

Eliminating A/ \bar{A} -positions

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1 Introduction

1.1 Background

Natural languages display a large variety of **displacement effects**:

- A-movements like raising and passivization
- \bar{A} -movements like *wh*-movement and relativization
- head movement
- rightward movements like extraposition, right node raising
- scrambling
- intermediate movement steps of long-distance dependencies

Conjecture in much of Government & Binding and the Minimalist Program:
All movements involve the same syntactic mechanisms (i.e. Move α , Merge).

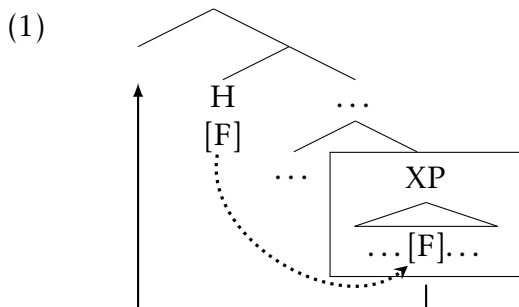
Research question: *How can a uniform syntax account for differences between movement types?*

1.2 This talk

In this talk, I focus on this question as it applies to the **A/ \bar{A} -distinction**.

A (fairly) standard view of the A/ \bar{A} -distinction

Movement involves a search operation for a feature F (Agree) and an application of (internal) Merge:



The positions targeted by (internal) Merge come in **two types**:


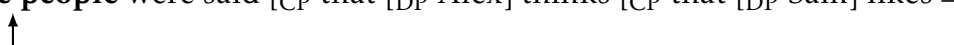
- **A-positions** (thematic positions, Spec-TP),
- and **\bar{A} -positions** (Spec-CP)

1.3 Properties associated with the A/ \bar{A} -distinction

Why are A- and \bar{A} -positions necessary?

Seven key differences between A- and \bar{A} -movement:

1. \bar{A} -movement can **cross intervening clauses and noun phrases**, A-movement cannot:

- (2) a. **Who** did [DP Kim] say [CP that [DP Alex] thinks [CP that [DP Sam] likes ___]]?

- b. ***Those people** were said [CP that [DP Alex] thinks [CP that [DP Sam] likes ___]].


2. A-movement is restricted to **nominals**, \bar{A} -movement is not:

- (3) a. *[AdvP Clearly] seemed ___ [CP that it was raining].
b. [AdvP How clearly] did it seem ___ [CP that it was raining]?
c. *[PP In the park] was lectured ___.
d. [PP Where] did Jess lecture ___?

3. \bar{A} -movement displays **pied-piping**, A-movement does not:

- (4) a. [PP To whom] did it seem ___ [CP that it was raining]?
b. *[PP To Kim] seemed ___ [CP that it was raining].
c. [NP [NP Whose] friend] ___ seems [to be smart]?
d. *[NP [NP My] friend] seem [___ to be smart].

4. \bar{A} -movement must **reconstruct for Principle C**, but A-movement does not:

- (5) a. *She_i dislikes that side of Alex_i.
b. *Which side of Alex_i does she_i dislike ___?
c. *It seems to her_i [that this side of Alex_i is well-hidden].
d. This side of Alex_i seems to her_i [___ to be well-hidden].

5. \bar{A} -movement displays **Weak Crossover**, but A-movement does not:

- (6) a. *Who_i did her_i friend see ___?
b. She_i seemed to her_i friend [___ to be sick].

6. A-movement provides **new antecedents for anaphors**, but \bar{A} -movement does not:

- (7) a. He_i seemed to himself_i [___ to be getting sick].
b. *Who_i did it seem to herself_i [that you should call ___]?

7. \bar{A} -movement can license **parasitic gaps**, but A-movement cannot:

- (8) a. Which book did you read ___ [after buying it]?
b. *Which book did you read it [after buying ___]?
c. Which book did you read ___ [after buying ___]?
(9) *That book was read ___ [after buying ___].

1.4 A featural approach to the A/ \bar{A} -distinction

Problems with A- and \bar{A} -positions:

- ▶ It remains unclear on what basis a position is classified as an A- or \bar{A} -position. Some well-known attempts:
 - Potential thematic positions vs. non-thematic positions (e.g. Chomsky 1981)
 - Adjunction vs. substitution (e.g. Stowell 1981; Mahajan 1990)
 - Positions before and after case is assigned
 - Phase edge vs. not on the phase edge (e.g. Chomsky 2008)
- ▶ It is not always obvious how to connect the differences between A- and \bar{A} -movement to properties of positions.

A featural view of the A/ \bar{A} -distinction

In this talk, I argue that the notion of A- and \bar{A} -positions is both **unnecessary** and runs into **empirical problems**.

1. *The A/ \bar{A} -distinction without A/ \bar{A} -positions*

I first argue that all the work in accounting for the A/ \bar{A} -distinction can be done through differences in the **Agree relation**:

- (10) **A featural approach to the A/ \bar{A} -distinction (Van Urk 2015):**
All differences between A- and \bar{A} -movement derive from independent properties of the *features* involved in Agree.

In particular, two main sources of differences between A- and \bar{A} -movement:

- (a) I propose that the A/ \bar{A} -distinction is reflected in the existence of **two types of features that trigger Merge**:
 - i. **A-features**, or φ -features, which are *obligatory* features of nominals,
 - ii. and **\bar{A} -features**, a class of *optional* features including *Wh*, *Top*, *Rel*, *Foc* (Rizzi 1990; Abels 2011)
- (b) In addition, I argue for a difference in the **LFs associated with A- and \bar{A} -movement chains**. Following Sauerland (1998) and Ruys (2000), I propose that \bar{A} -movement involves abstraction over **choice functions** and A-movement abstraction over **individuals**.

2. *Is the A/ \bar{A} -distinction universal?*

I show that, when multiple probes occur on the same head, they may sometimes be forced to **probe in unison** (e.g. Starke 2001; Coon and Bale 2014; Kotek 2014).

⇒ **Movement can be triggered by Agree for φ -features and \bar{A} -features at the same time.**

In such a system, movement would be associated with **both the benefits of \bar{A} -movement and of A-movement**:

- ▶ long-distance and capable of affecting information structure
- ▶ able to effect novel binding relations

Drawing on fieldwork data, I argue that this system is found in the **Nilotic language Dinka**.

2 Optional and obligatory features

I propose that the A/ \bar{A} -distinction reflects a distinction between **two types of movement-driving features**:

1. **A-features**, or φ -features, which are *obligatory* features of nominals,
2. and **\bar{A} -features**, a class of *optional* features including *Wh*, Top, Rel, Foc (Rizzi 1990; Abels 2011)

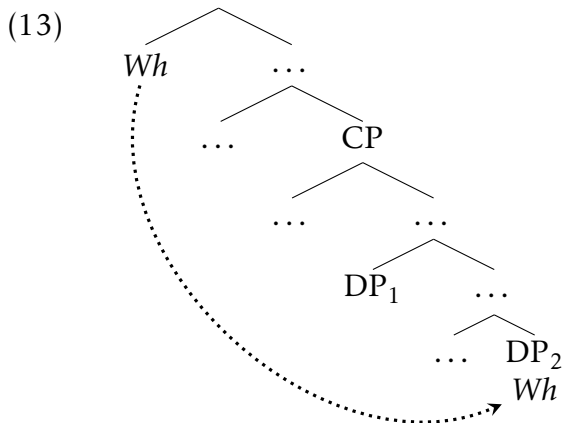
I suggest that this division is responsible for differences in **locality**, **restriction to nominals**, **pied-piping**, and **reconstruction for Principle C**.

2.1 Locality

Following much work, I adopt the idea that instances of phrasal movement obey **Relativized Minimality** (Rizzi 1990), or in Agree terms, **Attract Closest**:

- (11) *Relativized Minimality*:
A syntactic relation R must involve the closest XP capable of entering into R.
(Rizzi 1990 et seq; see also Starke 2001)
- (12) *Attract Closest*:
A probing feature F must attract the closest XP that bears F.

Relativized Minimality/Attract Closest provides a **featural** explanation of the long-distance nature of \bar{A} -movement. Features like *Wh* are **optional** features of phrases. As a result, if an intervening DP or CP lacks the feature *Wh*, Attract Closest will ignore it:

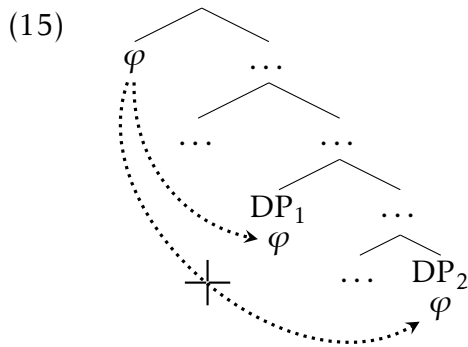


In accordance with Relativized Minimality, *wh*-movement can no longer cross over an intervening DP and CP if it is also interrogative (e.g. Ross 1967; Kuno and Robinson 1972):

- (14) a. ***Who** did **who** say [_{CP} that [_{DP} Alex] thinks [_{CP} that [_{DP} Sam] likes ___]]?
- b. ***Who** did Kim ask [_{CP} **whether** [_{DP} Sam] likes ___]?

In this view, the locality of \bar{A} -movement reflects independent properties of the **distribution** of \bar{A} -features.

Relativized Minimality also makes sense of the more **bounded** nature of A-movement. If A-movement is driven by φ -features, and φ -features are **obligatory** features of nominals, then such features cannot be absent on intervening DPs (15).



The locality difference results only from properties of the probing feature: features that trigger A-movement are **obligatory** on intervening phrases, while features that establish \bar{A} -movement are **optional**.

How about the inability of A-movement to cross a finite CP boundary?

- (16) *A-movement cannot cross finite CP:*
- a. *She seems [_{CP} __ is certain to be smart].
 - b. Who does it seem [_{CP} __ is certain to be smart]?

Rackowski and Richards (2005) & Halpert (2012, 2015):

The contrast in (16a–b) arises because **CPs are also targets for φ -probing**.

In Halpert (2012, 2015), finite CPs are effectively “**defective**” targets for φ -probing. Languages resort to a variety of solutions to overcome this:

1. Merge of an **expletive** that moves on behalf of the CP:

(17) **It** seems [_{CP} that she is certain to be smart].

2. Merge of a (**covert**) **DP shell** around the CP, as in Hartman (2012), that allows it to move:

(18) [_{DP} \emptyset [_{CP} That she is smart]] seems certain.

3. **Multiple Agree**, allowing the φ -probe to target an additional goal, in languages in which DPs *can* raise out of finite CPs (so-called “hyperraising”):

(19) *Hyperraising in Zulu:*

- a. uZinhle u-bonakala [ukuthi u-zo-xova ujeqe]
 1Zinhle 1-seems that 1-FUT-make 1steamed.bread
 ‘It seems that Zinhle will make steamed bread.’
- b. uZinhle ku-bonakala [ukuthi u-zo-xova ujeqe]
 1Zinhle 17-seems that 1-FUT-make 1steamed.bread
 ‘It seems that Zinhle will make steamed bread.’
 (Zulu; Halpert 2012:19)

2.2 Restriction to nominals and pied-piping

Recall that A-movement is **limited to nominals** (and perhaps CPs) and **lacks pied-piping**:

- (20) *Only \bar{A} -movement displays pied-piping and moves non-nominals:*
- *[_{AdvP} Clearly] seemed ___ [_{CP} that it was raining].
 - [_{AdvP} How clearly] did it seem ___ [_{CP} that it was raining]?
 - [_{PP} To whom] did it seem ___ [_{CP} that it was raining]?
 - *[_{PP} To Kim] seemed ___ [_{CP} that it was raining].

The restriction to nominals follows from the idea that A-movement is triggered by φ -features, which plausibly only appear in the extended projections of nouns.

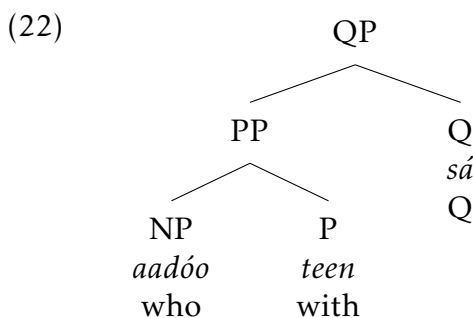
What about pied-piping?

I propose that the difference in pied-piping has the same source as the difference in locality, namely the fact that \bar{A} -features are **optional** and φ -features **obligatory**. This explanation uses of Cable's (2007, 2010) approach to pied-piping, which I briefly review here.

Cable (2007, 2010): Pied-piping is illusory! In a number of languages, fronting *wh*-phrases are accompanied by a particle that marks the pied-piped phrase, **the Q particle**.

- (21) a. [[**Aadóo** yaagu] **sá**] yigoot?
 who boat **Q** you.saw
 'Whose boat did you see?'
 b. [[[_{CP} **Wáa** kligéiyi] xáat] **sá**] i tuwáa sigóo?
 how is.big.REL fish **Q** you.want
 'A fish that is how big do you want?'
 (Cable 2007; Tlingit)

Cable proposes that *wh*-movement is actually always **movement of a phrase headed by Q** (22), where Q requires a *wh*-phrase in its scope.



In this view, the availability of pied-piping reflects the fact that Q can merge in **different places**:

- (23) *Pied-piping reflects variable merge of Q:*
- [_{QP} Q [_{DP} which person]] did you give the ball [_{PP} to ___]?
 - [_{QP} Q [_{PP} to which person]] did you give the ball ___?

An important consequence: In Cable's approach, pied-piping requires *flexibility of Merge site*. Suppose that φ -features, because they are obligatory, must always be merged in the same position, in a fixed position in the extended nominal projection.

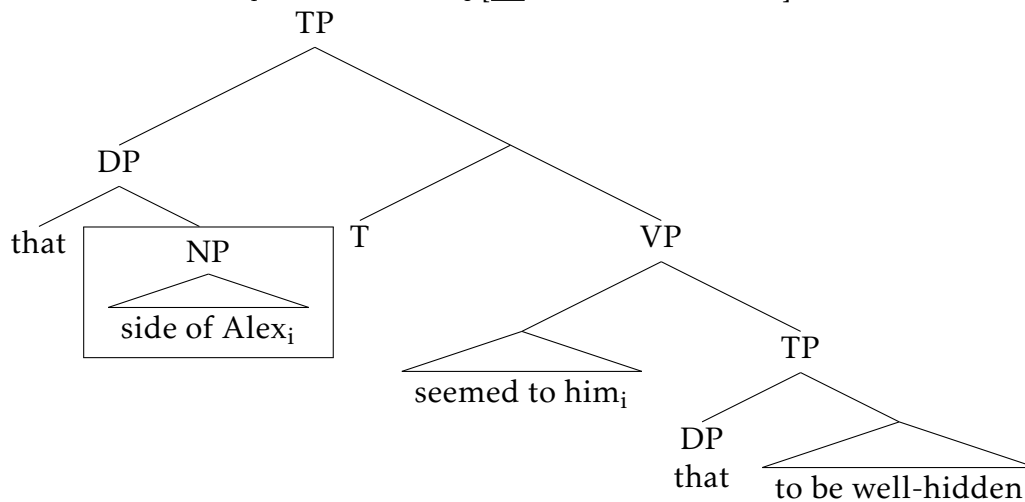
2.3 Reconstruction for Principle C

\bar{A} -movement, but not A-movement, displays **obligatory reconstruction for Principle C**.

- (24) a. That side of Alex_i seemed to her_i [__ to be well-hidden].
 b. *Which side of Alex_i does she_i dislike __?

I adopt Takahashi and Hulse's (2009) notion of *Wholesale Late Merger* (WLM), according to which NPs (in addition to adjuncts) can undergo Late Merge. This means that an A-movement example like (25a) can have the derivation in (25b).

- (25) *Wholesale Late Merger in A-movement:*
 a. That side of Alex_i seemed to her_i [__ to be well-hidden].
 b.



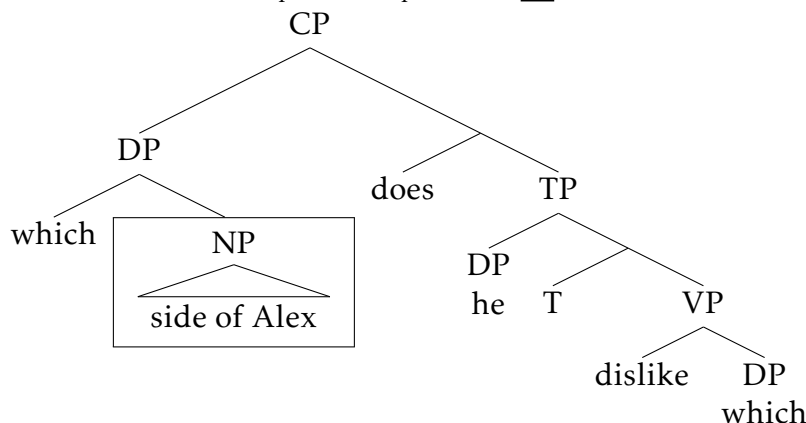
Note about constraints on Late Merge:

Takahashi and Hulse (2009) argue that Wholesale Late Merger is possible because Fox's (1999) Trace Conversion will apply to the lower copy and render it interpretable (specifically by inserting an NP restrictor $\lambda y.y=x$, where x is bound by the higher copy).

Why is there no Wholesale Late Merger in \bar{A} -movement?

Takahashi and Hulse: NPs introduce a **Case feature** that must be valued. This means the latest that WLM can apply is in a **Case position**. This rules out (26b).

- (26) *Derivation of \bar{A} -movement with WLM:*
 a. *Which side of Alex_i does he_i dislike __?
 b.



If correct, the pattern of reconstruction for Principle C arises because φ -features play a role in case assignment (e.g. Kornfilt and George 1981; Chomsky 2000, 2001).

3 On the interpretation of A- and \bar{A} -movement chains

In addition to this featural difference, I argue for a difference in the LFs of A- and \bar{A} -movement chains:

- ▷ Following Sauerland (1998) and Ruys (2000), I propose that \bar{A} -movement quantifies over **choice functions**
- ▷ A-movement, however, is accompanied by abstraction over **individuals**

I show that this difference accounts at least for **Weak Crossover** and **parasitic gap licensing**.

Important: In principle, different types of abstraction could equally well be linked to **positions**. I will present evidence, however, that linking this idea to positions makes incorrect predictions!

3.1 Weak Crossover

A-movement differs from \bar{A} -movement (and QR) in that Weak Crossover effects are absent:

- (27) *\bar{A} -movement does not obviate WCO:*
- a. *Her_i friend saw every girl_i.
 - b. *Who_i did her_i friend see ___?
 - c. Every girl_i seemed to her_i friend [___ to be the smartest].

Sauerland (1998) & Ruys (2000): WCO effects arise because all quantifiers quantify over *choice functions*, not *individuals* (see also Abels and Martí 2010, 2011).

Wh-in situ in Reinhart (1992, 1998)

Sauerland and Ruys are building off the treatment of *wh*-in situ in Reinhart (1992, 1998), which has two components:

1. The *wh*-phrase denotes a **choice function variable**, which takes a set and returns an individual
2. **Existential closure** over choice functions at the interrogative C

- (28) *In situ wh-word in Reinhart (1992):*
- a. C_Q ... which book ...
 - b. $\lambda p. \exists f(p = \lambda w \dots f(\text{book}) \dots \text{in } w)$

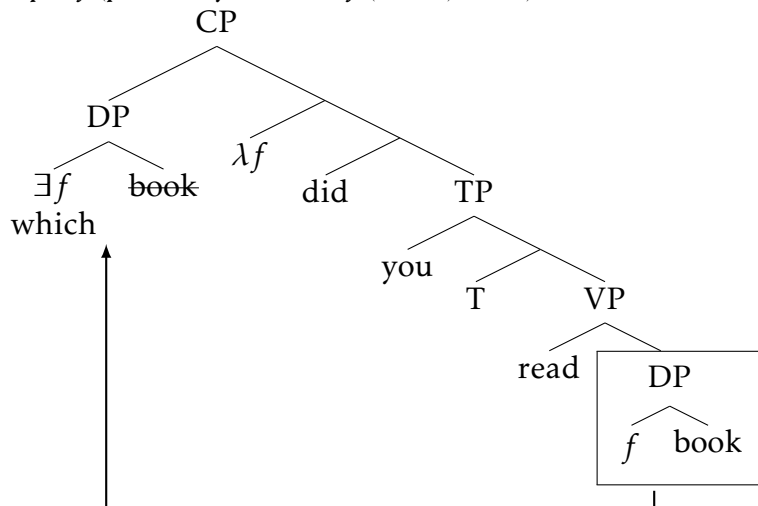
Sauerland and Ruys generalize this semantics to instances of *wh*-movement, treating fronting *wh*-phrases as existential quantifiers over choice functions.

To arrive at the correct LF, we need two more operations:

1. *Which* in the lower copy is **converted to a choice function variable** and abstracted over
2. The NP restrictor in the higher copy is **deleted**

(29) *Semantics of wh-movement in Sauerland (1998) and Ruys (2000):*

- a. Which book did you read?
- b. $\lambda p.\exists f(p = \lambda w.\text{you read } f(\text{book}) \text{ in } w)$
- c.



Choice functions predict Weak Crossover: If pronouns never denote variables over choice function, then *wh*-movement cannot bind a pronoun: it simply involves abstraction of the *wrong type*. In contrast, A-movement always involves abstraction over **individuals** and so can create novel binding relations.

A rule for interpreting \bar{A} -chains:

Generalizing this, I propose that all movement triggered by an \bar{A} -feature makes use of this type of abstraction, so that a rule like (30) applies at LF:

(30) Interpretation rule for \bar{A} -chains:

In a movement structure formed by Agree for an \bar{A} -feature, adjoin a node λf to the probing head.

See Sauerland (1998), Ruys (2000), and Abels and Martí (2010, 2011) for more detail about how to generalize the use of choice functions to other instances of \bar{A} -movement.

Weakest Crossover

Some support for this approach comes from Weakest Crossover. As Lasnik and Stowell (1991) observe, topicalization does not seem to create a Weak Crossover effect (31).

(31) *No Weak Crossover with topicalization:*

This book_i, I expect its_i author to buy __.

However, this is only true if simple coreference is possible. Postal (1993) notes that quantificational DPs *do* induce Weak Crossover when they topicalize (32a–b).

(32) *Topicalization of quantificational DP is subject to WCO:*

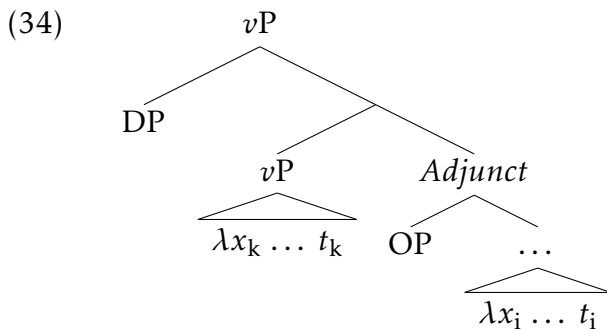
- a. Every other girl_i, Alex claims __ likes her_i mother.
- b. *Every other girl_i, Alex claims her_i mother likes __.

3.2 Parasitic gaps

A well-known difference between A- and \bar{A} -movement is that only instances of \bar{A} -movement are capable of licensing **parasitic gaps** (33a–b).

- (33) *A-movement does not license parasitic gaps:*
- What did Kim file $_$ [after grabbing $_$]?
 - *The paper was filed $_$ [after grabbing $_$].

Nissenbaum (2000): Parasitic gaps are the result of **predicate conjunction**, involving two predicates formed by λ -abstraction:

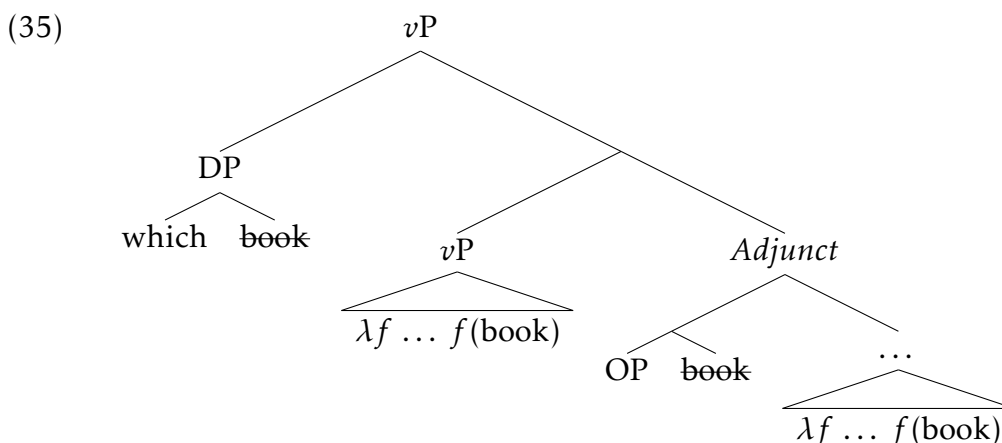


A problem of this analysis: *Why can't A-movement license parasitic gaps?*

A choice function analysis of parasitic gaps

Choice functions provide a possible answer: *because it forms a different predicate!*

If operator movement, like other instances of \bar{A} -movement, creates abstraction over choice functions, then parasitic gaps must involve **conjunction of predicates over choice functions** and not individuals:



Important assumption: To ensure that the operator picks out the same individual, an NP restrictor must move along with the null operator OP and undergoes *deletion under matching* (cf. Carlson 1977; Sauerland 1998).

In this approach, A-movement cannot license parasitic gaps for the same reason it does not trigger Weak Crossover: *because it creates abstraction over individuals!*

3.3 Depictives

A prediction of a choice function analysis: We should find instances of predicate conjunction licensed *only by A-movement*.

Pylkkänen (2008) on depictives

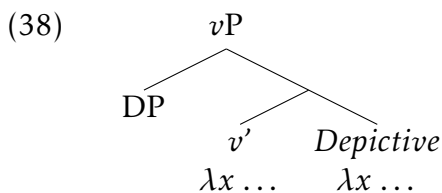
Depictives can describe subjects as well as direct objects, but cannot modify indirect objects or complements of prepositions (36a–b).

- (36) *Depictives do not modify indirect objects or objects of prepositions:*
- Sam_i gave Ted_k coffee drunk_{i/*k}.
 - Sam_i danced with Ted_k drunk_{i/*k}.

As Pylkkänen (2008) observes, (intermediate) A-movement, but *not \bar{A} -movement*, can license a depictive:

- (37) *A-movement creates novel interpretations for depictives:*
- Ted_k was danced with __ drunk_k.
 - Ted_k turned out [TP __ to have been told __ all the secrets drunk_k].
 - *Who_k did Sam dance with __ drunk_k?

Pylkkänen 2008: Depictives are <e,st> predicates (see also Geuder 2000), which attach to *v'* and trigger **predicate conjunction**:



As in Nissenbaum's treatment of parasitic gaps, the <e,st> predicate denoted by the *vP* can be **formed by intermediate movement** (necessary for (37b)).

This is evidence that:

- Both A-movement and \bar{A} -movement involve intermediate movement
- Both types of movement create predicates, but of a **different type**
- The predicates created by A-movement are of the same type as argument-introducing heads

Could we perhaps say that intermediate A- and \bar{A} -movement target different positions?

As Pylkkänen notes, parasitic gaps can be licensed **inside of a depictive** (39).

- (39) Which country did he die for __ [still loyal to __]?
(Pylkkänen 2008:40)

The difference then **cannot** be due to positions!

4 Composite probes and a prediction of a featural approach

I have shown that it is possible to build a theory of the A/ \bar{A} -distinction that makes no reference at all to a notion of A- and \bar{A} -positions, relying only on a featural difference.

In the remainder of this talk, I further show that there are languages in which a positional view runs into **empirical issues**.

A prediction of a featural approach:

A bunch of work has argued that two probing features which can in principle operate independently may sometimes **probe in unison** (e.g. Chomsky 2001; Pesetsky and Torrego 2001; Starke 2001; Bruening 2001; Haegeman 2013; Rezac 2013; Coon and Bale 2014; Kotek 2014; Deal 2015).

⇒ Movement can be triggered by Agree for φ -features and \bar{A} -features at the same time.

An illustration from person and number

It is usually hard to tell whether person and number probe together or separately.

BUT: Person and number may be relativized to specific features, yielding **omnivorous** agreement (Nevins 2007; Preminger 2011; Deal 2014).

- ▶ **Omnivorous person**, when a person probe skips over DPs that are not 1st or 2nd person. Found in Nez Perce complementizer agreement, for example (Deal 2015).

(40) *Complementizer agreement in Nez Perce favors [participant]:*

- ke-**m** kaa **pro**_{2SG} 'e-cew'cew'-teetu Angel-ne
c-2 then 3OBJ-call-TAM Angel-ACC
'When you call Angel, ...'
- ke-**m** kaa Angel-nim hi-cew'cew'-teetu **pro**_{2SG}
c-2 then Angel-NOM 3SUBJ-call-TAM
'When Angel calls you, ...'

- ▶ **Omnivorous number**, when a number probe skips over all singular DPs. Occurs in Kaqchikel Agent Focus (Preminger 2011):

(41) *Omnivorous number in Kaqchikel:*

- ja **rje'** x-e-tz'et-ö rja'
FOC **them** PRF-3PL-SEE-AF him
'It was them who saw him.'
- ja rja' x-e-tz'et-ö **rje'**
FOC him PRF-3PL-SEE-AF **them**
'It was him who saw them.'

A composite probe

We can use omnivorous agreement effects to show that person and number are sometimes forced to **probe in unison**. Coon and Bale (2014) discuss a pattern of Mig'maq subject agreement, which is omnivorous only with **plural participants**.

- ▶ No omnivorous effect with 3rd plural or 1st/2nd singular:

(42) Mu nem-i'li-w-g.
NEG see-1OBJ-NEG-3
'She doesn't see me.'

- ▶ But if a 1st/2nd pronoun is plural: *omnivorous agreement!*

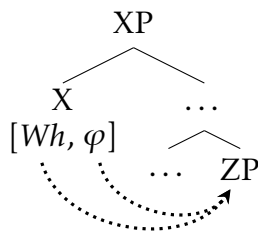
(43) Mu nem-ugsi-w-eg
NEG see-1OBJ.INV-NEG-1PL.
'He doesn't see us_{EXCL.}'

Coon and Bale: Person and number can form a *composite probe*, and select a target together.

A prediction for A and A'-movement

If two features on the same head can form a composite probes, we might find a composite probes made up of φ -features and A'-features:

(44) A composite A/ \bar{A} -probe:



If A- and \bar{A} -properties derive only from properties of the features, such movement should display both the benefits associated with **A'-movement**...

- ▶ long-distance
- ▶ have repercussions for information structure

... and those associated with **A-movement**:

- ▶ visible for φ -agreement and case assignment
- ▶ feed binding relationships
- ▶ No reconstruction for Principle C

5 Movement in Dinka

In my thesis, I argue that this happens in Dinka (Nilotic; South Sudan).

I develop this argument in two parts:

- ▶ Long-distance movement is always accompanied by φ -agreement and case assignment
- ▶ Long-distance movement behaves like A-movement for binding

5.1 V2 and voice in Dinka

Some background on Dinka (Thuɔŋjäŋ):

- ▶ Nilotic (Nilo-Saharan)
- ▶ one of the main languages of South Sudan
- ▶ spoken by about 4 million people
- ▶ Five dialect groups
- ▶ Diaspora communities all over the US (“Lost Boys/Girls of South Sudan”)
- ▶ All data here from Bor dialect, collected in Boston community

Dinka is a **verb-second** (V2) language.

- (45)
- | | | |
|----|---|----------------------|
| a. | Àyén à- càm cuïin nè pǎal.
Ayen 3s- eat food P knife
‘Ayen is eating food with a knife.’ | <i>Subject-first</i> |
| b. | Cuïin à- céem Áyèn nè pǎal.
food 3s- eat.ov Ayen.GEN P knife
‘Food, Ayen is eating with a knife.’ | <i>Object-first</i> |
| c. | Pǎal à- céemè Áyèn cuïin.
knife 3s- eat.oblv Ayen.GEN food
‘With a knife, Ayen is eating food.’ | <i>Oblique-first</i> |

V2 is accompanied by **Austronesian-style voice morphology**. As in many Austronesian languages, the initial XP is always a **DP in the unmarked case**, with its grammatical function indicated on the V2 verb/auxiliary.

- (46)
- | | | |
|----|--|----------------------|
| a. | Pǎal à- bé dhuôoŋ.
knife 3s- prf break.itr.nf
‘The knife will break.’ | <i>Subject Voice</i> |
| b. | Pǎal à- bii Bôl dhôoŋ.
knife 3s- prf.ov Bol.gen break.nf
‘The knife, Bol will break.’ | <i>Object Voice</i> |
| c. | Pǎal à- bènè Áyèn cuïin câam.
knife 3s- prf.oblv Ayen.gen food eat.nf
‘With a knife, Ayen will eat food.’ | <i>Oblique Voice</i> |

What does long-distance movement look like in this system?

5.2 Long-distance movement in Dinka

Dinka has two types of **long-distance movement**, topicalization (47a), and relativization (47b):

(47) *Topicalization and relativization in Dinka:*

- a. **Cụịin** à-yàa tàak [CP kè cém Áyèn —].
food 3S-HAB.1SG think.NF C eat.OV AyeN.GEN
 ‘The food, I think AyeN is eating.’
- b. Yè **ḡà** [CP Op yá tàak [CP cíi Bòl — ṭịịŋ]]?
 be **who** HAB.2SG think.NF PRF.OV Bol.GEN see.NF
 ‘Who do you think Bol has seen?’

- ▶ Like in Germanic V2 languages, what I call topicalization marks a variety of things, including an aboutness topic, given topic, and answer focus
- ▶ Relativization is used to form relative clauses and *wh*-clefts, as in (47b)

At first glance, this is familiar **long-distance \bar{A} -movement**:

1. Familiar consequences for information structure
2. Can cross intervening CPs and DPs
3. Island-sensitive

(48) *Relative clauses are islands for extraction:*

- a. Áyèn à-cé [DP r̄aan [CP m̄er **tòony**]] ṭịịŋ.
 AyeN 3S-PRF person.CS decorate **pot** see.NF
 ‘AyeN has seen someone who is decorating a pot.’
- b. *Yè **ḡó** [CP Op cíi Áyèn [DP r̄aan [CP m̄er —]] ṭịịŋ]?
 be **what** PRF.OV AyeN.GEN person.CS decorate see.NF
 ‘(lit.) What has AyeN seen someone [who is decorating —]?’
- c. ***Tòony** à-cíi Áyèn [DP r̄aan [CP m̄er —]] ṭịịŋ.
pot 3S-PRF.OV AyeN.GEN person.CS decorate see.NF
 ‘(lit.) A pot, AyeN has seen someone who is decorating —.’

4. Displays reconstructions effects

(49) *Reflexive reconstructs for binding:*

- a. **Ròt-dé_i** à-cè_i — nhiâar.
self-SG.3SG 3S-PRF.3SG love.NF
 ‘Herself/himself, she/he has loved.’
- b. **Ròt-dé_i** à-yùukù tàak [CP è cè_i — nhiâar].
self-SG.3SG 3S-HAB.1PL think.NF C PRF.3SG love.NF
 ‘Herself/himself, we say that she/he has loved.’
- c. **Ròt-dé_i** à-cè_i tàak [CP è cùukù — nhiâar].
self-SG.3SG 3S-PRF.3SG think.NF C PRF.1PL love.NF
 ‘Herself/himself, she/he has thought that we have loved.’

5. Reflexes of successive cyclicity (Van Urk and Richards 2015)

5.3 Agreement, case, and long-distance movement

However, all movement in Dinka co-occurs with case assignment and φ -agreement.

Agreement:

A prefix on V2 verb/auxiliary expresses person and number of the initial DP:

(50) *Agreement on V2 verb/auxiliary:*

- a. Y̱in Ø-cé m̱ir ṯiŋ.
you 2-PRF giraffe see.NF
'You have seen a giraffe.'
- b. Mòc à-cé y̱in ṯiŋ.
man 3s-PRF you see.NF
'The man has seen you.'
- c. Ròor áa-cé y̱in ṯiŋ.
men 3P-PRF you see.NF
'The men have seen you.'

Agreement tracks the **initial DP**, not the subject:

(51) *Topicalization feeds agreement:*

- a. Y̱in Ø-c̱i m̱òc ṯiŋ.
you 2-PRF.OV man.GEN see.NF
'You, the man has seen.'
- b. M̱ir à-càa ṯiŋ.
giraffe 3s-PRF.1SG see.NF
'A giraffe, I have seen.'
- c. Mièer áa-càa ké ṯiŋ.
giraffes 3P-PRF.1SG 3PL see.NF
'Giraffes, I have seen.'

This is true regardless of distance and we see the same agreement in relative clauses:

(52) *Relativization triggers φ -agreement at C:*

- a. Yè ḵòc-kó [CP Op é-kè-thèt]?
be people.cs-which.PL PST-3P-cook
'Which people were cooking?'
- b. Yè ḵòc-kó [CP Op é-kè-c̱i Áyèn ké gàam gàlám]?
be people.cs-which.PL PST-3P-PRF.OV Ayen.GEN 3PL give.NF pen
'Which people had Ayen given a pen to?'
- c. Ye ḵòc-kó [CP Op é-kè-yá ké tàak [CP é-kè-c̱i Áyèn
be people.cs-which.PL PST-3P-HAB.2SG 3PL think.NF PST-3P-PRF.OV Ayen.GEN
ké gàam gàlám]]?
3PL give.NF pen
'Which people did (s)he think that Ayen had given a pen to?'

Case assignment

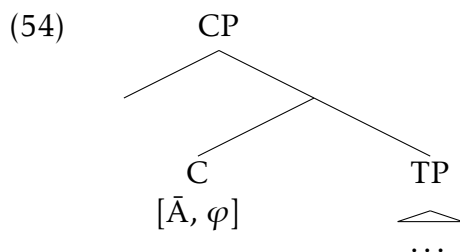
The initial DP is always in the **unmarked case**. This creates **case alternations**, with subjects and PPs. For example, subjects are genitive when not initial (53a–b).

(53) *Case alternation with subjects:*

- a. Àyén a-cé cùin câam nè pǎal.
 Ayen 3S-PRF food eat.NF P knife
 'Ayen has eaten food with a knife.'
- b. Cùin a-cíi Àyèn câam nè pǎal.
 food 3S-PRF.OV Ayen.GEN eat.NF P knife
 'Food, Ayen has eaten with a knife.'

I treat this as **case assignment**, triggered by φ -agreement (e.g. George and Kornfilt 1981; Chomsky 2001).

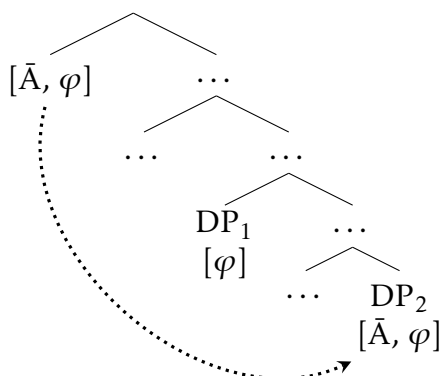
A composite probe on C I propose that, in Dinka, the probe driving \bar{A} -movement is on the same head as a φ -probe (which I take to be C here). In addition, the two form a **composite probe**:



Predictions of a featural approach

Movement driven by a composite A/ \bar{A} -probe should...

1. Behave like \bar{A} -movement for locality:



2. Behave like A-movement for:

- The restriction to nominals and pied-piping
- No obligatory reconstruction for Principle C (because WLM is delimited by case assignment)
- No Weak Crossover (if the availability of abstraction over individuals is tied to the features triggering movement)

5.4 Long-distance movement and binding

1. Long-distance movement fails to display Weak Crossover:

- (55) a. **Mòc ébén_i** à-yíi tíiŋ-dè_i luééel, [CP è ___ thèt].
man every 3S-HAB.OV woman-SG.3SG say.NF C cook
 ‘Every man_i, his_i wife says is cooking.’
- b. Yè **ŋà** [CP Op yíi tíiŋ-dè_i luééel [CP è níhiér Bòl ___]]?
 be **who** HAB.OV wife-SG.3SG say.NF C love.OV Bol.GEN
 ‘Who does his wife say Bol loves?’

2. Long-distance movement fails to reconstruct for Principle C:

- (56) a. [DP Mánh è **Máyèn kù Àyén_i**] à-yùükù tàak [CP **cìikè_i** ___ tîiŋ].
 brother P **Mayen.GEN and Ayen** 3S-HAB.1PL think.NF **PRF.3PL** see.NF
 ‘The brother of Mayen and Ayen_i, we think they_i have seen.’
- b. Yè [DP mánh-ó è **Máyèn kù Àyén_i**] [CP Op yùükù tàak [CP **cìikè_i** ___ tîiŋ]]?
 be [DP brother-which P **Mayen.GEN and Ayen** HAB.1PL think.NF
PRF.3PL see.NF
 ‘Which brother of Mayen and Ayen_i do we think have they_i seen?’

3. Long-distance movement can provide new antecedents for anaphors:

- (57) a. **Bòl_i** à-cíi [DP àkékòol-tí è **ròt-dè_i**] ___ piòòlic.
Bol 3S-PHF.OV story-that P **self-SG.3SG** criticize.NF
 ‘Bol, that story about himself has criticized.’
- b. **Bòl_i** à-cíi [DP thùrá è **ròt-dè_i**] nyòòth [CP kè cùükù ___ tîiŋ].
Bol 3S-PHF.OV picture P **self-SG.3SG** show.NF C **PRF.1PL** see.NF
 ‘Bol, a picture of himself has shown that we have seen.’

Caveat: Dinka anaphors display Strong Crossover (*cf.* Rizzi 1986; McGinnis 2004)

A/A'-properties are properties of *features*, not of *positions*.

Other systems like Dinka

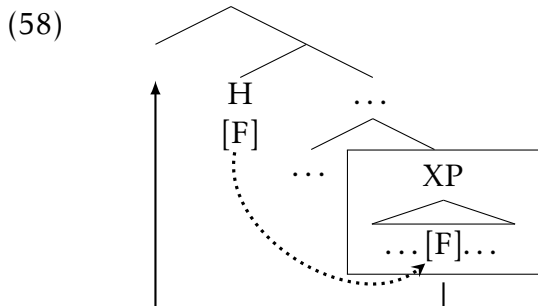
Dinka is not the only language in which long-distance movement has A-properties:

- ▶ In many Austronesian languages, all movement affects case and there is a long-standing debate about the status of A- and \bar{A} -movement (e.g. Guilfoyle, Hung, and Travis 1992; Richards 2000; Pearson 2001, 2005)
- ▶ In many Bantu languages, movement is restricted to nominals and co-occurs with changes in φ -agreement (e.g. Kinyalolo 1991; Carstens 2003; Henderson 2006)

See Van Urk (2015) for more discussion.

6 Concluding remarks

I have argued for a **featural theory of the A/ \bar{A} -distinction**, which **eliminates the notion of A/ \bar{A} -positions**.



In this theory, all phrasal movement involves the steps in (58), with all differences residing only in the **identity of [F]**.

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