The van Riemsdijk/Williams Paradox: In de Fourier's footsteps

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Parallel Domains
In honor of Jean Roger Vergnaud's work
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A Jean Roger Vergnaud

Mentor, Ami, Collègue,

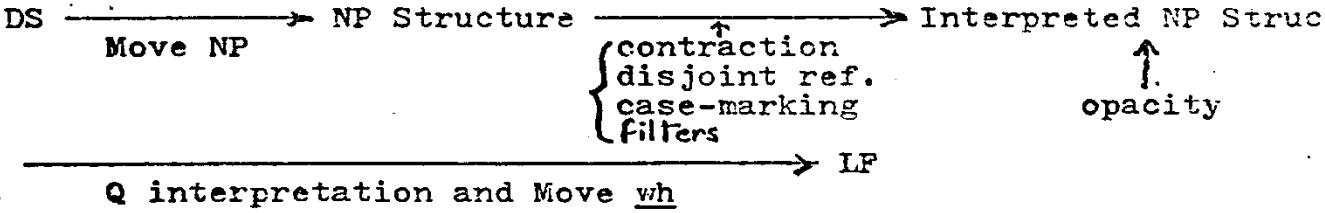
dont les travaux et les rires
sont une inspiration

Remarks on the "extended" linear model
by Zénon de Fourier*
March 1980

0. The "extended" linear model.

In a recent series of provocative notes, Henk van Riemsdijk (HvR) and Edwin Williams (EW) have proposed and developed a model of the organ tion of syntax which can be schematized as follows:

(1)



This model is essentially a specific realization of the linear model discussed in Kimball and alluded to in Chomsky 1973. In

FOOTNOTES

This paper is part of a common enterprise by Aoun, Sportiche, Vergnaud and Zubizarreta. Our main source of inspiration has been our conversations with Henk van Riemsdijk and Edwin Williams, and with Noam Chomsky. We have also benefited from a discussion with A.Belletti, M-R Manzini and A.Weinberg, and from a presentation by Mats Rooth at the University of Massachusetts at Amherst.

(1) S-Structure is the output of Move α - cf.Chomsky 1979.

The van Riemsdijk/Williams paradox is a reconstruction asymmetry between A and A-bar movement.

(1) ***He$_j$** deserved to see these descriptions of **FDR$_j$**
(2) * [Which description of **FDR$_j$**] did **he$_j$** deserve to see t

(3)*it seemed to **him$_j$** that some description of **FDR$_j$** were false
(4) [Some descriptions of **FDR$_j$**] seemed to **him$_j$** to be t false

Two problems:

Pb#1 Relevant difference between A and A-bar movement?

Pb#2 Why does it correlate with other differences between them?

Main Goals

- Show that Pb#1 is part of a larger pattern of the behavior of copies, whether covert (traces) or not.

- Propose a lean solution to the vRW paradox in a Cyclic Spellout system
  - based a natural characterization of the A/A-bar distinction
  - extending it to all other cases of this larger pattern

- Show why this characterization of the A/A-bar distinction could predict some clustering of properties
  - by revising the empirical spread of Condition A of the BT
  - by reducing BT's Condition A to phase theory

Plan

- Why the No Tampering Condition and Full Interpretation make the vRW paradox an acute problem: Puzzle #1
- What the existing solutions are, why they are insufficient but show the extent of the problem: Puzzles #2 and #3
- A solution: FI applies cyclically to Syntactic Objects, not their addresses
- Redefine the A/A-bar distinction and how BT applies
- Correlate some A-movement properties together

NOT INCLUDED

- *Still further puzzles:*
  - *a.Relative Clauses and the Late Merger adjunct/ argument distinction: Puzzle #4 and #5*
  - *b.Determiner Interpretation: Puzzle #6*
- *Speculations on Vehicle Change (Parsimony vs. Deletion)*

ADDED

Short Appendix on selected questions by the audience

1 Background:

Full Interpretation (FI): No superfluous symbols in a representation (Chomsky, 1995)
Syntactic objects are interpreted if contentful, eliminated otherwise.

No Tampering Condition (NTC):
"Merge of two SOs [syntactic objects] X and Y leaves them unchanged. If so, then Merge of X and Y can be taken to yield the set {X, Y}, the simplest possibility worth considering. Merge cannot break up X or Y, or add new features to them." (Chomsky, 2008)

“Therefore Merge is invariably “to the edge” and we also try to establish the “inclusiveness principle,” [nothing is added but the new set resulting from merging] dispensing with bar-levels,…”

(5) Which picture of FDR did she buy □ ?

→ What is the syntax of □ ?

1. Traces could a priori equally well be interpreted as slash features, bound pronouns or as copies:

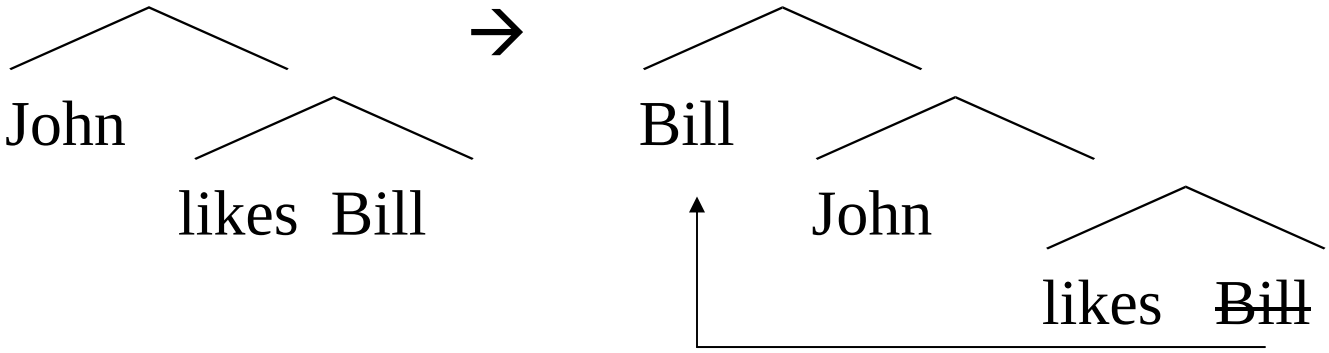
Option 1: □ = /DP
Option 2: □ = it
Option 3: □ = picture of FDR
Option 4: □ = ???

Throughout: derivations are built bottom up (not essential).

No Tampering yields the so-called “copy theory of movement”.
Ex: English Topicalization:

(6) John likes Bill → Bill, John likes

{John, {likes, Bill}} → {Bill, {John, {likes, ~~Bill~~}}}



(7) Which picture of John did she buy □ ?

→ What is the syntax of □ ?

Correct Prediction of the NTC+ FI: Traces trigger Condition C effects:

Condition C of the Binding Theory (a condition on the interpretation of syntactic structures, see e.g. Schlenker, 2005):
A pronoun cannot c-command a coreferential non pronoun.

NTC: Traces have the internal structure of the moved constituent.
FI: The content of traces must be interpreted

(8) * Which picture of FDR_j did he_j buy □ ? → □ ⊃ /… FDR/
(9) * Which picture of FDR_j did he_j buy ~~picture of FDR_j~~

(additional evidence due Heycock, 1995, see also Fox, 2000, Sauerland, 2004)

No independent principle predicts □ ⊃ /… FDR/

Crucially, this is NOT related to scope

Buy is extensional: interpreting *picture of FDR* high or low or both makes no difference.

(10) * Which picture of FDR did she buy ~~picture of FDR~~

? (picture of FDR) λx (FDR saw x) & picture of FDR (x))
Which picture of FDR is such that she bought it and it is a picture of FDR

We can also guarantee (*combien* questions, local anaphor binding) wide scope of the yellow part but this does not remove the condition C effects observed.*

2 Puzzle #1: the van Riemsdijk-Williams Paradox

Puzzle #1: Failure to interpret a low copy

☞ A moved phrase behaves like an unmoved phrase for Condition C

(11) ***He**$_j$ deserved to see these descriptions of **FDR**$_j$

→(12) * [Which description of **FDR**$_j$] did **he**$_j$ deserve to see t

(13) * [Which description of **FDR**$_j$] did **he**$_j$ deserve to see ~~description of **FDR**$_j$~~

☞ This moved phrase does not behave like its unmoved counterpart for Condition C

(14) * it seemed to **him**$_j$ that a description of **FDR**$_j$ was inaccurate

(15) Mary seemed to **everyone**$_j$ to like **his**$_j$ pictures

→(16) [Descriptions of **FDR**$_j$] seemed to **him**$_j$ to be t inaccurate

(17) [Descriptions of **FDR**$_j$] seemed to **him**$_j$ to be ~~descriptions of **FDR**$_j$~~ inaccurate

☞ There seems to be a kind difference between movement dependencies: A vs A-bar

For now: Mvt to an A-bar position vs. an A-position

☞ Exactly what lead to the conclusion that traces are copies in A-bar movement cases leads to the opposite conclusion in A-movement cases

☞ Need to distinguish A and A-bar traces

“Cloaking” Problem: How to make unpronounced material (traces) selectively semantically invisible

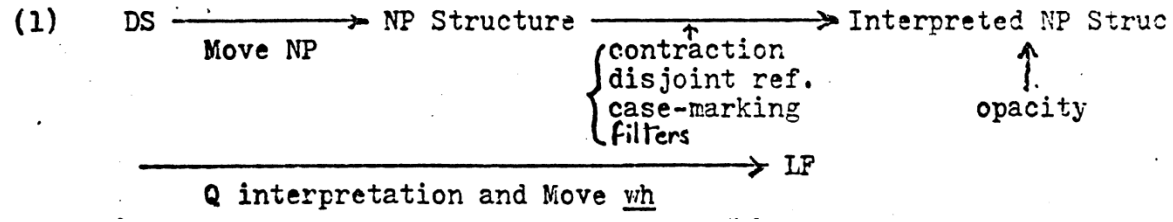
Existing proposals to distinguish between A and A-bar movement:

1. Movement vs not: A-movement is not syntactic movement (e.g. LFG, HPSG, etc..): not discussed here.

2. Segregating movement types: **NP Structure** (van Riemsdijk and Williams, 1981)

3. Possibility of **Late NP Merger** (in a Case position) (Lebeaux, 1991, 2009)

NP Structure (van Riemsdijk and Williams, 1981)



Simplifying the NP structure model architecture:

MERGE AND A-MOVEMENT
→
NP STRUCTURE ← Condition C checked here
→
A-bar Movement

and NO TRACES.

NP Structure: Correct Predictions:

Condition C will see

an A-movement trace as simply absent

an A-bar movement trace as an unmoved constituent

(18) [Some descriptions of **FDR$_j$**] seemed to **him$_j$** to be t false

(19) [Some descriptions of **FDR$_j$**] seemed to **him$_j$** to be ∅ false

(20) * [Which description of **FDR$_j$**] did **he$_j$** deserve to see t

(21) * **he$_j$** deserve to see [which description of **FDR$_j$**]

NP Structure: Incorrect Prediction:

Condition C will see an A-movement trace as simply absent regardless of the semantic scope of the moved DP.

Strategy #1: make narrow scope of the moved DP prominent with an intensional verb: only the bottom copy is interpreted

(22) **New solutions** seem to be needed
(23) ~~**New solutions**~~ seem to be needed **new solutions**
(24) seem to be needed **new solutions**
(25) it seems that one needs **new solutions**

With narrow scope Condition C effects reappear (Fox, 2000, Romero,1998, Sportiche, 1996)

(26) **New solutions satisfying FDR**$_j$ seem to him$_j$ to be needed **t**
(27) * seem to **him**$_j$ to be needed **new solutions satisfying FDR**$_j$
(28) * it seems to **him**$_j$ that **new solutions satisfying FDR**$_j$ are needed

Strategy #2: guarantee narrow scope of the moved DP.
How? with idiom chunks: a chunk does not have an independent interpretation → the whole idiom must be an LF constituent, Chomsky, 1995): only the bottom copy is interpreted

(29) * **Les soupçons de Jean$_j$** lui$_j$ semble avoir été **éveillés** ce jour là
FDR's suspicions seem to him to have been awakened that day

(30) * **Les soupçons de Jean$_j$** lui$_j$ semble avoir été **éveillés ~~les soupçons de Jean$_j$~~** ce jour là

(31) **lui$_j$** semble avoir été **éveillés les soupçons de Jean$_j$** ce jour là

BUT ☞**Puzzle #2:** Total Reconstruction

(32) **New solutions** seem to be needed
(33) ~~**New solutions**~~ seem to be needed **new solutions**
💣(34) seem to be needed **new solutions**
(35) it seems that one needs **new solutions**

How is 💣 compatible with NTC and FI?

Cloaking Problem: How to make unpronounced material (traces) selectively semantically invisible

Revised Cloaking Problem: How to make copies **(whether pronounced or not)** selectively semantically invisible

3. Lebeaux 's 1991 Late NP Merger (in a Case position)*

(renamed wholesale late merger in *Takahashi and Hulsey, 2009)*

DP's can be built in two different ways

1. The normal way
2. Containing a pro whose lexical content is added later

Two possible derivations:

(36) [Many descriptions of **FDR$_j$**] seemed to **him$_k$** to be ~~many descriptions of **FDR$_j$**~~ false

(37) [Many [$_{NP}$ descriptions of **FDR$_j$**]] seemed to **him$_k$** to be ~~many~~ [$_{NP}$ ∅] false

Inserted Post Movement: Late Merger

*Lebeaux 91, Takahashi/Hulsey 2009, Late lexical insertion in NP, Lebeaux 2009 late lexical insertion in DPs

The Late Merger Derivation (bottom up):

Merge proNP: $[_{NP}$ --]
Merge D $[_{D}$ some $[_{NP}$ --]]
Merge other things seem to him_i …$[_{D}$ some $[_{NP}$ --]]
Move DP $[_{D}$ some $[_{NP}$ --]] seem to him_i …$[_{D}$ some $[_{NP}$ --]]
Merge $[_{D}$ some $[_{NP}$ pictures of FDR_i]] seem to him_i …$[_{D}$ some $[_{NP}$ --]]
NP content

Correct Prediction:
Condition C never violated: FDR_i is never c-commanded by him_i

The Late Merger Derivation: Incorrect Predictions Case #1

Back to the vRW paradox.

Question: How is the distinction drawn?

(38) [Some descriptions of **FDR$_j$**] seemed to **him$_j$** to be t false
(39) * [Which description of **FDR$_j$**] does **he$_j$** believe t to be t false

Answer:
Syntax: Late NP merger may occur anytime, but must occur in the Case position at the latest
Semantics: Once merged, an NP **must** be interpreted

Answer is:
Consistent with NTC (to the extent that Late Merge ever is)
Consistent with FI

The Late Merger Derivation: Incorrect Predictions Step #2

Two type of cases in which a merged NP is not interpreted

Case #1:
(40) * [Which description of **FDR$_j$**] does **he$_j$** believe t to be t false

(41) Tell me [which of **his appointments**] nobody forgot t
His doctor's appointment

His must be in the scope of (=c-commanded by) nobody
nobody cannot raise above his (no pair-list readings)

(42) Tell me [what] nobody forgot
* Tell me for nobody what he forgot
* Tell me for everybody what they forgot

What we want:
(43) .. [which] nobody forgot of **his appointments**
What we get:
(44) .. [which of **his appointments**] nobody forgot of **his appointments**

Question: How is the distinction drawn for solving the vRW paradox?

Modified Answer:
Syntax: Late NP merger may occur anytime, but must occur in the Case position at the latest
Semantics: Once merged, an NP **must** be interpreted **in the Case position but not necessarily higher**

This Answer is:
Consistent with NTC (to the extent that Late Merge ever is)
Inconsistent with FI

Puzzle #3: Reconstruction of part of wh-moved phrases can be total

Another Case:

*(45) [**How many pictures**] do they want t*
*(46) [**Combien de photos**] veulent-ils t*
*(47) **Combien** veulent-ils t **de photos***
How many pictures: What is the quantity q … there are q pictures

quick description of the (relevant) meaning and their associated Logical Forms

*(48) [**How many pictures**] do they all want him to buy t*

Context: "Susan, Anna and Mary want John to buy some pictures. They all want him to buy six pictures. They agree on three of them but disagree on the three other pictures."

(49)[How many pictures] do they all want him to buy t

At least two possible ways of understanding this question:
Narrow scope *(50)What's the number of pictures they all want him to buy? Answer : SIX*
:
*French (51) **Combien** veulent-elles toutes qu'il achète **de photos***
How many do they all want him to buy pictures: Answer: SIX
Wide Scope (52) How many pictures are there that they all want him to buy? Answer: THREE
French:
(53) Combien de photos veulent-elles toutes qu'il achète
How many pictures do they all want him to buy: SIX or THREE

What are the Logical Forms corresponding to these two readings?
[Note: floated Qs always take surface scope (E. Williams)]

Narrow scope reading LF: the French surface form
(54) [How many] do they all want him to buy pictures
What is the (maximal) number n, they all want him to buy n pictures

Wide scope reading LF:two copies of the NP
[How many pictures] do they all want him to buy (these) pictures
What is the (max) number n, there are [n pictures]$_x$ they all want him to buy x

Case #2 aka Puzzle #2 aka Total Reconstruction

Puzzle #2: Total Reconstruction

(55) **New solutions** seem to be needed
(56) ~~**New solutions**~~ seem to be needed **new solutions**
(57) 💣 seem to be needed **new solutions**
(58) it seems that one needs **new solutions**

Modified Answer:
Syntax: Late NP merger may occur anytime, but must occur in the Case position at the latest
Semantics: Once merged, an NP **must** be interpreted ~~**in the Case position**~~ **AT THE MERGE POINT** **but not necessarily higher**

Answer is:
Consistent with NTC (to the extent that Late Merge ever is)
Inconsistent with FI

N.B. And where is the Case position?

Classical view: [spec,TP]

(59) **New solutions** T seem to be needed

Agree view

(60) **New solutions T** seem to be needed **new solutions**

Conclusion:
Link between where syntactic objects actually occur and where they are interpreted – the basic idea behind Late Merge of NP – does not hold.

➔ Another Solution is necessary.

Puzzles to be solved:

Puzzle #1: the vRW paradox
A-bar movement leaves traces, A-movement does not have to

Overt syntactic presence does not translate into required interpretation
Puzzle #2: Total Reconstruction under A-movement
Puzzle #3: Reconstruction of part of wh-moved phrases can be total
(but does not have to be).

3 Phase based treatment: Cyclic NP structure

Goal: Copies can selectively become (partially) invisible
General idea of the proposal:

- Standard derivations only (no Late NP Merge)
- Copies under movement must be identical (probably strongly*)
  To code identity, we must distinguish an object from its various realizations (something naturally coded with multidominance)
- **FI only requires that a given object be fully interpreted**, **not that it be fully realized at every address where it occurs**
- Copies can become invisible (by **Impoverishment**)
- Impoverishment is cyclically constrained by FI: if several copies of the same object are found in the same **spellout** domain, FI only require full interpretation of one of them.

Copies under movement must be strongly identical

We must distinguish two identical tokens of an element independently merged.

(61) *John was seen John
(62) *John was seen Bill

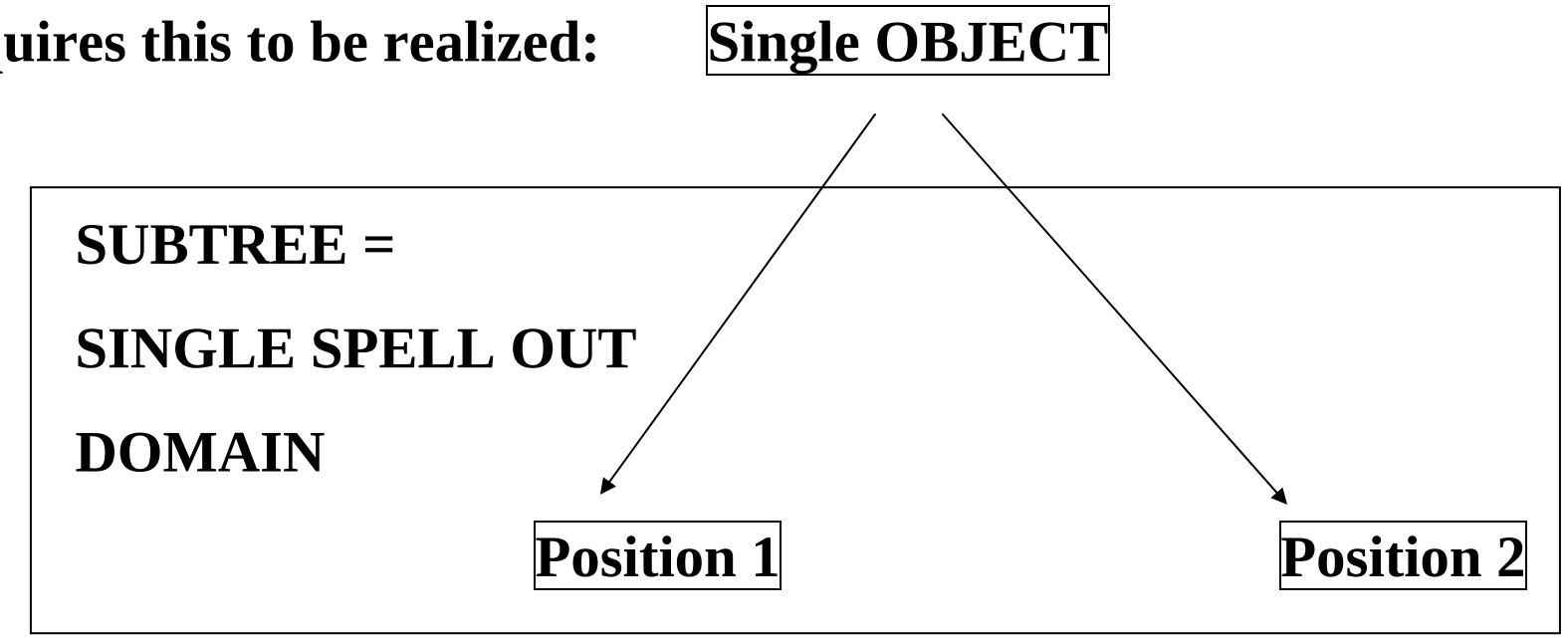
from between an element merged twice (which allows silence of one copy)

(63) OK John was seen ~~John~~

20th century way: Form Chain
21st century way: Multidominance

In Multidominance Terms:

FI requires this to be realized:



FI does not require realization at both positions.

How to make Traces partially invisible

Mechanism: Impoverishement

<u>Impoverishment in Morphology:</u>

Am Are *Are* is the unmarked, least specified form: [be, pres, -pl, ɪ]
Are Are If for whatever reason, person features are deleted,
this form surfaces as default
Is Are

(64) I am sick, [be, -pl, pres, ~~1pers~~] n't I → [be, pres, -pl, ɪ] → aren't I

#

Impoverishment of syntactic objects:

John = [the [John]] John: [+ male, + human] + additional content
Elbourne, 2005, Matushansky, 2008

↓ Impoverishment

Him = [the [e]] e : [+male, +human] no additional content

↓ (maximal) Impoverishment (deletion)

∅ no content

Two versions: (choice not discussed here)
Impoverishment freely possible
Impoverish required up to crash (=Parsimonious Realization)

3.1 Allowing the mechanism to apply

Full Interpretation (Realize everything)
Impoverishment possible
Impoverishment: Impoverish up to crash (=Parsimonious Realization)

Full interpretation always bleed Impoverishment.

Proposal:

FI requires **every syntactic object** to receive a full interpretation

Prediction: if a single syntactic object has two addresses, FI does not require full interpretation at every address, but at one only.

Example:

(65) [good descriptions of FDR] seemed to him
to be [good descriptions of FDR] available

Single object SO: G*ood descriptions of FDR* in two locations.
Full interpretation: Fully interpret at least once, freely impoverish elsewhere

1	Neither high nor low copy:	* by FI
2	High copy only	OK by FI for SO but possibly * for *available* (low predicate unsaturated)
3	Full high copy; impoverished low copy (enough to impoverish *FDR* to *him)*	OK by FI Wide scope for SO, no Condition C
4	Low only (maximally impoverished high copy): Total Reconstruction	OK for FI, narrow scope for SO, Condition C if him=FDR

A Special Case (Related to Puzzle #6)

(Campbell, 1991)
(66) Three students ***is*** *a cinch to win*
(67) Three students ***are*** *cinches to win*
(68) Three students are cinches to win

(Sauerland and Elbourne, 2002)
(69) A northern team ***is*** *likely to be in the final*
(70) A northern team ***are*** *likely to be in the final*

*Note: * PF raising (wrongly predicts no scope interaction)*

(71) A northern team are not likely to be in the final
∃ >not, not > ∃ (possibly %?)

3.2 Constraining the mechanism further

Back to the vRW paradox.

Why is it possible to impoverish traces of A-movement but it is not possible to tamper with traces of A-bar movement within a single clause?

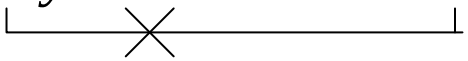
(72) [Some descriptions of **FDR$_i$**] seemed to **him$_j$** to be t false
(73) * [Which description of **FDR$_j$**] does **he$_j$** believe t to be t false

FI is a principle of interpretation: we expect it to hold at the interface.

Proposal: FI is enforced when a constituent is fed to interpretation
Consequence: it must be satisfied within SPELL OUT DOMAINS

Syntactic operations are bounded → ***Phases*** *(Cyclic Nodes, Bounding Nodes):*

(74) Mary believes that Sue left



(75) ***Mary believes*** ***that*** ***that*** ***Sue left***

(76) ***phase edge***

X [PHASE **[** PHASE **[--- Y ---]** **]** **]**
HEAD

[-- --] SPELL OUT DOMAIN

Taking Raising to Subject and wh-question formation as representative of A and A-bar movement.

A and A-bar movement. differ in movement span.
The syntactic domain of A-movement is strictly smaller (all within one phase – one cycle – excluding its edge) than the domain of A-bar movement (always involving the phase edge).

(77) [… [$_{\text{Phase}}$ Phase Edge [----------]]

Maximal span of A-movement ---------

Minimal span of A-bar movement --------- [----------

FI is checked Cyclically on SPELL OUT DOMAINS

First A or A-bar movement of M

SPELL OUT DOMAIN

(78) [… [$_{Phase}$ Phase Edge [----------]]

Maximal span of A-movement --M--**t**----

Movement is with the green zone: it contains two copies.

Impoverishment can freely affect one or the other:

(79) [Some descriptions of **FDR$_j$**] seemed to **him$_j$** to be **t** false

Minimal span of A-bar movement -----M-----[---**t**------

Movement is across the spell out domain boundary.

Spell out domain contains only one copy.

Impoverishment of **t** impossible: **t** is subject to **FI**

(80) * [Which description of **FDR$_j$**] does -[- **he$_j$** believe **t** to be t false

Second (and subsequent..) A or A-bar movement of M

A-movement: No difference. Movement remains in the same phase.
A-bar movement is to the next phase edge up:

First Movement: 

t1 is subject to **FI**
Next Spellout: **M can be freely impoverished**

Second Movement 

SO has three addresses: at **M**, **t2** and **t1**
t1 is fully interpreted
t2 and M can be freely impoverished etc…

Summary

NTC is principle about syntactic derivation. It requires traces as copies.
FI (realize everything) is an Interface principle.
Interpretation is Parsimonious: **Impoverish up to crash** (=only interpret what has to be)

Properties of what is usually called A and A-bar movement:
Property #1: A-movement takes place within a single Spell out domain
Property #2: A-bar movement never takes place within a single Spell out domain

Proposals:
A. FI requires **every syntactic object** to receive a full interpretation
B. As an interface principle, FI is checked cyclically for every spell out domain.
Consequence #1: If an object is present twice or more within a single spellout domain, only one token is fully interpreted
Consequence #2: If an object has already been interpreted, it may be freely impoverished

Property #1: A-movement takes place within a single Spell out domain

+

Consequence #1: If an object is present twice or more within a single spellout domain, only one of its tokens is (must be) fully interpreted

=

A-movement does not trigger Condition C effects

=

½ of puzzle #1 (vRW for A-mvt)
+ puzzle #2 (total reconstruction)

Property #2: A-bar movement never takes place within a single Spell out

+

Consequence #2: If an object has already been interpreted, it may be freely impoverished

=

In the first step of an A-bar mvt, the trace triggers a condition C effect
In subsequent steps, further tokens need not be interpreted

=

½ of puzzle #1 (vRW for A-bar mvt)
+ puzzle #3 (total reconstruction of a subpart)

Why A vs A-bar?

Properties in the classical system	**A-bar movemen**	**A-movemen**
Case driven	*No*	*Sometimes*
Cased Trace	*Sometimes**	*No*
Blocks Contraction	Yes	No
Can licence PG	Yes	No
Triggers SCO/WCO	Yes	No
Can cross over Phase heads	**Yes**	**No**
Must cross over Phase heads	**??**	**No**
First Step Reconstruction require	**Yes**	**No**
Provide antecedents for anaphors	**No**	**Yes**

Properties in the AGREE system	**A-bar movemen**	**A-movemen**
Case driven	*No*	*No*
Cased Trace	*??*	*Yes*
Blocks Contraction	Yes	No
Can licence PG	Yes	No
Triggers SCO/WCO	Yes	No
Can cross over Phase heads	**Yes**	**No**
Must cross over Phase heads*	**??**	**No**
First step Reconstruction require	**Yes**	**No**
Provide antecedents for anaphors	**No**	**Yes**

Must cross over Phase heads: crucially YES for wh-mvt in questions

Classical Binding Theory (Chomsky, 1986)

Condition A: Binding Domains for Anaphors:
Smallest XP within which the anaphor could be bound

(81) Mary saw herself

(82) Mary saw a picture of herself

(83) Mary said that pictures of herself just appeared

(84) *Mary saw Bill's picture of herself

(85) *Mary said that John had seen a picture of herself

(86) *Mary said that the weather had damaged a picture of herself

(87) *Mary said that John had invited everyone but herself

Excluded but not by BT

*(88) *Mary said that herself had left*

But Empirically:

(89) Mary saw herself

(90) Mary saw a picture of herself

(91) Mary said that pictures of herself just appeared

Good: Zribi Hertz, 1989, Runner and Kaiser, 2005

(92) Mary saw Bill's picture of herself

Reported as ?: Pollard and Sag, 1992 Reuland 2011

(93) ?Mary said that John had seen a picture of herself

Generally judged good

(94) Mary said that the weather had damaged a picture of herself

(95) Mary said that John had invited everyone but herself

Pollard and Sag, 1992, Reinhart and Reuland, 1993, Pollard 2005, Reuland 2011

A. Reflexives can be **anaphors** (subject to Condition A) or **exempt anaphors** (subject to other conditions: c-command unnecessary, logophoric centricity and intervention effects, de se reading requirements , etc…)
B. Anaphors and Exempt Anaphors are in complementary distribution

Anaphors

(96) Mary saw herself

Exempt Anaphors

(97) Mary saw a picture of herself
(98) Mary said that pictures of herself just appeared
(99) Mary saw Bill's picture of herself
(100) ?Mary said that John had seen a picture of herself
(101) Mary said that the weather had damaged a picture of herself
(102) Mary said that John had invited everyone but herself

A. Reflexives can be **anaphors** (subject to Condition A) or **exempt anaphors** (subject to other conditions: logophoric centricity, de se readings, c-command unnecessary, etc…)
B. Anaphors and Exempt Anaphors are in complementary distribution

A extremely well motivated.

B is not: Showing that a reflexive in a particular syntactic position **can** be exempt (which these authors do) does not mean that it **must** be exempt.

Recent and ongoing work by Isabelle Charnavel (2009, 2010, 2011) and Charnavel and Sportiche (2011) shows that this is false.

Recent and ongoing work by Byron Ahn (2011) shows that this must even be further refined.

The picture I think emerges from these studies is as follows:

Anaphors

(103) Mary saw herself
(104) Mary saw a picture of herself
(105) They saw each other's pictures
(106) Bill saw Mary's picture of herself

Exempt Anaphors

(107) Mary saw a picture of herself
(108) They saw each other's pictures
(109) Mary said that pictures of herself just appeared
(110) Mary saw Bill's picture of herself
(111) ?Mary said that John had seen a picture of herself
(112) Mary said that the weather had damaged a picture of herself
(113) Mary said that John had invited everyone but herself

The Classical Story is right except for ….

Revised Classical Story ….

Condition A: Binding Domain for (English Reflexive) Anaphors
An anaphor must be bound in its CP* and cannot be separated from its antecedent by a subject.

*Assumes that raising complements and ECM complements are TP's. This is good enough for now and not essential.

Anaphors (vP's shown)

(114) Mary see herself

(115) Mary see a picture of herself

(116) They see each other's pictures

(117) *Mary see Bill's picture of herself

(118) Mary believe herself to know Bill

(119) Mary believe a picture of herself to show that….

(120) Mary believe Bill to know herself

(121) * Mary believe that herself knows Bill

(122) * Mary believe that a picture of herself to show that….

Questions:

- Why must anaphors be bound?
- Where does Condition A apply?
- Why is there a domain?
- Why doesn’t A-bar movement supply binders for anaphors but A-movement does?

- Why must anaphors be bound?

  They are referentially defective

  (Keenan, 1987)

- Where does Condition A apply?

  It is an interpretive condition: it applies at the interpretive interface

  (Chomsky, 95,...)

- Why is there a domain?

An anaphor must be bound in its CP* and cannot be separated from its antecedent by a subject.

CP's define **Phase** boundaries

Subjects (of vP's or DPs) sit at **Phase**s' edges

(Dream of unification between Movement and Binding)

Proposal #1: (implicit in Landau, 2007, Quicoli, 2008 but difficult without BT revision).

There is a domain because BT

a. applies at the interface
b. applies cyclically

Proposal #2: The binding domain is the **SPELL OUT** domain (i.e. what becomes incrementally visible to meaning computation)

Spell out domains: essentially: TP, **vP, DP**

(but a bit more needs to be said to get the details right)

- Why doesn't A-bar movement supply binders for anaphors but A-movement can?

  A-bar Mvt = Mvt to an A-bar position
  A Mvt = Mvt to an A-position

  A /A-bar position difference essentially undefinable since the introduction of the PISH.

  Proposal: No A /A-bar **position** difference

  Definition:
  A-bar mvt is mvt crossing over Phase heads (into the edge)
  A mvt is mvt not crossing over Phase heads

Consequences:

	Properties	A-bar mvt	A-mvt
1	Can cross over Phase heads	Yes	No
2	Must cross over Phase heads	Yes	No
3	First step Reconstruction required	Yes	No
4	Provide antecedents for anaphors	No	Yes

1 and 2: definitions

3: follows from 2: Spell out Domain

4: follows from 2

Since the span of A-bar movement goes beyond the Phase head, it adds a binder OUTSIDE of the SPELL out domain.

Summary: Interpretation is done Cyclically in Spellout Domains
Applies to the Principle of Full Interpretation and to Binding Theory

Prop 1: FI requires syntactic objects to be fully interpreted
Prop 2: Once fully interpreted, an object need not (by FI) be interpreted again.
Prop 3: A-bar Movement is Movement to a Phase Edge
Prop 4: A-movement is not
Prop 5: The domain Condition A is a Spell out domain

In a Spellout Domain containing the lowest A-copy, there must be another A-copy (by Prop 4). Either one can be freely impoverish (by Prop 1 and Prop 2).

In a Spellout Domain containing the lowest A-bar copy, there cannot be another A-bar copy (by Prop 3). The lowest copy must be interpreted (by Prop 1) either one can be freely impoverish.

By prop 5, an anaphor must be bound in its spellout domain. By Prop 3, the antecedent cannot have been supplied by A-bar movement.*

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APPENDIX: a couple of questions raised.

Question by Elabbas Ben Mamoun

What happens with respect to reconstruction of wh-movement when there is a resumptive pronouns?
This has to do with work by Aoun, Benmamoun and also Choueri in Arabic showing that if the resumptive is inside an island, there is no reconstruction inside the island. But if the resumptive is not inside an island, reconstruction is possible (and perhaps even required for condition C). This is consistent with the picture presented here but with an additional twist: if there is wh-movement with a resumptive inside an island, there is still reconstruction into the lowest clause which (i) contains the resumptive and (ii) is not inside the island (Joseph Aoun, p.c: I do nto recall whether this is in the published work or not). This gives us information on how low the wh-phrase can come from: one way of thinking about this is to assume that the wh-phrase moved from a position at the periphery of the island, much like Iatridou did for Greek CLLD in her 1990 paper.

Question by Julie Legate:

How is
John likes himself possible?
Since the vP [John like himself] will spell out without *John* which is at the edge. *Himself* is left unbound in its spell out domain.
Answer:

The easier answer (there is an alternative: John likes himself is * by BT, but I will not discuss it here):
Legate (!!) shows (in an LI paper) that there is phase edge at the periphery of raising verbs. This can be seen for raising to subject from an infinitive: movement goes through a main clause VP peripheral position (which is therefore non theta). See e.g.

A man does not seem to …
Which allows Neg > a man > seem = thre is n't a man who seems …
With reconstruction of "a man" lower than not but higher than seem.

If a man does not seem to have… = if it is not the case that there is a man who seems to have…
or If it is not the case that it seems that there is a man who has….

I therefore assume that all raising from spec. vP to spec TP goes through this position which I take to be at the periphery of the vP Phase.
I take vP *not* to be a Phase but a SPELL OU T DOMAIN