

We need: a theory of case positions:

(10) No case-licensed position in unaccusative VP or in AP (on conventional assumptions)

- a. *It seems Mary to have solved the problem.
- b. *Mary is aware Bill to be the best candidate.

We need: a Last Resort principle

English R2 and R1 possible only from a reduced clause, i.e. one that lacks a CP layer and is infinitival.

- **Standard proposal:** A-movement (including movement to an R1 or R2 position) is possible only if failure to move would violate the Case Filter.

2. Two approaches to clause type and size

Some presuppositions of the standard approach

Standard lexicalist view of the past four decades (Kiparsky & Kiparsky 1970, Bresnan 1972)

- The finiteness of a clause and presence/absence of C is a result of the lexical items freely chosen to participate in the derivation that built that clause (the *Lexical Array*).
- For example: if [\pm Past] and C do not form part of the Lexical Array chosen to build a particular clause, the result will be a reduced infinitive. Conversely, if [\pm Past] and C are chosen, the result will be a full finite CP.

How the previous section's puzzles look from the standard lexicalist perspective

- Given that the derivation has built an infinitive, how does the system solve the problems that follow from having chosen to build an infinitive?
- *For example:* The subject of an English infinitive has a licensing problem that can be solved (only) if an R1 or R2 probe successfully locates it, so that that movement and case-licensing becomes possible. This is possible only across a reduced infinitival clause boundary (but not across an unreduced one), due to ...

An alternative view

- Abandon the assumption that infinitives and reduced clauses are "born, not made".
- The interaction between a higher probe (R1, R2 or \bar{A}) and an embedded subject *precedes* the differentiation of the embedded clause into finite vs. non-finite, full vs. reduced, etc. — and *triggers* its reduction to an infinitive.
- Specifically, probing of an embedded subject by a clause-external probe *triggers the deletion of the C and T layers of the clause, creating a reduced infinitive from what would otherwise be a full finite CP.*

Premises of the alternative view

(11) Probing across a clause boundary

- a. **Phase penetrability:** A probe π with an EPP property can locate a goal γ across a CP boundary, even if γ does not occupy the edge of that CP...
- b. **Phase impenetrability:** ...but γ can move to π **only if occupies the edge of CP.**

(12) Anti-locality

Movement to the edge of CP must cross a phase boundary.¹
 (cf. Saito & Murasugi 1998; Bošković 1994; Ishii 1999; Grohmann 2003, Erlewine 2015)
 ($\rightarrow \checkmark$ spec,vP to spec,clauseP, *movement to spec,clauseP from outside vP)

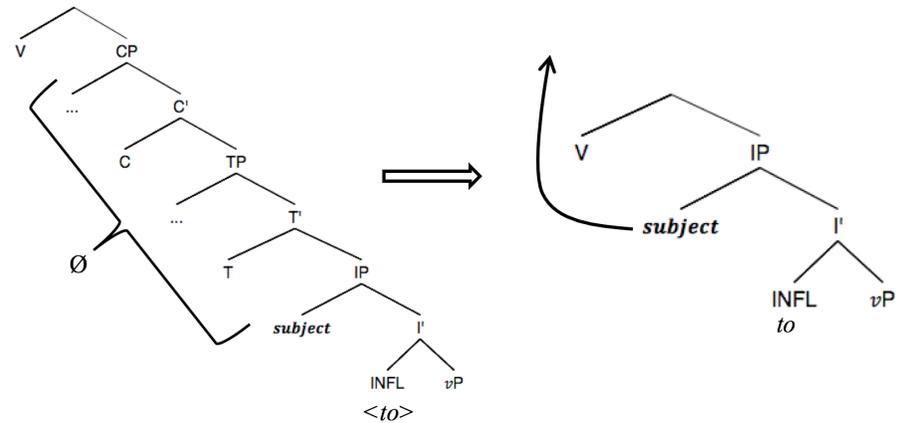
(13) Exfoliation

Structural Description: [_{WP ... β ... [_{YP ... [_{γ P ... α ...]}]]], where WP and YP are adjacent phases, and γ P is not a phase.}}

Structural Change: Replace YP with γ P

Last Resort Property: Applies only if necessary to enable Merge(β , α) without violating Phase Impenetrability.

(14) Example: infinitive-forming exfoliation triggered by an R2 probe on V



Necessary assumption (I hope to do better someday):

to is the head of "IP" — and is overt only when T is absent.

¹ *Improvement (no time):* "Movement to the edge of a phase from a non θ -position must cross a phase boundary." — which reduces to a "lethal ambiguity" condition on probing.

History

- **The alternative view is actually a modernization of the one of the oldest proposals in generative grammar** (Rosenbaum 1965, 1967) — according to which the Raising rules are responsible for the infinitivization of the clause from which Raising applies.
- **Model of grammar presupposed by Kiparsky & Kiparsky (1970)/Bresnan (1972)**
 - basic structure-building (the *base component*) and *syntactic selection* precedes all instances of movement and deletion, yielding *Deep Structure*
 - semantic interpretation applies to *Deep Structure*.
- **K&K/B's arguments against the older proposal...**
 - **Predicates select for different clause-types**, so clause-types must already be differentiated at Deep Structure, and clause-type choice cannot be triggered by movement.
 - **Choice of clause type has semantic implications**, so clause-types must already be differentiated at Deep Structure so the semantics can distinguish them.
"The error [of previous approaches] is that different types of complements (*that*-clauses, gerunds, infinitives) have all been assumed to have the same deep structure, and hence to be semantically equivalent." (K&K, 172)
- **... but these arguments no longer distinguish the proposals in a model without Deep Structure**, where selection and semantic interpretation are interspersed with Internal and External Merge. So it worth reopening the questions generally considered to have been settled by K&K/B.

3. Argument 1: Surprising Case Filter-like effects on non-nominal subjects

- **A case-theory paradox:** A CP that does not need case as the complement of A, N or an unaccusative/passive verb seems to need it in subject position. A CP (that has not undergone R1 or \bar{A} movement) may be the subject of an infinitival (*for*-less) clause only in an R2 environment.
- (15) **A CP complement does not need to be case-licensed elsewhere...**
- a. We are sure [that the world is round].
*We are sure *(of) the world's roundness.*
 - b. my proof [that the world is round]
*my proof *(of) the world's roundness*
 - c. They assured us [that the world is round].
*They assured us *(of) the world's roundness.*
 - d. It was proved [that the world is round].
**It was proved the world's roundness.*

- (16) **...but (viewed from a traditional perspective) a CP subject does**
- a. I consider [that the world is round] __ to be a tragedy. (✓ R2)
 - b. [That the world is round] seems __ to be a tragedy. (✓ R1)
 - c. [That the world is round] I believe __ to be a tragedy. (✓ \bar{A} -movement)
 - d. *Mary was assured [that the world is round] to be a tragedy.
 - e. *It is likely [that the world is round] to be a problem.

- **Solved in the Exfoliation approach:** The embedded clause does not become an infinitive unless its subject raises out of it — *regardless of its syntactic category*.

(17) **Positions to which an embedded subject may be extracted in English**

- a. **low A-position (R2 probe):** Spec,VP for $V \in$ believe-class
- b. **high A-position (R1 probe):** Spec,vP; Spec,aP; or Spec,nP — usable as an intermediate landing site on the way to a case position in passive and unaccusative configurations if no intervener triggers a minimality problem.
- c. **high \bar{A} -position (\bar{A} -probe):** Spec,vP, Spec,aP, and Spec,nP

In (16a-c), the embedded subject has moved in response to an R2, R1 and \bar{A} -probe, respectively — but in (16d-e) there is no parse in which it has legally moved from its clause.

- **Popular alternative explanation for (15):** Subject clauses (or apparent subject clauses) are nominal or embedded in a nominal (Koster 1978; Alrenga 2005; among others), and show case-theoretic effects for that reason.

(18) **... but fronted predicates behave the same way...**

- a. I consider [even more important than linguistics] __ to be the fate of the planet.
- b. [Even more important than linguistics] seems __ to be the fate of the planet.
- c. [Even more important than linguistics] I believe __ to be the fate of the planet.
- d. *Mary was assured [even more important than linguistics] to be the fate of the planet.
- e. *It is likely [even more important than linguistics] to be the fate of the planet.

(19) **... and fronted locatives in Locative Inversion ...**

- a. ?I consider [in this room] __ to be found the finest examples of Athenian sculpture.
- b. [In this room] seem __ to be found the finest examples of Athenian sculpture.
- c. [In this room] I believe __ to be found the finest examples of Athenian sculpture.
- d. *Mary was assured [in this room] to be found the finest examples of Athenian sculpture.
- e. *It is likely [in this room] to be found the finest examples of Athenian sculpture.

- **An Exfoliation generalization:** In (15)-(16) and (18)-(19), only when movement has taken place from an embedded subject or subject-like position is infinitivization possible.

4. Argument 2: Surprising absence of Case Filter effects on nominal subjects

Case and the subject of infinitives:

- On an Exfoliation approach to clause size, **the subject of an embedded infinitive has no case-licensing problem** — since its clause was a full finite CP until Exfoliation applied.

Exfoliation as a last resort:

- Since Exfoliation is a last resort, Exfoliation *only* applies to a clause when its subject (or other element in the upper clausal domain) undergoes movement. Untriggered infinitivization will yield unacceptability

- The previous section showed non-nominals that behave under the standard theory as if they anomalously require case. This section shows nominals that behave under the standard theory (at first glance) as if they anomalously do *not* need case — and argues against the proposal that case is assigned to them in a special way.

Setup: Configuration in which the subject σ of an embedded clause may not be accessed by an R2 ϕ -probe in the higher clause, either because:

- the higher clause lacks the R2 ϕ -probe, or
- an intervening nominal blocks contact between the R2 probe in the higher clause and σ .

From an Exfoliation perspective...

... the embedded clause in situations (a) and (b) may be infinitival only if a higher probe *other than R2* successfully extracts it from the embedded clause.

- In situation (a), the extractor could be either an R1 probe or an \bar{A} -probe.
- In situation (b), the extractor could only be an \bar{A} -probe, since the same Minimality considerations that would block the ϕ -probe R2 should block R1.

From a Lexicalist perspective without Exfoliation...

... in which infinitives are born rather than made, **situations (a) and (b) would both look like puzzles of case theory** — case-licensing of the embedded subject only if it undergoes \bar{A} -movement or R1.

Situation (a) instantiated (no R2 probe):

- (20) **English *wager*-class verbs (Postal 1974; Pesetsky 1991)**
- *We wagered Mary to be the most likely winner.
 - Mary, who we wagered to be the most likely winner...
 - Mary was wagered to be the most likely winner.

also: admit, affirm, announce, assert, avow, claim, conjecture, declare, decree, disclose, grant, guarantee, intimate, maintain, mumble, mutter, note, observe, posit, recollect, said, scream, shout, sight, state, stipulate, verify, whisper, yell, ...

The puzzle in a standard (post-K&K/B) world: *How is the embedded subject licensed?*

- (21) **Agent stipulation (Pesetsky 1991)** [traditional world]
If α assigns the θ -role *Agent*, α Case-marks β only if α θ -marks β .
- (22) **The work-around for (21)** [traditional world]
- The subject of an infinitival clause not licensed in situ due to (21) may be licensed in a higher position if it undergoes movement, and ...
 - ... an agentive verb does not license an R2 ϕ -probe.

The puzzle under Exfoliation: *Why did the embedded clause become an infinitive?*

- Since an infinitival clause is *created* only when its subject is extracted...
 - ... (22b) does all the work. Case issues concerning the embedded subject are irrelevant.
- (23) **Agent-R2 stipulation (=22b))**
An agentive verb does not license an R2 ϕ -probe.
(*more ambitiously:* Every A-position in an agentive *v*/VP must receive a θ -role.)
- (24) **Positions to which an embedded subject may be extracted in English**
- high \bar{A} -position (\bar{A} -probe)** in *v*P, *a*P, and *n*P
 - low A-position (R2 probe)** below *v* in non-passive *believe*-class *v*Ps
 - high A-position (R1 probe)** in *v*P and *a*P (and perhaps *n*P) — usable as an intermediate landing site on the way to a case position, in passive and unaccusative configurations where no ϕ -bearing nominal intervenes

Situation (a) instantiated in French and Italian

- (25) a. *Je croyais cet homme être arrivé.
I believed this man AUX.INF arrived
'I believed this man to have arrived.'
- b. l'homme que je croyais être arrivé...
the.man that I believed AUX.INF arrived
'the man that I believed to have arrived...'
- c. %Marie a longtemps été crue avoir résolu ce problème.
Marie AUX long.time been believe.FEM have solved this problem
(also 'consider', 'suppose', 'say', 'guess'...; Pollock 1984)
- (26) **French/Italian R2 stipulation**
French and Italian *believe*-class verbs lack an R2 ϕ -probe .

**Situation (b) instantiated (intervener between R2 probe and subject):
double-object ECM-ish verbs (*assure* etc.)**

- (27) **Double-object infinitive-taking verbs**
- *I assure you Mary to be the best candidate.
 - *Mary was assured you ___ to be the best candidate...
 - ✓ Mary, who I assure you ___ to be the best candidate... (Kayne 1984, xiii)

In a traditional, post-K&K/B world:

- **Premise:** the infinitival clause in (27b) is non-finite from the beginning.
- **Easy examples:** In (27a), the embedded subject needs case-licensing — and cannot receive it in the subject position of an infinitival clause because the indirect object intervenes (cf. **I assure you my sincerity*). In (27b), locality prevents the movement of *Mary* over *you*.
- **The challenging example:** In (27c), the moved embedded subject receives case in an intermediate landing site that it cannot receive *in situ*. (Kayne 1984; Pesetsky 1991; Rezac 2013)

But the powers and non-powers of the putative higher case assigner would have to be extraordinarily peculiar — in two ways:

- (28) **Puzzle 1: The putative case assigner is insensitive to category distinctions that otherwise matter for case.**
- passive:** Mary, who I've been assured to be the best candidate...
 - adjective:** Mary, who I am positive to be the best candidate...
Mary, who we're confident to be the best candidate...
 - noun:** %Mary, who I have a hunch to be the best candidate...
- (29) **Puzzle 2: The putative case assigner saves *only* nominals that have been extracted from the subject position of an infinitive. Extraction of a complement from a non-case position cannot be saved by this case assigner.**
- passive:** your honesty, which I've been assured *(of) ...
 - adjective:** Mary, who I am positive *(about)...
Mary, who we're confident *(of)...
 - noun:** Mary, who I have a hunch *(about)...

The Exfoliation alternative

- (30) **Positions to which an embedded subject may be extracted in English (repeated)**
- high \bar{A} -position** in vP , aP , and nP (**\bar{A} -probe on v , a , n**)
 - low A-position** below v in non-passive non-unaccusative *believe*-class vPs (**R2 ϕ -probe on V or nearby**)
 - high A-position** in vP and aP (and perhaps nP), usable as an intermediate landing site in passive and unaccusative configurations where no ϕ -bearing nominal intervenes. (**R1 ϕ -probe on v , a or n**)

- **Infinitivization is the issue:** If movement from an embedded clause to one of the positions in (30) does not happen, no infinitivization is possible. The clause will remain a full finite CP.
- **No puzzle for case theory:** No need to worry about the licensing of the moved subject in the *wager*/French or *assure* paradigms. **The subject is always licensed in the embedded clause pre-Exfoliation.**

In (31a-c), since movement of the embedded subject to an R2 position is impossible, **the embedded clause should have remained finite**, as in (32)

- (31) **Not a case problem, but an unlicensed Exfoliation problem**
- *We wagered Mary to be the most likely winner.
 - *Je croyais cet homme être arrivé. 'I believed this man to have arrived.'
 - *I assure you Mary to be the best candidate.
- (32) **Example (31a-c) without Exfoliation**
- We wagered that Mary was the most likely winner.
 - Je croyais que cet homme est arrivé. 'I believed that this man arrived.'
 - I assure you that Mary is the best candidate

5. Questions you might have at this point

Case morphology

- **Question:** Why is the R2 element morphologically ACC, if it is licensed in the embedded finite CP before Exfoliation?
- **Possible answer:** If ACC is a dependent case, ACC morphology reflects the final A-position occupied by the embedded subject, independent of where it was licensed.

Binding Theory

- **Question:** Why does the R2 element share binding-theoretic properties with main-clause objects, rather than embedded-clause subjects?
- **Possible answer:** The impossibility of nominative reflexives correlates with either surface agreement or surface case.

R1 verbs

- **Achievement:** R1 verbs, as unaccusatives, lack an R2 probe on V— but bear an R1 probe on v. This explains a classic paradigm:

(33) **Infinitivization of an R1-verb complement is not possible unless the embedded subject undergoes non-R2 movement**

- There is likely to seem to be a linguist in the garden.
(R1 movement of *there* triggered infinitivization)
- *There is likely to seem a linguist to be in the garden.
(either illegal R2 movement of *a linguist* or illegal infinitivisation if *a linguist* remained in situ)
- *There is likely a linguist to seem to be in the garden.
(like b)
- A linguist is likely to seem to be in the garden.
(R1 movement of *a linguist* triggered infinitivization)

- **Unsolved puzzle:** Exfoliation is blocked for the clausal associate of expletive *it*.

- Mary is likely ___ to be the best candidate.
- *Mary, who it is likely ___ to be the best candidate.

- Mary, who is believed ___ to be the best candidate.
- *Mary, who it was believed ___ to be the best candidate.

- **Hope:** This has something to do with the *it*-CP relation.

Non-subject \bar{A} -movement from embedded clause (important!)

- **Question:** Why does infinitivization due to CP exfoliation not accompany *object* extraction? In (36), the embedded subject is licensed by finite T before Exfoliation — so why does extraction of the object not infinitivize the embedded clause?

- Non-subject extraction does not feed exfoliation of CP**
*This book, which I assure you Sue to have read ___.

- **Answer:** Exfoliation is a **last resort** operation for elements that Antilocality prevents from reaching the edge of their Phase by movement. The object can move from the edge of vP to the edge of CP with no Antilocality issue, so Exfoliation is not triggered.

6. Exfoliated yet finite: the complementizer-trace effect

A fact suppressed so far

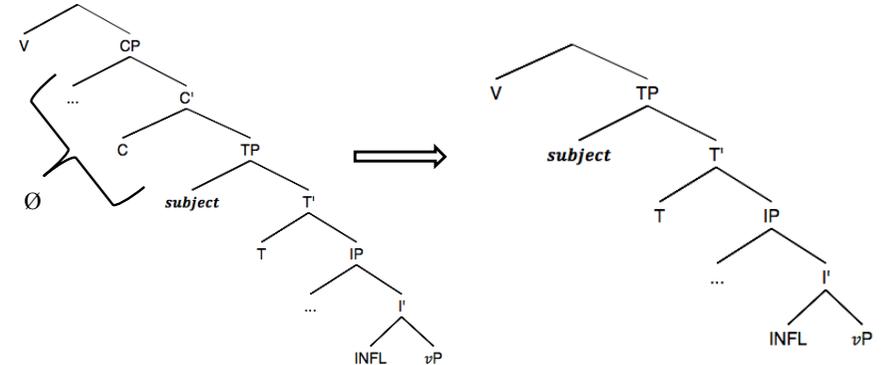
- **Subject extraction in English does not require infinitivization.** It is compatible with the retention of tense and agreement in the embedded clause. Is this unexpected?
- **Famous property of English:** Subject extraction from a finite clause may not obligatorily trigger infinitivization — but it *does* trigger the absence of the complementizer. This is the **complementizer-trace effect**:

- Mary, who I believe ___ to be the best candidate...
- Mary, who I believe ___ is the best candidate...
- *Mary, who I believe that ___ is the best candidate...

Proposal

- Both I (*to*) and T have ϕ -probes with the EPP property.
- Exfoliation that deletes TP and CP **also deletes EPP on T**, eliminating the violation if the subject never raised that far ("salvation by deletion").
- **But the subject may alternatively move to spec,TP — in which case subject extraction will only Exfoliate CP layer, leaving TP intact.**

(38) **Exfoliation of the C-layer, leaving TP behind**



- English clause sizes so far**
finite *that*-clause > finite *that*-less clause > *to*-infinitive

Generalization: Subject extraction always entails a smaller-than-full clause

7. Complementizer-trace effects unified with Anti-agreement

- **Anti-agreement:** Subject extraction sometimes suppresses ϕ -featural agreement distinctions without suppressing tense.

(40) Tamazight Berber anti-agreement (Ouhalla 1993)

- a. thamttut thʃla araw
woman 3SG.FEM.see.PERF boys
'The woman saw the boys' (VSO also possible)
- b. mani thamttut ag ʃlan araw (Anti-Agreement)
which woman COMP see.PERF.Part boys
'Which woman saw the boys'
- c. *mani thamttut ag thʃla araw (*full agreement)
which woman COMP 3SG.FEM.see.PERF boys
'which woman saw the boys?'

(41) Lubukusu anti-agreement (Diercks 2010 chapter 3)

- a. o-mw-ana a-a-tim-a class 1 agreement
1-1-child 1S-PAST-run-FV
- b. naanu o-w-a-tima-a subject extraction → anti-agreement
who 1C-1S-PST-run-FV
- c. *naanu a-a-tim-a subject extraction → *class 1 agreement
who 1S-PAST-run-FV

(42) Bemba anti-agreement suppressing person distinctions (Henderson 2013)

- a. Ni-ne u-u-ka-belenga ibuku
COP-1SG REL-AAE-FUT-read 5-book 'It is I who will read the book.'
- b. Ni-we u-u-ka-belenga ibuku
COP-2SG REL-AAE-FUT-read 5-book 'It is you who will read the book.'
- c. Ni-fwe a-ba-ka-belenga ibuku
COP-1PL REL-AAE-FUT-read 5-book 'It is we who will read the book.'
- d. Ni-mwe a-ba-ka-belenga ibuku
COP-2PL REL-AAE-FUT-read 5-book 'It is y'all who will read the book.'

- **Claim** (Baier 2016): PERSON is the first feature to be suppressed in anti-Agreement configurations ...

- ...followed by: **Person > Gender > Number**

- "In some varieties [of Berber], e.g. Tarifit...the participle does not inflect for any agreement features. In other varieties, e.g. Tamazight, it inflects for [NUMBER]. In a third group of varieties, e.g. Ouargli and Tahaggat...the participle inflects for both [NUMBER] and [GENDER]." (Ouhalla, cited by Henderson)

(43) The Feature Subset Hypothesis (Baier, 2016)

The ϕ -features expressed by agreement in an Anti-Agreement context are always a proper subset of the ϕ -features expressed by agreement in a Full Agreement context.

	Agreement Features			Anti-Agreement Features			Count
	Person	Gender	Number	Person	Gender	Number	
Type 1a	✓		✓				10
Type 1b	✓	✓	✓				9
Type 2a	✓		✓			✓	3
Type 2b	✓	✓	✓			✓	2
Type 3b	✓	✓	✓		✓	✓	2

- But perhaps the idea that anti-agreement always deletes person is the wrong way to think about it. It is when person (possibly plus other features) is absent that a linguist starts *calling* it anti-agreement. The featural rot starts earlier, if we include complementizer-trace effects in the picture:

(44) Functional hierarchy

C > participant > gender > number > tense

(Preminger (2011, 2014): opposite order of PART and NUMBER in Kaqchikel. Hmm.)

8. English *for*-infinitives as R2 constructions

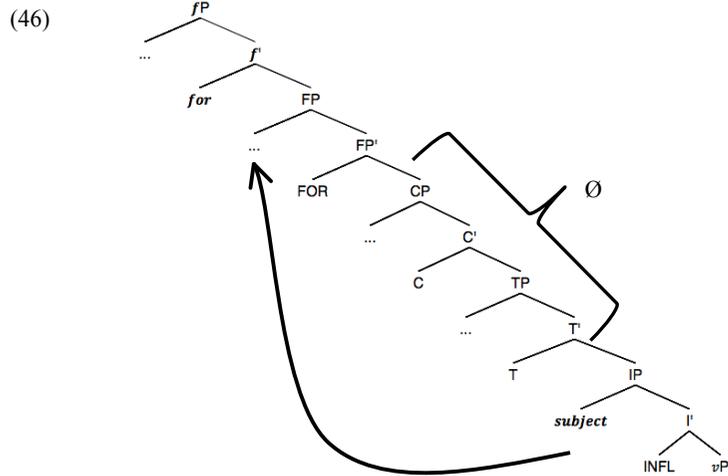
[probably skipped in talk]

- *For* infinitives in their Modern English form look like a counterexample to the strong version of the hypothesis that *all* infinitives derive from Exfoliation of full finite CPs.

- (45)a. Bill would prefer for John to leave the room.
b. Sue is eager for there to be a colloquium party.
c. For the shit to hit the fan right now is desirable.

- But as the analysis of *for* in traditional case-theoretic discussion made clear, *for* has properties reminiscent of R2 verbs.

Conjecture: *for* has big-FOR and little-*for* variants (like the verbal domain)², embeds a finite indicative CP, and triggers raising of the subject of its complement CP to spec,FORP (like R2 verbs), with concomitant Exfoliation:



Arguments that *for*-infinitives are Raising structures that embed an indicative clause

- (47) **Relativization argument for a lower indicative layer**
- a. I would have preferred for there to be ice-cream at the party, as Mary mistakenly reported, which you would have liked too. (*switching the relative clauses)
 - b. She wanted very badly for the solution to turn green, as/which her theory predicted, which is what we all wanted as well. (*switching the relative clauses)
- (48)a. **sluicing:** Bill wanted very badly for Sue to get her license, but couldn't predict when. (...she would get her license)
- b. **pronoun:** John was so eager for Mary to finish her symphony that he reported it prematurely.

² Alternative (Esther Torrego, p.c.): big-FOR might be a form of T, with *for* as C.

9. The control elephant in the room

- If obligatory control is analyzed as movement (Bowers 1973; 1981, Wehrli 1980; 1981; Hornstein 1999, *passim*), Exfoliation might explain the full range of infinitives.
- (49)a. Mary tried to __ read the book. *R1 movement?*
 b. Bill persuaded Tom __ to read the book. *R2 movement?*
 c. Bill promised Tom __ to read the book. *wtf R1 movement?*
- (50)a. Mary wondered how __ to get herself to the airport on time. *R1 movement?*
 b. Sue told Tom how __ to get himself to the airport on time. *R2 movement?*
 c. Bill asked Sue how __ to get himself to the airport on time. *wtf R1 movement?*
- (51)a. Mary bought a chair in which to seat herself during long concerts.
 b. Mary bought Tom a chair in which to seat himself during long concerts.
- (52) __ to win the election will require lots of money. (*what moved where?*)
- **Promissory note:** Landau (2015) provides a framework for understanding what moves where in Control — a different perspective than the Bowers/Wehrli/Hornstein proposals.

10. Adverb intervention in the *that*-trace paradigm

[skipped in talk]

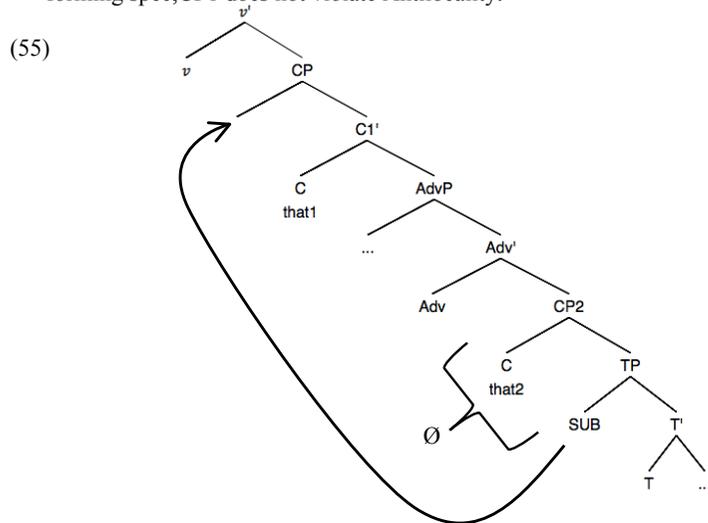
- (53) **Adverb intervention effect** (Bresnan 1977, 194 fn. 6; Culicover 1993, 1993)
- a. Robin met the man who Leslie said that for all intents and purposes __ was the mayor of the city.
 - b. I asked what Leslie said that in her opinion __ had made Robin give a book to Lee.
- (54) **Nupe complementizer-trace** (Kandybowicz 2006, 220-221)
- a. Ke u: bè [ke Musa du __] na o?
 what 3.SG seem COMP Musa cook NA O
 'What does it seem that Musa cooked?'
 - b. *Zèè u: bè [ke __ du nakàn] na o?
 who 3.SG seem COMP cook meat NA O
 'Who does it seem cooked meat?'

... ameliorated by adverb intervention

- c. Zèè Musa gàn [gànan pányi lèé __ ni enyà] o?
 who Musa say C before PST beat drum O
 'Who did Musa say that a long time ago beat the drum?'

Proposal:

- The amelioration results from a double-CP structure, in which the adverbial material is a dependent of the higher C.
- The subject is probed by C1, and exfoliation deletes CP2. Movement from the edge of CP2 forming spec,CP1 does not violate Antilocality.



- (56) **Double-that examples from McCloskey (2006)**
- But the simple analysis which suggests that because American investment takes place here that we should be a lapdog for their efforts in the war is one that I think is quite objectionable and quite offensive.
 - He thinks that if you are in a bilingual classroom that you will not be encouraged to learn English.

11. for-trace effects

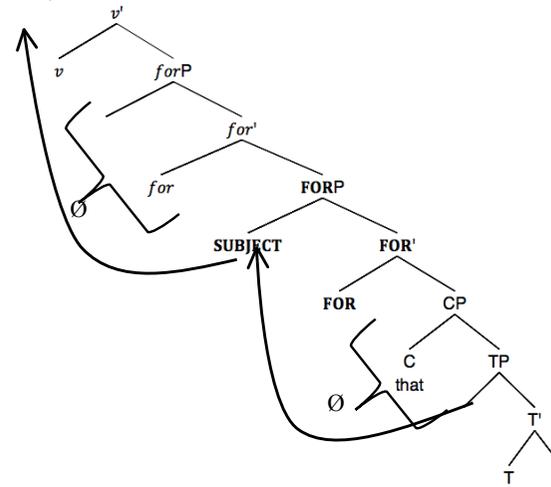
[skipped in talk]

(57) **for-trace effects**

- Who would you prefer (for) Sue to meet ___ at the station?
- Who would you prefer (*for) ___ to meet Sue at the station?
(Ross 1967, 445ff.; Bresnan 1977, 171)

- **for-trace effects explained as a species of that-trace effect if...**
 - forP is phasal and an anti-locality domain, like thatP, so
 - extraction from the R2 position in forP must trigger exfoliation of forP

(58) **for-trace effect**



12. Hyper-raising

So far: Subject extraction in English requires Exfoliation — which can involve

- both CP and TP, yielding an *infinitive* (and explaining *believe, wager, assure* etc.), or
- just CP, yielding a complementizerless *finite clause* (explaining complementizer-trace effects etc.)

Why does English not allow the same two options for A-movement?

(59) **R1: why is (b) unacceptable?**

- Mary seems ___ to be the best candidate.
- *Mary seems ___ is the best candidate.
- *Mary seems that ___ is the best candidate.

(60) **R2: why is (b) unacceptable?**

- Sue believes Mary quite sincerely ___ to be the best candidate.
- *Sue believes Mary quite sincerely ___ is the best candidate
- *Sue believes Mary quite sincerely that ___ is the best candidate

• **One possible solution:**

(61) **Ban on hyper-raising**

- a. The subject of a clause, whether it raises to spec,AGRP (spec, TP) or remains in spec,IP, shares all its ϕ -features with AGRP.
- b. A higher R1 or R2 ϕ -probe cannot distinguish AGRP from this subject (*note: an \bar{A} -probe has no such problem*) — and thus (*several versions of "thus" are imaginable*) cannot raise the subject...
- c. ... unless AGRP is exfoliated away.

Presupposition: Relativized Minimality is relevant after, and not before exfoliation (compatible with "multiple Agree").

- I am not proud of (61), but it provides a platform for asking the following question:

If the ban on hyper-raising (whatever it is) is turned off, we expect a complementizer-trace effect with A-movement.

- Because AGRP must be exfoliated if a subject is to move to R1 or R2, a fortiori CP must also be exfoliated.
- If for some reason scenario (61) is inactive in a language, not only should we see raising from a domain that remains visibly finite (hyper-raising), but we should also see a *that*-trace effect.

Lusaamia shows hyper-raising with a *that*-trace effect: "The reconstructed reading is blocked by the presence of a complementizer in the embedded clause" (Carstens & Diercks 2013)

(62) *Scenario: You find that the watering hole is empty. Though there are no cows on site, you can say:*

a. **no raising**

Bi-bonekhana koti eng'ombe chi-ng'were amachi
 8SA-appear that 10cow 10SA-drink 6water
 'It appears that the cows drank the water'

b. **R1, no complementizer**

Eng'ombe chi-bonekhana chi-ng'were amachi
 10cow 10SA-appear 10SA-drink 6water
 'The cows appear to have drunk the water'

... *but not:*

c. **R1, complementizer**

*Eng'ombe chi-bonekhana koti chi-ng'were amachi
 10cow 10SA-appear that 10SA-drink 6water
 'The cows appear as if they have drunk the water' (Carstens & Diercks 2013)

13. A world without Exfoliation:

Halpert (2015) on Hyper-raising in Zulu

(63) **Zulu: hyper-raising over the complementizer *ukuthi***

- a. ku- bonakala [ukuthi uZinhle u-zo- xova ujeqe
 17S- seems that AUG.1Zinhle 1S- FUT- make AUG.1steamed.bread
- b. uZinhle u- bonakala [ukuthi __ u- zo- xova ujeqe
 AUG.1Zinhle 1S- seem that 1S- FUT- make AUG.1steamed.bread

(64) **Raising preserves idiomatic subject readings**

- a. ku-bonakala [ukuthi iqhina li-zo-phuma embizeni]
 17S-seem that AUG .5steinbok 1S-FUT-exit LOC.3cooking.pot
- b. iqhina li-bonakala [ukuthi __ li-zo-phuma embizeni]
 AUG .5steinbok 5S-seem that 5S-FUT-exit LOC.3cooking.pot
 'It seems that the secret will come out.'
 literal: 'It seems that the steinbok will get out of the cooking pot.'

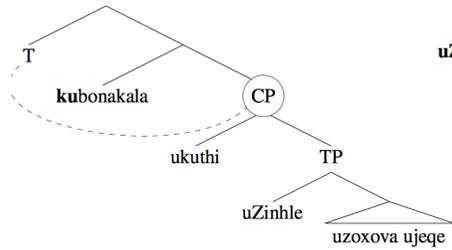
(65) **Optional matrix agreement with hyper-raised subject**

- a. ku- bonakala [ukuthi uZinhle u- zo- xova ujeqe]
 17S- seems that AUG.1Zinhle 1S- FUT- make AUG.1steamed.bread
- b. uZinhle u- bonakala [ukuthi u- zo- xova ujeqe
 AUG .1Zinhle i 1S- seem that 1S- FUT- make AUG.1steamed.bread
- c. uZinhle ku- bonakala [ukuthi u- zo- xova ujeqe
 AUG .1Zinhle 17S- seems that 1S- FUT- make AUG.1steamed.bread
 'It seems that Zinhle will make steamed bread.'

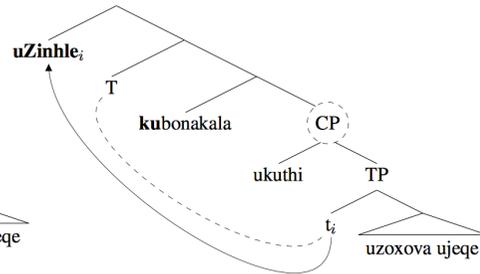
Borrowing from Halpert's proposal:

- The optional morphological agreement in (65) reflects the fact that the R1 probe (= T for Halpert) agrees *twice* (and which of these instances Agree is reflected morphologically is underdetermined).
- This does not happen in English if English CP lacks ϕ -features (McCloskey 1991; Iatridou & Embick 1997), in contrast to its Zulu counterpart.
- In Zulu, only the DP goal can satisfy EPP, so it is the goal that moves, regardless of verbal morphology.

**Step 1 in raising-to-subject:
T agrees with embedded CP**



**Step 2 in raising-to-subject:
T agrees with and fronts embedded subject**



Developing Halpert's proposal in an Exfoliation setting:

- Assume, following Rackowski & Richards (2005), that the successful contacting of CP by the R1 ϕ -probe allows subsequent interaction with the subject, even though it is not at the phase edge. This makes exfoliation of CP unnecessary.
- If the R1 probe in Zulu always successfully interacts with an *ukuthi*-clause before finding the subject within it, and if this interaction eliminates the phase-edge problem for the subject....
- ... then we expect that exfoliation will be not only unnecessary, but *impossible*...
- ...which might explain why Raising from an infinitive is impossible.

(66) **Zulu: no raising from infinitive**

*uZinhle u- bonakala [__ uku- (zo-) xova ujeqe]
 AUG .1Zinhle 1S- seem INF- (FUT-) make AUG.1steamed.bread
 'It seems that Zinhle will make bread.'

- Of course, Zulu *has* an infinitive, used in control structures (and with a lexical subject, cf. English *for*). So these structures must involve a probe that seeks different features from the ϕ -probe in R1 constructions.

14. Connections to Müller's (2015, *passim*.) proposals for Structure Removal

Similarities

- Structure is removed! The logic by which "before" properties (T and C are present, subject bears NOM) are distinguishable from "after" properties (T and C are absent, subject may bear ACC) is very familiar.

Difference

- Structure removal, at least in the domains discussed here, is triggered by a property that is not just a lexical requirement that structure be removed — but a repair motivated by locality.

Is Exfoliation counter-cyclic?

- Not necessarily: if Exfoliation permits the satisfaction of a current-cycle EPP/Agree property of an R2, R1 or \bar{A} -probe, then it obeys the Strict Cycle as proposed by Kiparsky in the 1970s.

Do we need to delete CP and TP at one stroke? Could we delete first CP, then TP in separate steps, when infinitivization happens?

- Yes, that could be considered a "friendly amendment" to the proposal of this talk.

15. Some unexplored questions

- Could Exfoliation be triggered by Agree alone, without movement? Lasnik±Saito suggest that English has pure ECM as well as R2. Other arguments have been suggested to me by Kenyon Branam and Nick Longenbaugh.
- Do Restructuring infinitives result from Exfoliation — or are they pure instances of sub-CP complementation
- Does *vP* exfoliate? DP? Other categories?
- English *that*-less declaratives without extraction.
- Small clauses
- *etc.*

References

- Baier, Nico. 2016. A survey of anti-agreement effects. Unpublished manuscript. UC Berkeley. [http://linguistics.berkeley.edu/~nbbaier/documents/baier_prospectus.pdf]
- Bošković, Željko. 1994. D-structure, theta-criterion, and movement into theta-positions. *Linguistic Analysis*. 24:247-286.
- Bowers, John. 1973. *Grammatical relations*. Doctoral dissertation, Massachusetts Institute of Technology. [Published by Garland, New York, 1986]
- Bowers, John S. 1981. *The theory of grammatical relations*. Ithaca: Cornell University Press.
- Bresnan, Joan. 1972. *Theory of complementation in English syntax*. Doctoral dissertation, Massachusetts Institute of Technology.
- Bresnan, Joan. 1977. Variables in the theory of transformations. In Peter W. Culicover and Thomas Wasow and Adrian Akmajian, ed. *Formal syntax*. 157-196. New York: Academic Press.
- Carstens, Vicki, and Michael Diercks. 2013. Parameterizing case and activity: Hyper-raising in Bantu. In Claire Moore-Cantwell Seda Kan, Robert Staubs, ed. *Proceedings of the 40th annual meeting of the north east Linguistic Society*. 99-118. Amherst, MA: Graduate Student Linguistics Association, UMass Amherst.
- Chomsky, Noam. 2000. Minimalist inquiries. In Roger Martin, David Michaels, and Juan Uriagereka, eds. *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*. 89-156. Cambridge, Mass.: MIT Press.
- Culicover, Peter W. 1993a. The adverb effect: Evidence against ECP accounts of the *that-t* effect. In Amy J. Schafer. ed. *Proceedings of the North East Linguistic Society 23* pp. 97-111. University of Ottawa: Graduate Linguistic Student Association.
- Culicover, Peter W. 1993b. Evidence against ECP accounts of the *that-t* effect. *Linguistic Inquiry*. 24:557-561. [http://www.jstor.org/stable/4178827]
- Diercks, Michael. 2010. *Agreement with subjects in Lubukusu*. Doctoral dissertation, Georgetown University. [https://repository.library.georgetown.edu/handle/10822/553142]
- Erlewine, Michael Yoshitaka. 2015. Anti-locality and optimality in kaqchikel agent focus. *Natural Language & Linguistic Theory*. to appear [unpublished ms., MIT; http://ling.auf.net/lingbuzz/001841]
- Grohmann, Kleanthes K. 2003. *Prolific domains: On the anti-locality of movement dependencies*. Amsterdam: John Benjamins.
- Halpert, Claire. 2015. Raising hell. Unpublished manuscript. University of Minnesota.
- Henderson, Brent. 2013. Agreement and person in anti-agreement. *Natural Language and Linguistic Theory*. 31:453-481.
- Hornstein, Norbert. 1999. Movement and control. *Linguistic Inquiry*. 30:69-96. [http://www.jstor.org/stable/4179050]
- Höskuldur, Þráinnsson. 2007. *The syntax of Icelandic*. Cambridge: Cambridge University Press.
- Iatridou, Sabine, and David Embick. 1997. Apropos pro. *Language*. 73:58-78.
- Ishii, Toru. 1999. Cyclic spell-out and the *that-t* effects. In Sonya Bird, Andrew Carnie, Jason Haugen, and Peter Norquest, eds. *Proceedings of WCCFL 18(220)*. 220-231.
- Ishii, Toru. 2004. The phase impenetrability condition, the vacuous movement hypothesis, and *that-t* effects. *Lingua*. 114:183-215. [http://www.sciencedirect.com/science/article/pii/S0024384103000457]
- Kandybowicz, Jason. 2006. *Comp-trace* effects explained away. In Donald Baumer, David Montero, and Michael Scanlon, eds. *Proceedings of the 25th West Coast Conference on Formal Linguistics*. 220-228. Somerville, MA: Cascadilla Proceedings Project. [http://www.lingref.com/cpp/wccfl/25/paper1452.pdf]
- Kayne, Richard S. 1984. *Connectedness and binary branching*. Dordrecht, Holland: Foris.
- Kiparsky, Paul, and Carol Kiparsky. 1970. Fact. In Manfred Bierwisch, and K. Heidolph, eds. *Progress in linguistics*. 143-173. The Hague: Mouton.
- Landau, Idan. 2015. *A two-tier theory of Control*. Cambridge, MA: MIT Press
- Lasnik, Howard, and Mamoru Saito. 1991. On the subject of infinitives. In Lisa M. Dobrin, Lynn Nichols, and Rosa M. Rodriguez, eds. *Chicago linguistics society 27*. 324-343. Chicago: Marantz, Alec. 1991. Case and licensing. In Germán Westphal, Benjamin Ao, and Hee-Rahk Chae, eds. 234-253. University of Maryland, Baltimore: Ohio State University.
- McCloskey, James. 2006. Questions and questioning in A local English. In Rafaella Zanuttini, Héctor Campos, Elena Herburger, and Paul H. Portner, eds. *Crosslinguistic research in syntax and semantics. Negation, tense and clausal architecture*. 87-126. Georgetown University Press.
- McCloskey, James. 1991. There, it, and agreement. *Linguistic Inquiry*. 22:563-567. [http://www.jstor.org/stable/4178736]
- Müller, Gereon. 2015. A proposed rule of tree-pruning. Unpublished manuscript. University of Leipzig. [http://ling.auf.net/lingbuzz/002704]
- Ouhalla, Jamal. 1993. Subject-extraction, negation and the anti-agreement effect. *Natural Language and Linguistic Theory*. 11:477-518.
- Pesetsky, David. 1991. Zero Syntax, vol. 2: Infinitives. <http://web.mit.edu/linguistics/www/pesetsky/infins.pdf>
- Postal, Paul. 1974. *On raising*. Cambridge, Mass.: MIT Press.
- Preminger, Omer. 2014. *Agreement and its failures*. MIT Press.
- Preminger, Omer. 2011. *Agreement as A fallible operation*. Doctoral dissertation, Massachusetts Institute of Technology. [http://ling.auf.net/lingBuzz/001303]
- Rackowski, Andrea, and Norvin Richards. 2005. Phase edge and extraction: A Tagalog case study. *Linguistic Inquiry*. 36:565-599.
- Rezac, Milan. 2013. Case and licensing: Evidence from ecm/_doc. *Linguistic Inquiry*. 44:299-319.
- Rosenbaum, Peter S. 1965. *The grammar of English predicate complement constructions*. Doctoral dissertation, MIT. [http://dspace.mit.edu/handle/1721.1/16391]
- Rosenbaum, Peter S. 1967. *The grammar of English predicate complement constructions*. Cambridge, Mass.: MIT Press.
- Ross, John Robert. 1967. *Constraints on variables in syntax*. Doctoral dissertation, MIT. [http://dspace.mit.edu/handle/1721.1/15166]
- Saito, Mamoru, and Keiko Murasugi. 1998. Subject predication within IP and DP. In Kyle Johnson, and Ian Roberts, eds. *Beyond principles and parameters: Essays in memory of osvaldo jaeggli*. 159-182. Dordrecht: Kluwer Academic Publishers.
- Wehrli, Eric. 1980. *Constructions infinitives: Compléments VP et leurs implications théoriques*. Montreal: McGill University.
- Wehrli, Eric. 1981. On thematic roles and exceptional case marking. In Victoria Burke, and James Pustejovsky, eds. *Proceedings of NELS 11*. 414-424. Amherst, MA: Graduate Student Linguistic Association, UMass/Amherst.