR
'With how much water did Bol cook sweet potatoes?'

Thus, these XPs *do* exit via a specifier of *v*P; *their movement simply fails to empty the vP edge*.

Let's formalize this observation:

We posit two movement-driving features on *v*, one specifically associated with Case and another which triggers *wh*-movement. In examples like (21a), these two features must be satisfied by different phrases; *ye bɛ̤ɛ̤i kó̱* ('to which villages') is a *wh*-phrase but is inactive for Case, while *wanmá̤th* ('brother') is active for Case but is not a *wh*-phrase:

(22)



By contrast, in examples like (8a), repeated here as (23a), both features of *v* may be satisfied by a single phrase; *yeŋa* ('who') is both a *wh*-phrase and a DP with an active Case feature:

(23) *Object extraction requires empty Spec-vP:*

a. Yeŋà cíi mòc ___ yiɛ́n kità̱p?
who PRF.NS man give book
'Who did the man give the book to?'

b. *Yeŋà cíi mòc kità̱p yiɛ́n?
who PRF.NS man book give
'Who did the man give the book to?'

[2]Mass nouns like *píu* ('water') are formally plural in Dinka.

The ill-formedness of (23b), on this account, arises from an Economy condition like the one in (24) (see Pesetsky and Torrego 2001 for a similar proposal):

(24) **Multitasking:** At every step of a derivation, if there are two operations A and B available, and the features checked by A are a superset of those checked by B, the grammar prefers A.

Multitasking rules out (23b), since the grammar has elected to check the Case and *wh*-features of *v* with separate phrases, rather than with one phrase as in (23a).

In this way, the restrictions on Spec-*v*P in declaratives mirror those that show up under extraction. That this approach is on the right track is supported by the profile of PP extraction through Spec-CP:

- Spec-CP is not a case position and can be occupied by PPs as well as nominals (25).

  (25) *Adjuncts can occupy Spec-CP:*
  [Bâ̤a̤i] a-cénne Bô̱l ɣò̤t yík Dɛ̱̀ŋ.
  village 3SG-PRF.OBL Bol.GEN house build Deng
  'Bol built a house for Deng in the village.'

- Extraction of an PP through Spec-CP then *should* have an emptying effect, just like extraction of DPs. Extraction of a PP from an embedded clause indeed blocks movement to Spec-CP of that clause (26a–b).

  (26) *Extraction of an adverbial phrase blocks movement to Spec-CP:*
  a. Yétenô cúkkú luéél [[___] cíi wɔ̀k kità̱p ɣò̱o̱c]?
  where PRF-1PL say PRF.NS we book buy
  'Where did we say [that we bought a book *t*]?'
  b. *Yétenô cúkkú luéél [[kità̱p] (a-)cú-kú ɣò̱o̱c]?
  where PRF-1PL say book 3SG-PRF-1PL buy
  'Where did we say [that we bought a book *t*]?'

Summing up: The distribution of EPP satisfaction under movement is the same as in declaratives. The conditions on which types of *wh*-movement empty an EPP position are just those that determine how an EPP position may be filled overtly.

Part 1 has taught us the following about Dinka:

- There are two positions in the Dinka clause, Spec-CP and Spec-*v*P, which have the EPP property, so that they must be occupied if possible.
- Long-distance movement satisfies the EPP property of these positions, letting us trace the path of movement and providing strong support for the notion of *successive-cyclic movement*.
- There is a case restriction on Spec-*v*P, so that only DPs which are case-licensed by *v* may satisfy EPP there. PPs, which are not case-licensed by *v*, cannot appear there. This restriction shows up also under extraction, so that PPs move through Spec-*v*P but do not satisfy EPP there.

And now things get more complicated!

Part 2: The role of agreement in long-distance dependencies

4 Successive cyclicity in long-distance extraction

In addition to lending support to the notion of intermediate movement, Dinka provides evidence for the idea that long-distance extraction is accompanied by agreement between phase heads (Rackowski & Richards 2005; Den Dikken 2012a,b).

This evidence comes from a difference between extraction from finite and from non-finite clauses:

We saw above that extracted XPs satisfy the EPP property of Spec-CP on the way. Examples like (27a–b) seem to show that extraction also empties the higher Spec-vP:

(27) *Extraction out of finite clause causes higher Spec-vPs to be empty:*

a. Yeŋà cíi Yâa̱r [___] lɛ̱́k Dɛ̱̀ŋ, [yè ___ cíi Bɔ̱̂l ___ tu̱ɔ̀ɔ̱c
who PRF.NS Yaar.GEN tell Deng C PRF.NS Bol.GEN send
wú̱u̱t]?
cattle.camp.LOC
'Who did Yaar tell Deng [that Bol sent *t* to the cattle camp]?'

b. *Yeŋà cíi Yâa̱r [Dɛ̱̀ŋ] lɛ̱́k, [yè ___ cíi Bɔ̱̂l ___ tu̱ɔ̀ɔ̱c
who PRF.NS Yaar.GEN Deng tell C PRF.NS Bol.GEN send
wú̱u̱t]?
cattle.camp.LOC
'Who did Yaar tell Deng [that Bol sent *t* to the cattle camp]?'

This is surprising! Given the conclusions reached at the end of the last section, the moved phrase presumably lacks an active Case feature by the time it reaches the matrix clause, so its ability to empty the matrix Spec-*v*P is mysterious.

> We propose that it is actually *the finite CP* in (27a) that satisfies Spec-*v*P. However, after movement of the CP to Spec-*v*P, it undergoes **extraposition**, so that Spec-*v*P is empty at the surface.

To understand this proposal, we first have to outline the behavior of finite CPs in Dinka:

- Recall that, in a ditransitive, one XP must occupy Spec-CP and one DP Spec-*v*P (28a–c).

(28) *Spec-CP and Spec-vP must be occupied:*

a. Bòl a-cí [Dɛ̱̀ŋ] lɛ̱́k akókôl.
Bol 3SG-PRF Deng tell story
'Bol told Deng a story.'

b. Bòl a-cí [akókôl] lɛ̱́k Dɛ̱̀ŋ.
Bol 3SG-PRF story tell Deng
'Bol told Deng a story.'

c. *Bòl a-cí [___] lɛ̱́k Dɛ̱̀ŋ akókôl.
Bol 3SG-PRF told Deng story
'Bol told Deng a story.'

- However, when one of these objects is a finite CP, Spec-CP and Spec-*v*P can appear empty (29a–c). We claim that the empty slots in (29a–c) are in fact filled by the complement clause, but that this clause subsequently undergoes extraposition.

(29) *Spec-CP and Spec-vP can be empty if there is a CP complement:*

a. Bòl a-cí [Dɛ̀ŋ] lɛ̱́k [Ayén a-cí kitàp ɣòoc].
Bol 3SG-PRF Deng tell Ayen 3SG-PRF book buy
'Bol told Deng [that Ayen bought a book].'

b. Bòl a-cí [___] lɛ̱́k Dɛ̀ŋ [Ayén a-cí kitàp ɣòoc].
Bol 3SG-PRF tell Deng Ayen 3SG-PRF book buy
'Bol told Deng [that Ayen bought a book].'

c. [___] a-cíi Bôl [___] lɛ̱́k Dɛ̀ŋ [Ayén a-cí kitàp ɣòoc].
3SG-PRF.NS Bol.GEN tell Deng Ayen 3SG-PRF book buy
'Bol told Deng [that Ayen bought a book].'

- Similarly, with transitive verbs, Spec-*v*P is always empty (the CP cannot appear there) (30a–b), and Spec-CP may appear empty also (30b).

(30) *Spec-CP and Spec-vP can be empty also in transitive with CP complement:*

a. Yàa̱r a-cí [___] luéél, [a-cíí nín].
Yaar 3SG-PRF say 3SG-NEG sleep
'Yaar said that he isn't sleeping.'

b. [___] a-cíi Yâa̱r [___] luéél, [a-cíi nín].
3SG-PRF.NS Yaar.GEN say 3SG-NEG sleep
'Yaar said that he isn't sleeping.'

- As noted above, we propose that this pattern arises because CPs may move to Spec-CP and Spec-*v*P, but, unlike other XPs, **undergo extraposition after moving to these positions**.

An argument for movement+extraposition:
Support for the idea that CPs move and extrapose comes from an implicational relationship between Spec-CP and Spec-*v*P in such constructions. If Spec-CP is empty, then Spec-*v*P is also empty (31).

(31) *Emptying of Spec-CP by complement CP blocks movement to Spec-vP:*

*[___] a-cíi Bôl [Dɛ̀ŋ] lɛ̱́k [Ayén a-cí kitàp ɣòoc].
3SG-PRF.NS Bol.GEN Deng tell Ayen 3SG-PRF book buy
'Bol told Deng [that Ayen bought a book].'

This follows if this emptying by CPs reflects movement and extraposition, since the CP first has to move to Spec-*v*P to get to Spec-CP.

We suggest then this is what is going on in long-distance extraction from finite clauses, like (32):

(32) Yeŋà cíi Yâa̱r [___] lɛ̱́k Dɛ̱̀ŋ, [yè ___ cíi Bô̱l ___ tuɔ̱ɔc wú̱u̱t]?
who PRF.NS Yaar.GEN tell Deng C PRF.NS Bol.GEN send cattle.camp.LOC
'Who did Yaar tell Deng [that Bol sent *t* to the cattle camp]?'

The CP from which extraction takes place moves to Spec-*v*P and undergoes extraposition. Moreover,

movement of CP to Spec-*v*P, which is optional ordinarily (29a–c), becomes obligatory when the CP is extracted from. We propose the following generalization:

(33) **Long-distance Extraction Generalization:**
A clause from which extraction takes place must move to Spec-*v*P if it can.

On this account, then, Spec-*v*P in (33) is emptied, not by the moved *wh*-phrase, but by the embedded CP itself. We offer two pieces of evidence in support of this conclusion.

Argument 1: Non-finite clauses

- Our first argument involves the behavior of nonfinite clauses in Dinka. Such clauses cannot move to Spec-*v*P or Spec-CP:

(34) *Non-finite clauses cannot move to Spec-vP or Spec-CP:*

a. [Cän] a-cí [Adít] lɔ̈ŋ [bí jäl].
Can 3SG-PRF Adit encourage FUT leave
'Can encouraged Adit to leave.'

b. *[Cän] a-cí [___] lɔ̈ŋ Adít [bí jäl].
Can 3SG-PRF encourage Adit FUT leave
'Can encouraged Adit to leave.'

c. *[___] a-cíi Cä́n [___] lɔ̈ŋ Adít [bí jäl].
3SG-PRF.NS Can.GEN encourage Adit FUT leave
'Can encouraged Adit to leave.'

- As expected, extraction from such clauses fails to empty the matrix Spec-*v*P:

(35) *Extraction out of non-finite clause never empties higher Spec-vP:*[3]

a. Yekäŋó́ cíi Adít [**ké** [Cän] lɔ̈ŋ [bí **ké** ɣɔ̈ɔc]]?
what.things PRF Adit PL Can encourage FUT PL buy
'What things did Adit encourage Can [to buy *t*]?'

b. Yétenô cíi Adít [[Cän] lɔ̈ŋ [bén Bôl tuɔ̈ɔc]]?
where PRF Adit Can encourage FUT.OBL Bol.GEN send
'Where did Adit encourage Can [to send Bol *t*]?'

Argument 2: Long-distance extraction of PPs

- A second argument has to do with long-distance extraction of PPs. We have seen that local extraction of a PP does not empty Spec-*v*P:

(36) *Locative arguments do not empty Spec-vP:*
Yétenô cénné Bôl [Dɛ̈ŋ] tuɔ̈ɔc?
where PRF.OBL Bol.GEN Deng send
'Where did Bol send Deng?'

- However, long-distance extraction of a PP does empty Spec-*v*P in the matrix clause, *just when extraction is from a finite clause*:

[3]Note that we can verify from the *ke*-stranding example in (35a) that the Spec-*v*P position of the object control verb *lɔŋ* ('encourage') is used as an intermediate landing site.

(37) *Extraction of a PP from finite clause causes higher Spec-vPs to be empty:*

a. Yétenô cíi Yâ̤a̤r ___ lɛ̤́k Dɛ̱ŋ, [yè ___ cíi Bôl Ayén
where PRF.NS Yaar.GEN tell Deng C PRF.NS Bol.GEN Ayen
tu̱ɔ̱c]?
send
'Where did Yaar tell Deng [that Bol sent Ayen *t*]?'

b. *Yétenô cíi Yâ̤a̤r Dɛ̱ŋ lɛ̤́k, [yè ___ cíi Bôl Ayén tu̱ɔ̱c]?
where PRF.NS Yaar.GEN Deng tell C PRF.NS Bol.GEN Ayen send
'Where did Yaar tell Deng [that Bol sent Ayen *t*]?'

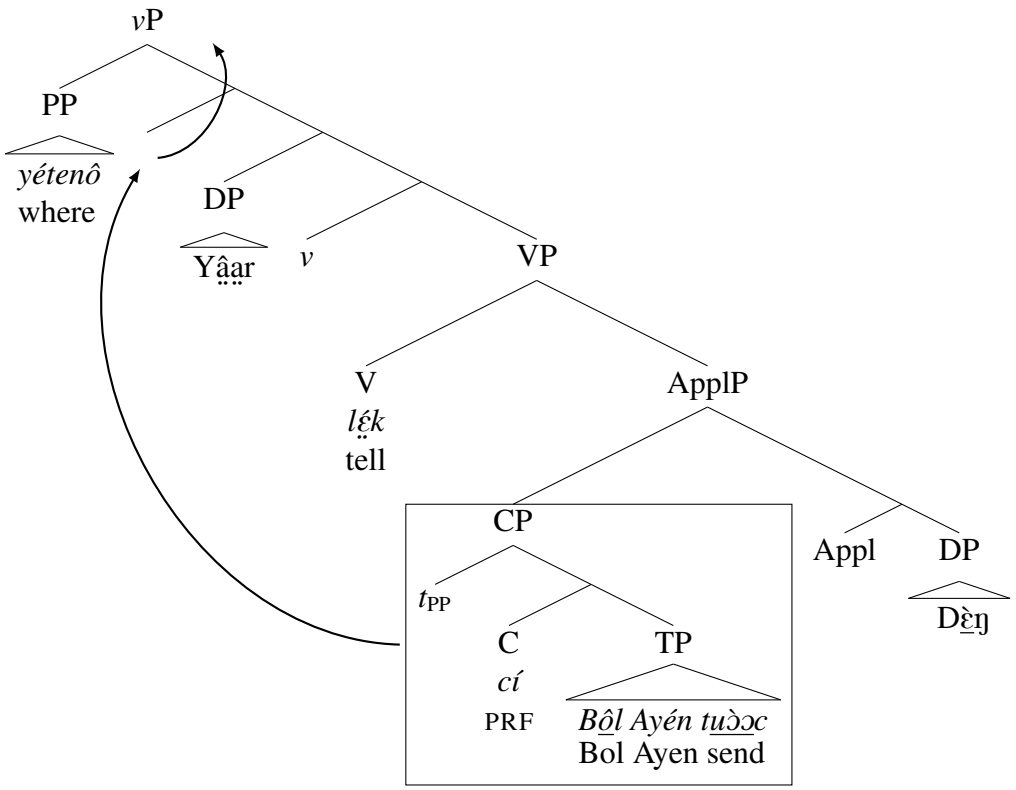
We have shown then that whether matrix Spec-*v*P in a long-distance question is empty is determined, not by the *wh*-phrase, but by whether the embedded clause is of the type capable of emptying it (i.e. whether it is a finite CP). We take this as evidence that it is *the embedded clause itself* which empties Spec-*v*P.

In this way, Dinka shows us that **there has to be a syntactic relation between the embedding verb and the finite CP in the context of long-distance extraction**. In this case, this manifests itself as movement and extraposition, causing Spec-*v*P to appear empty in examples such as (38):

(38) Yétenô cíi Yâ̤a̤r ___ lɛ̤́k Dɛ̱ŋ, [yè ___ cíi Bôl Ayén tu̱ɔ̱c]?
where PRF.NS Yaar.GEN tell Deng C PRF.NS Bol.GEN Ayen send
'Where did Yaar tell Deng [that Bol sent Ayen *t*]?'

Under this proposal, (38) can be represented by the tree in (39):

(39)



This conclusion accords with work by Rackowski and Richards (2005) and Den Dikken (2009, 2012a,b), who argue that extraction from a CP in Tagalog and Hungarian requires Agree between *v* and CP.

Putting everything together:

Dinka provides evidence that the syntax of long-distance extraction involves ***at least two components:***

- intermediate movement through the edge of Spec-CP and Spec-*v*P
- an Agree relation between the embedding verb and the CP from which extraction takes place

This is an important conclusion, as many models of successive-cyclicity assume one but not the other. A number of proposals either do away with Agree or featural triggers as a component in initiating intermediate movement (e.g. Bošković 2002, 2007; Chomsky 2008). Conversely, Rackowski and Richards (2005) and Den Dikken (2009, 2012a,b) argue that agreement circumvents phase boundaries, so that the concept of intermediate movement is no longer necessary.

In the next section, we address the issue of what kind of theory could incorporate both of these components and propose a modification of Rackowski and Richards (2005).

5 Phases as interveners

We have argued that the syntax of long-distance extraction involves ***two components***: phase impenetrability and agreement between *v* and CP. In this section we offer a modified version of Rackowski and Richards (2005), which incorporates both of these elements.

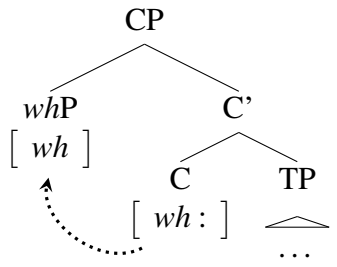
We need to accomplish two things:

- If a CP (for example) contains a *wh*-phrase, then *both* the *wh*-phrase *and* the CP itself need to be possible Goals for *wh*-probing.
- In addition, it will be important for us to ensure that the dominating CP is actually a ***closer*** potential Goal to higher Probes; this will be the key to forcing higher Probes to Agree with the dominating CP before they can Agree with the *wh*-phrase.

Assumption 1 (see also section 3): A C with a *wh*-phrase in its specifier carries a *wh*-feature which is responsible for driving *wh*-movement to it (Chomsky 1995, Preminger 2011).

On this view, a declarative CP from which *wh*-extraction takes place successive-cyclically has, at one point in the derivation, the partial structure in (40):

(40)



In this view, since CP and the *wh*-phrase both carry a *wh*-feature, they are both potential Goals for higher probes seeking *wh*-features.

Assumption 2: We can now ensure that CP will be the higher of the two Goals by defining *closeness* along the following lines:[4]

(41) **Definition of closeness:**
A goal A is a *closer goal* for an Agree relation with a probe P than a goal B if A is distinct from B and every node that dominates A also dominates B.

Assuming that Agree must target the *closest* goal, the condition in (41) guarantees that a Goal A is more accessible to higher Probes than a distinct Goal B if A either c-commands or dominates B. By this definition, the CP in (40) is a more accessible Goal for higher *wh*-probes than the *wh*-phrase itself, since the CP dominates the *wh*-phrase.[5]

How then is the *wh*-phrase to be extracted?

- Here we follow much work on multiple *wh*-constructions (Richards 1998, Hiraiwa 2001) in claiming that a Probe may Agree with multiple distinct Goals, as long as it does not 'skip' the highest potential Goal in favor of more deeply embedded Goals.

- For example, a Probe may Agree with two Goals, one structurally higher than the other, *as long as they are the highest Goals in the search space*; the fact that one of the Goals is higher than the other does not disqualify the lower Goal from being Agreed with. Rackowski and Richards (2005) encode this as follows:

  (42) Once a probe P Agrees with a Goal G, P can ignore G for the rest of the derivation. (Richards 1998; Hiraiwa 2001; Rackowski and Richards 2005)

  (Whether the precise formulation in (42) is the correct one or not is not very important for our account; some version of (42) must presumably be true for multiple *wh*-questions to exist at all.)

- The locality condition in (41), paired with the condition on multiple Probing in (42), will guarantee that in a configuration like the one in (40), higher Probes seeking to extract the *wh*-phrase must Agree *both* with the *wh*-phrase and with the CP dominating it.

- As we saw in the last section, the facts of Dinka support this conclusion; extraction from a tensed CP requires that *v* Agree with the CP, moving it to the specifier of *v*P (after which the clause will extrapose, leaving the specifier position empty).[6]

[4]Rackowski and Richards (2005) offer a more complex definition of locality, which is intended not only to force Agree between phase heads but also to derive phase impenetrability. Their definition has the consequence that successive-cyclic movement must move through the edges of intervening *v*Ps, but may freely skip intervening CPs. The Dinka facts seem to demonstrate that this is untenable, at least for Dinka; successive-cyclic movement does indeed stop at the edge of every phase. We will therefore make use of the definition of closeness in (41), assuming that phase impenetrability is a separately enforced condition.

[5]This basically incorporates Chomsky's (1964) A-over-A principle into the definition of intervention. See also Kitahara (1997) and Müller (1998) for arguments from constraints on remnant movement that this is a desirable move.

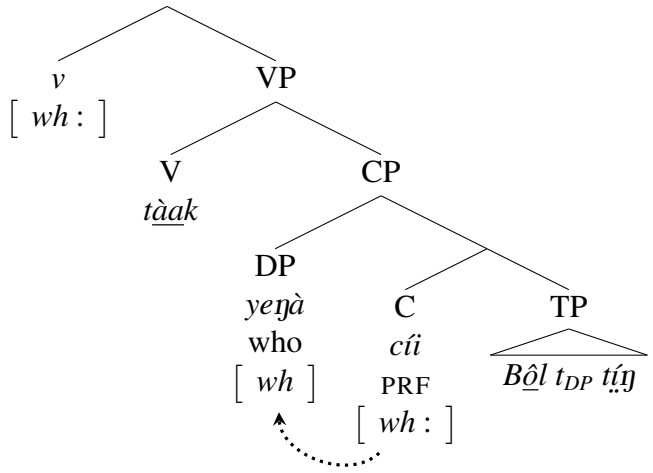
[6]We have several options for non-finite clauses. One option is that they are not phases, and so do not require circumvention.

Let us illustrate this system with an explicit derivation along these lines. Consider the example in (43).

(43) Yeŋà yè̤ ___ tàak, [___ cíi Bôl ___ tíŋ̤]?
who IMPF.2SG think PRF.NS Bol.GEN see
'Who do you think Bol saw?'

When matrix *v* is merged, the *wh*-phrase *yeŋà* ('who') has been attracted to Spec-CP by a *wh*-feature on C:

(44)



By the logic in (41), CP is the closest goal to the *wh*-probe on *v*, because it dominates the *wh*-phrase.

As a result, in order to access the *wh*-phrase, ***v* must agree with the CP**. Matrix *v* then assigns Case to the CP and attracts it to Spec-*v*P, from which it subsequently extraposes.[7]

Matrix *v* can then target the *wh*-phrase and attract it to a second specifier.

This explains why matrix Spec-*v*P is *obligatorily empty* in such constructions. Both XPs that satisfy *v*'s features must undergo subsequent movement: the CP because Dinka requires CPs to extrapose, and the *wh*-phrase because it must move to matrix Spec-CP to be interpreted.

6 Movement out of extraposed constituents

In the picture sketched here, extraction takes place from a CP that undergoes movement. This may at first glance seem at odds with some data about extraction from CPs in other languages.

Another is that non-finite clauses are agreed with by *v*, but that no reflex of this is visible, as non-finite clauses do not undergo movement or participate in agreement in Dinka.

[7]There are two analytical options with regard to what feature *v* and the CP agree in. We could posit a Multiple Agree relation for the *wh*-feature, as Multitasking would then favor the CP for Case assignment also. Another option is to say that the CP is a *defective* intervener for *wh*-probing (e.g. because *v* wants to target the *interpretable* instance of the *wh*-feature). We would then say that matrix *v* and the CP only Agree for Case, allowing *v* to ignore it in further probing. This last option has the advantage of retaining the Rackowski and Richards (2005) account of the CED.

- In particular, movement of CP seem to induce freezing effects in a number of places. We see this, for example, in English pairs like (45a–b).

(45) *Movement of CP blocks extraction in English:*

a. What is it unlikely [that John said *t*]?
b. *What is [that John said *t*] unlikely?

- But we find it with CP objects also. Vicente (2005), for example, shows that, in Basque, movement of CP renders extraction impossible. CPs can surface both to the right and to the left of the verb (46a–b).

(46) *CPs occur on both sides of the verb in Basque:*

a. Jonek ez du uste [Mirenek liburua irakurri duenik].
Jon no AUX think Miren book read AUX.C
'Jon doesn't think that Miren read a book.'
b. Jonek ez du [Mirenek liburua irakurri duenik] uste.
Jon no AUX Miren book read AUX.C think
'Jon doesn't think that Miren read a book.'
(Basque; Vicente 2005:366)

- However, when a CP surfaces to the left of the verb (in what Vicente argues is an A-position), extraction of a *wh*-phrase from within that CP is blocked (47a–b).

(47) *Extraction from moved CP impossible in Basque:*

a. Zer ez du Jonek uste [Mirenek *t* irakurri duenik]?
what no AUX Jon think Miren read AUX.C
'What doesn't Jon think Miren has read?'
b. *Zer ez du Jonek [Mirenek *t* irakurri duenik] uste?
what no AUX Jon Miren read AUX.C think
'What doesn't Jon think Miren has read?'
(Basque; Vicente 2005:366)

- A similar pattern obtains in Dutch (Koster 1987).[8] CPs can undergo scrambling and appear left of the verb (48a), though they normally surface to the right (48b).

(48) *CPs may undergo scrambling in Dutch:*

a. Ik had [dat hij dat zou zeggen] niet verwacht.
I had that he that would say.INF not expected
'I had not expected that he would say that.'
b. Ik had niet verwacht [dat hij dat zou zeggen].
I had not expected that he that would say.INF
'I had not expected that he would say that.'

- When this happens, however, extraction from within the scrambled CP is blocked (49a–b).

[8] Our thanks to an anonymous NELS reviewer for pointing out the relevance of these facts, which formed the impetus for this part of the paper.

(49) *Extraction from scrambled CP impossible in Dutch:*

a. Wat had je niet verwacht [dat hij *t* zou zeggen]?
what had you not expected that he would say.INF
'What had you not expected that he would say?'

b. *Wat had je [dat hij *t* zou zeggen] niet verwacht?
what had you that he would say.INF not expected
'What had you not expected that he would say?'

- Such facts seem to suggest that movement of a CP is not compatible with extraction, which may be problematic for the current account.

However, extraposed clauses do not appear to pattern like other moved CPs:

- We see this already in the Dutch examples given above. DP objects ordinarily appear preverbally in Dutch. We could then take the peripheral position of CPs to be the result of extraposition. As (49a) shows, extraction from a final CP is grammatical.

- Similarly, in English, extraposition of CP does not block *wh*-movement (50).

(50) *Extraposition of CP does not block extraction in English:*
What did you say yesterday [that she wants to go do *t*]?

- In fact, there is some evidence that CP extraposition may even feed extraction. Taraldsen (1981) observes that relative clauses in Norwegian can be extracted from, but only if they are extraposed (51a–e).[9]

(51) *Relative clause extraposition feeds extraction in Norwegian:*

a. *Her er en bok som [ingen [$_{CP}$ som leser]] blir lykkelig.
here is a book that nobody that reads becomes happy
'Here is a book that nobody who reads it becomes happy.'

b. Her er en bok som [ingen] blir lykkelig [$_{CP}$ som leser].
here is a book that nobody becomes happy that reads
'Here is a book that nobody becomes happy who reads it.'

c. *Per slipper jeg ikke [noen [$_{CP}$ som liker]] inn.
Per let I not anybody that likes in
'Peter, I didn't let anybody who likes him in.

d. Per slipper jeg ikke [noen] inn [$_{CP}$ som liker].
Per let I not anybody in that likes
'Peter, I didn't let anybody in who likes him.'
(Norwegian; Taraldsen 1981:486)

Although we will not offer a theory of why extraposition differs from other types of movement in terms of freezing effects, it should be clear that the Dinka facts accord what we see in other languages:

Extraposition of CP is compatible with *wh*-movement of a phrase within it.

[9]Norwegian appears to not obey *wh*-islands, the presence of which presumably blocks such derivations in English.

Conclusion

In this talk, we have argued, on the basis of data from Dinka Nyarweng, that the syntax of long-distance extraction involves at least two components:

- Intermediate movement through the edge of *v*P/VP and the edge of CP (Chomsky 1986, 2000, 2001, 2008)

- Agreement between phase heads on the path of movement (Rackowski & Richards 2005; Den Dikken 2009, 2012a,b)

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.

Andersen, Torben. 2007. Auxiliary verbs in Dinka. *Studies in Language* 31: 89–116.

Andersen, Torben. 2012. Spatial roles and verbal directionality in Dinka. *Journal of African Languages and Linguistics* 33: 143–179.

Bošković, Željko. 2002. A-movement and the EPP. *Syntax* 5: 167–218.

Bošković, Željko. 2007. On the locality and motivation of Move and Agree: An even more minimal theory. *Linguistic Inquiry* 38: 589–644.

Cable, Seth. 2007. *The grammar of Q: Q-particles and the nature of wh-fronting, as revealed by the wh-questions of Tlingit*. Doctoral dissertation, MIT.

Cable, Seth. 2010. *The grammar of Q: Q-particles, wh-movement, and pied-piping*. Oxford, UK: Oxford University Press.

Chomsky, Noam. 1964. *Current issues in linguistic theory*. The Hague, Netherlands: Mouton.

Chomsky, Noam. 1977. On *wh*-movement. In *Formal syntax*, ed. by Peter Culicover, Tom Wasow, and Adrian Akmajian, 71–132. New York: Academic Press.

Chomsky, Noam. 1986. *Barriers*. Cambridge, MA: MIT Press.

Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.

Chomsky, Noam. 2000. Minimalist inquiries: The framework. In *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, ed. by Roger Martin, David Michaels, and Juan Uriagereka, 89–155. Cambridge, MA: MIT Press.

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

Chomsky, Noam. 2008. On phases. In *Foundational issues in linguistic theory: Essays in honor of Jean-Roger Vergnaud*, ed. by Robert Freidin, David Michaels, Carlos P. Otero, and Maria Luisa Zubizaretta, 133-166. Cambridge, MA: MIT Press.

den Dikken, Marcel. 2009. On the nature and distribution of successive-cyclicity. Paper presented at NELS 40, MIT.

den Dikken, Marcel. 2012a. The Phase Impenetrability Condition and successive cyclicity: A reconsideration. Paper presented at CLS 48, University of Chicago.

den Dikken, Marcel. 2012b. On the strategies for forming long A'-dependencies: Evidence from Hungarian. CUNY, Ms.

Frampton, John, and Sam Gutmann. 2000. Agreement is feature sharing. Manuscript, Northeastern University.

Hagstrom, Paul. 1998. *Decomposing questions*. Doctoral dissertation, MIT.

Hiraiwa, Ken. 2001. Multiple Agree and the Defective Intervention Constraint in Japanese. In *Proceedings of*

HUMIT 2000, 67–80. Cambridge, MA: MITWPL.
Kitahara, Hisatsugu. 1997. *Elementary operations and optimal derivations*. Doctoral dissertation.
Koster, Jan. 1987. *Domains and dynasties*. Dordrecht, Netherlands: Foris.
McCloskey, James. 2000. Quantifier float and *wh*-movement in an Irish English. *Linguistic Inquiry* 31: 57–84.
Müller, Gereon. 1998. *Incomplete category fronting: A derivational approach to remnant movement in German*. Dordrecht, Netherlands: Kluwer.
Preminger, Omer. 2011. *Agreement as a fallible operation*. Doctoral dissertation, MIT.
Rackowski, Andrea, and Norvin Richards. 2005. Phase edge and extraction: A Tagalog case study. *Linguistic Inquiry* 36: 565–599.
Richards, Norvin. 1998. The Principle of Minimal Compliance. *Linguistic Inquiry* 29: 599–629.
Rizzi, Luigi. 1997. The fine structure of the left periphery. In *Elements of grammar: Handbook of generative syntax*, ed. by Liliane Haegeman, 281–337. Dordrecht, Netherlands: Kluwer.
Wurmbrand, Susi. 2001. *Infinitives: Restructuring and clause structure*. Berlin: Mouton de Gruyter.

Appendix: On complementizers and V2

- In this appendix, we present some arguments for V2 being C-level in Dinka.

- First of all, the first position hosts an agreement particle *a*(*a*)- that is sensitive to clause type. It is always present in declaratives, with 3rd person XPs (52a–b).

(52) *3rd person XPs in first position trigger agreement:*

a. ɣɛ̀n cí mîir tíŋ.
I PRF giraffe see
'I saw a giraffe.'

b. Bɔ̀l **a**-cí wɛ̀u kwàl.
Bol **3SG**-PRF money steal
'Bol stole some money.'

- But it is absent in questions (53a), even when we have *wh*- in situ (53b):

(53) *First position agreement disappears in questions:*

a. Yeŋó cíi Bôl tíŋ?
what PRF.NS Bol.GEN see
'What did Bol see?'

b. ŋɔ̀r cí ŋó kuɛ́ɛn?
Ngor PRF what read
'What did Ngor read?'

- We can explain this if the first position is a specifier of a C head. We can say that there are two Cs, a declarative one with φ-features and an interrogative one without them. In contrast, if the first position is lower, we have no reason to expect agreement on it to be sensitive to clause type.

- In addition to this, Dinka has a Q-particle, in the sense of Hagstrom (1998) and Cable (2007, 2010). This Q-particle attaches to fronted *wh*-words. Spec-CP is the landing site for this *wh*-fronting, both in matrix and embedded questions (e.g. 54):

(54) *Wh-phrases target Spec-CP:*
ɣɛ̀n cí gá̤i̤ yeŋó̤ cíi Bô̱l tí̤ŋ.
I PRF wonder what PRF.NS Bol.GEN see
'I wonder what Bol saw.'

- Another sign that V2 is C-level comes from the fact that some complementizers block V2. This is true of the interrogative complementizers *men* ('whether') and *na* ('if') (55a–b).

(55) *Interrogative complementizers block V2:*
a. Majók a-gà̤i̤ [mèn/ná cí Dɛ̱̀ŋ lɔ̀ bâ̱a̱i].
Majok 3SG-wonder whether/if PRF Deng go home
'Majok wonders whether Deng went home.'
b. *Majók a-gà̤i̤ [mèn/ná Dɛ̱̀ŋ (a-)cí lɔ̀ bâ̱a̱i].
Majok 3SG-wonder whether/if Deng 3SG-PRF go home
'Majok wonders if Deng went home.'

- V2 satisfaction is optional under the complementizer *ye* (56).

(56) *Optional V2 with ye:*
A-cá̱ luéél, [ye bí Cà̤n wít tiá̱a̱m].
3SG-PRF.1SG say C FUT Can wrestling win.TR
'I said that Can will win the wrestling.'

- A final argument for V2 being C-level comes from the fact that only finite clauses that can have a complementizer show V2. Non-finite clauses are necessarily verb-initial (57).

(57) *Non-finite clauses lack V2:*
Bò̱l a-cíi Ayén lɔ̤̀ŋ [bí Adít jà̤l].
Bol 3SG-PRF Ayen encourage.TR FUT Adit.GEN leave
'(lit.) Bol encouraged Ayen for Adit to leave.'

- These clauses contain T-material, like the future auxiliary *bi* and lexical subjects, but not C-material, like complementizers or *wh*-words. If V2 is established at C, this follows.

- A question that arises then is why V2 can co-occur with complementizers at all (58a–b).

(58) *Complementizers may co-occur with V2:*
a. A-cá̱ tà̱a̱k, [ke Cà̤n bí wít tiá̱a̱m].
3SG-PRF.1SG think C Can FUT wrestling win.TR
'I think that Can will win the wrestling.'
b. A-cá̱ luéél, [ye Cà̤n a-bí wít tiá̱a̱m].
3SG-PRF.1SG say C Can 3SG-FUT wrestling win.TR
'I said that Can will win the wrestling.'

- We propose then that Dinka has an extended left periphery, along the lines of Rizzi (1997), with at least two C heads, the lower one of which determines V2 and is a phase head.[10] Those complementizers that block V2 optionally we take to show flexibility in where they can be merged.

[10] Whether the higher one is a phase head does not matter.