

Right node raising, scope, and plurality¹

Aron Hirsch (MIT); aronh@mit.edu
Michael Wagner (McGill); chael@mcgill.ca

Amsterdam Colloquium
December 15, 2015

INTRODUCTION

Right node raising ('RNR') refers to co-ordinate structures where a constituent associated with both conjuncts ('the pivot') appears once, rightmost in the sentence.

- (1) John likes and Mary hates Hamlet.

Two broad approaches to analyzing RNR:

- Ex situ approaches: the pivot is *external* to the conjunction in the narrow syntax.

(2) **Rightward ATB-movement**² (e.g. Ross 1967, Hankamer 1979, Postal 1974, Sabbagh 2007)
[[John likes t_1] and [Mary hates t_1]] Hamlet₁]
- In situ approaches: the pivot is *internal* to the conjunction in the narrow syntax.³

(3) **E.g. backward ellipsis** (Wexler & Culicover 1980, Swingle 1995, Kayne 1994, Wilder 1995, Hartmann 2001, Ha 2008)
[[John likes ~~Hamlet~~] and [Mary hates Hamlet]]

A tool to dissociate analyses: scope of the pivot relative to *and*.

- Dissociative scope prediction** (simplified wrt multi-dominance; to be discussed further)
- a. If an ex situ analysis is available, the pivot can scope above *and*.
 - b. If only an in situ analysis is available, the pivot must scope below *and*.

Today: is *pivot* > *and* available and, if so, under what conditions?

- We introduce a new diagnostic for the scope of the pivot involving **focus operators**.
- Based on this (and data involving earlier diagnostics), we argue for the following results:

- Empirical generalizations**
- a. The pivot can scope above *and* (Sabbagh 2007).
 - b. When the (base) position of the pivot is within an island, *pivot* > *and* may be unavailable.

¹ We thank Danny Fox, Martin Hackl, Irene Heim, Sabine Iatridou, David Pesetsky, and Viola Schmitt for helpful discussion. All errors are, of course, our own. Both authors receive financial support from the Social Sciences and Humanities Research Council of Canada.

² Another type of ex situ approach allows for co-ordination of non-standard constituents, and assumes that a surface string like (1) is base-generated, rather than derived by movement (Steedman 1985). In the following, we assume that an ex situ structure involves movement.

³ While proponents of in situ accounts usually assume either ellipsis or multi-dominance, Barros & Vicente (2011) argue that *both* are necessary; but, see Larson (2012) for counterarguments.

- We entertain two analytical directions to account for the generalizations:
 1. A **hybrid** approach: ex situ and in situ analyses co-exist; ATB-movement is island-sensitive, so only the in situ analysis is available in island configurations.
 2. A more unified alternative involving **multi-dominance** (after McCawley 1982, Wilder 1999, and, especially, Bachrach & Katzir 2007, 2009).

PART 1: WIDE SCOPE OF THE PIVOT

Generalization 1

The pivot can scope above *and* in RNR.

Focus operators as a tool to diagnose *pivot > and*

- Our strategy to diagnose the scope of the pivot: insert a focus operator (*only, even*).
- To build up, consider first a mono-clausal sentence:

(4) John likes only Hamlet.
- *Only* is a two-place operator (cf. Rooth 1985, Wagner 2006): *only* combines with arguments of type α (x) and $\langle \alpha, st \rangle$ (f); *only* presupposes the truth of the prejacent (i.e. $f(x)(w)$) and asserts the falsity of non-weaker alternatives.

(5) $[[\text{only}]] = \lambda x_{\alpha} . \lambda f_{\langle \alpha, st \rangle} . \lambda w . \forall a \in \text{ALT}(x) [f(a)(w) \rightarrow (f(x) \Rightarrow f(a))]$
Presupposition: $f(x)(w)$

(6) **LF for (4):** $[[\text{only Hamlet}]] \lambda 1 [\text{John likes } t_1]]$

(7) **Predicted meaning in (4)**
 $[[\text{only}]](\text{Hamlet})(\lambda x . \lambda w . \text{John likes } x \text{ in } w)$
 $= \lambda w . \forall a \in \text{ALT}(\text{Hamlet}) [\text{John likes } a \text{ in } w \rightarrow [\lambda w' . \text{John likes Hamlet in } w' \Rightarrow \lambda w' . \text{John likes } a \text{ in } w']]$
Presupposition: John likes Hamlet in w
- Given this analysis, *only* can scopally interact with other operators, e.g. after Taglicht (1998):

(8) John is required to learn only one language.

 - a. Only one language is such that John is required to learn it. (*only > require*; 9a)
 - b. What is required is that John learn only one language. (*require > only*; 9b)

(9) **LFs for (8a) and (8b)**
 - a. $[_{TP} [_{DP} \text{only one language}]] \lambda 1 [_{TP} \text{required} [_{vP} \text{John to learn } t_1]]]$
 - b. $[_{TP} \text{require} [_{vP} [_{DP} \text{only one language}]]] \lambda 1 [_{vP} \text{John to learn } t_1]]]$

Test 1 for pivot > and: wide scope of only

- Test sentence:

(10) Kennedy proposed and Bush signed into law only one bill.

→ Scope in (10) is ambiguous:

(11) **And > only**

a. [[only one bill] λ 1 K. proposed t_1] & [[only one bill] λ 2 B. signed into law t_2]

b. “Kennedy proposed only one bill and Bush signed into law only one bill.”

c. Ted Kennedy and George Bush were very unproductive. Kennedy proposed and Bush signed into law only one bill. Unfortunately, Bush did not pass Kennedy’s bill.

(12) **Critically available: only > and**

a. [[only one bill] λ 1 [K. proposed t_1 & B. signed into law t_1]]

b. “Only one bill did both Kennedy propose and Bush sign into law.”

c. Ted Kennedy proposed many pieces of legislation, but George Bush was willing to pass just one of them. Kennedy proposed and Bush signed into law only one bill.

- Second test sentence:

(13) John likes and Mary hates only the Fantastic Mr. Fox.

A wide scope reading like in (10) seems to replicate in (13), but judgments are more variable:

(14) **Available: only > and**

John likes many movies and Mary hates many movies, but their tastes are nearly identical. John likes and Mary (simultaneously) hates only the Fantastic Mr. Fox.

→ “Only the Fantastic Mr. Fox is such that both John likes it and Mary hates it.”

Test 2: combining only and each

(15) Kennedy proposed and Bush signed into law only one bill each.

(16) **The meaning mirrors and > only**

“Kennedy proposed only one bill and Bush signed into law only one bill.”

(17) **But, the pivot must be ex situ to license each**

*Kennedy proposed only one bill each and Bush signed into law only one bill each.

Test 3: wide scope of *even*

- Consider first a mono-clausal example:

(18) John likes even Hamlet.

- We will assume a syntax parallel to only:

(19) **LF for (18)**

[[even Hamlet] $\lambda 1$ [John likes t_1]]

- *Even* introduces a scalar presupposition:

(20) **Defining *even***⁴

[[even]] = $\lambda x_\alpha . \lambda f_{\langle \alpha, st \rangle} . \lambda w . f(x)(w)$

Presupposition: $\forall a [a \in \text{ALT}(x) \ \& \ a \neq x \rightarrow \text{likelihood}(f(a)) > \text{likelihood}(f(x))]$

(21) **Predicted meaning for (18)**

[[even]](Hamlet)($\lambda x . \lambda w . \text{John likes } x \text{ in } w$)

= $\lambda w . \text{John likes Hamlet in } w$

Presupposition: $\forall a [a \in \text{ALT}(\text{Hamlet}) \ \& \ a \neq x \rightarrow \text{likelihood}(\lambda w . \text{J likes } a \text{ in } w) > \text{likelihood}(\lambda w . \text{J likes Hamlet in } w)]$

- Testing for *pivot* > *and* in RNR:

(22) Kennedy proposed and Bush signed into law even this gun control bill.

(23) ***And* > *even***

a. [[even this bill] $\lambda 1$ K. proposed t_1] & [[even this bill] $\lambda 2$ B. signed into law t_2]

b. “K. proposed even this gun control bill and B. signed into law even this gun control bill.”

c. *Presupposition*: $\forall a [a \in \text{ALT}(\text{this bill}) \ \& \ a \neq x \rightarrow \text{likelihood}(\lambda w . \text{K. proposed } a \text{ in } w) > \text{likelihood}(\lambda w . \text{K proposed this bill in } w)]$
& $\forall a [a \in \text{ALT}(\text{this bill}) \ \& \ a \neq x \rightarrow \text{likelihood}(\lambda w . \text{B. signed } a \text{ in } w) > \text{likelihood}(\lambda w . \text{B. signed this bill in } w)]$

(24) ***Even* > *and***

a. [[even this bill] $\lambda 1$ [K. proposed t_1 & B. signed into law t_1]]

b. “Even this gun control bill is such that both K. proposed it and B. signed it into law.”

c. *Presupposition*: $\forall a [a \in \text{ALT}(\text{this bill}) \ \& \ a \neq x \rightarrow \text{likelihood}(\lambda w . \text{K. proposed } a \text{ in } w \ \& \ \text{B. signed } a \text{ in } w) > \text{likelihood}(\lambda w . \text{K. proposed this bill in } w \ \& \ \text{B. signed this bill in } w)]$

(25) **Available: *even* > *and***

Ted Kennedy and George Bush got along surprisingly well. Kennedy proposed and Bush signed into law even this gun control bill. Kennedy had been trying to get gun control passed for years.

⁴ This definition is quite rough. See e.g. Yael Greenberg’s talk later today for more discussion of *even*.

Further evidence for wide scope readings

Test 4: Universal quantifiers (Sabbagh 2007)

- If the pivot is a universal quantifier, an additional operator is needed to diagnose its scope, since universals are commutative with *and*.
- Sabbagh's test case:
 - (26) **Insert an existential**
Some nurse gave a flu shot to and administered a blood test for every patient.
 - (27) **Available: *every patient* > *some nurse* > *and***
 - a. [every patient $\lambda 2$ [some nurse $\lambda 1$ [_{vP} t₁ gave a flu shot to t₂]
and [_{vP} t₁ administered a blood test for t₂]]]
 - b. $\forall x \exists y$ [y gave a flu shot to x & y administered a blood test for x]
 - (28) **Distinct from: *some nurse* > *and* > *every patient***
 $\exists y$ [$\forall x$ [y gave a flu shot to x] & $\forall z$ [y administered a blood test for z]]]

Test 5: Existential quantifiers

- *At least one* scopally interacts with *and*. In RNR, scope is ambiguous:
 - (29) **Available: *at least one* > *and***
 - a. Hillary and Obama generally agree, but they are different people. Hillary supported and Obama (simultaneously) opposed at least one bill.
 - b. $\geq 1x$ [Hillary supported x & Obama opposed x]
 - (30) **Distinct from: *and* > *at least one***
 - a. Linguistics hired and Chemistry fired at least one professor.
 - b. $\geq 1x$ [Linguistics hired x] & $\geq 1y$ [Chemistry fired y]

Test 6: Distributive operators (Abels 2004; cf. Abbott 1976)

- (31) **Different allows for a “distributive” reading in RNR**
Bob and Sally brought their partners over for dinner. Their partners did not get along. Bob dates and Sally married two quite different people.
- (32) **Informal paraphrase of distributive reading**
Bob dates one person, and Sally married one person, and the person Bob dates is quite different from the person Sally married.
- (33) **The distributive reading requires wide scope of the pivot**
Bob dates two quite different people and Sally married two quite different people. (**distr.*)

- A sketch of an analysis of (31):

(34) **Different = reciprocal relational adjective (Beck 2000)**

[[different]] = $\lambda X_e . \forall y [y \leq X \rightarrow \forall z [z \leq X \ \& \ y \neq z \rightarrow \text{different}(y,z)]]$

(35) **Analysis of two (quite) different people**

a. $[\exists [\text{two} [\text{different} [\text{people}]]]]$

b. $\lambda f_{et} . \exists X [\text{people}(X) \ \& \ \#(X)=2 \ \& \ \forall y [y \leq X \rightarrow \forall z [z \leq X \ \& \ y \neq z \rightarrow \text{different}(y,z)]]]$

(36) **Assumption: abstraction may occur separately in each conjunct**

a. $[[\exists \text{ two very different people}]] \ [[_{TP1} \lambda 1 \text{ Bob dates } t_1]] \ \text{and} \ [_{TP2} \lambda 2 \text{ Sally married } t_2]]$

b. $[[_{TP1}]] = \lambda x . \text{Bob dates } x, \ [[_{TP2}]] = \lambda y . \text{Sally married } y$

(37) **Assumption: and may be interpreted as in Link (1983)**

a. $[[\text{and}_2]] = \lambda P_{et} . \lambda Q_{et} . \lambda X . \exists y \exists z [X = y \oplus z \ \& \ P(y) \ \& \ Q(z)]$

b. $[[\text{and}]]([[_{TP1}]])([[_{TP2}]]) = \lambda X . \exists y \exists z [X = y \oplus z \ \& \ \text{Bob dates } y \ \& \ \text{Sally married } z]$

(38) **Predicted meaning**

$[[\text{(31)}]] = 1$ iff $\exists X [\text{people}(X) \ \& \ \#(X)=2 \ \& \ \forall y [y \leq X \rightarrow \forall z [z \leq X \ \& \ y \neq z \rightarrow \text{different}(y,z)]] \ \& \ \exists y \exists z [X = y \oplus z \ \& \ \text{Bob dates } y \ \& \ \text{Sally married } z]]$

Test 7: Cumulative operators (Abbott 1976)

(39) **Total allows for a “cumulative” reading in RNR**

There was a strange sort of concert taking place in the street last night. A man hummed and a woman whistled four songs total.

(40) **Paraphrase of cumulative reading**

The man hummed fewer than four songs and the woman whistled fewer than four songs — but they hummed/whistled four songs combined.

(41) **The cumulative reading requires wide scope of the pivot**

A man hummed four songs total and a woman whistled four songs total. (*cumulative)

Test 8: Conjunctive pivots (see Moltmann 1992 for related observations)

(42) Madonna sang and McCartney wrote *American Pie* and *Let it Be*, respectively.

(43) **Paraphrase of “pairwise distributed” reading**

Madonna sang *American Pie* and McCartney wrote *Let it Be*.

(44) **The pairwise distributed reading requires wide scope of the pivot**

Madonna sang *American Pie* and *Let it Be* and McCartney wrote *American Pie* and *Let it Be*.

PART 2: ISLAND (IN)SENSITIVITY

- A natural conclusion so far: RNR has an ex situ analysis.

(45) **Rightward ATB-movement**

[[John likes t_1] and [Mary hates t_1]] Hamlet $_1$] (*and* > *pivot* derives from ATB-reconstruction)

- **Puzzle for the ATB-movement analysis:** RNR is grammatical even when the pivot is associated with positions within an island.

(46) **Complex NP Constraint** (Ross 1967)

*Which table $_1$ does John know the man who bought t_1 ?

(47) **RNR**

John knows the man who created and Mary knows the man who bought this table.

- Hypothesis 1: ATB-movement is not subject to islands.

(48) **Problem: leftward ATB-movement is subject to islands**

*Which table $_1$ does J. know the man who created t_1 and M. know the man who bought t_1 ?⁵

- Hypothesis 2: *rightward* ATB-movement is not subject to islands (Sabbagh 2007, who takes islands to be a PF phenomenon sensitive to the direction of movement, after Fox & Pesetsky 2000).
- **We focus on a scope prediction of Hypothesis 2:** readings with *pivot* > *and* should be equally available in island and non-island configurations.

→ We argue that this prediction is not supported (pace Sabbagh 2007). Although RNR is *grammatical* in island configurations, the possible interpretations are more restricted, leading to:

Generalization 2

The availability of *pivot* > *and* is island-sensitive: *pivot* > *and* may be unavailable when the pivot is associated with a position in an island.

- **Caveat:** this is a difficult empirical domain with significant variability in judgments. The reported data reflect intuitions which seemed to be stable across our informants.

⁵ A parallel example in which island-violating RNR feeds *wh*-movement is reported as acceptable in Bachrach & Katzir (2007); however, the judgments we elicited suggest that this is in fact not possible. We think that this data point has to be tested more extensively.

Testing for island-sensitivity with focus operators (*only*)

Test 1: *only*⁶

- Island-sensitivity is observed with *only* in non-RNR contexts:
 - (49) **Island-sensitivity with overt ATB movement**
*Only one bill did Kennedy back democrats who supported and Bush back republicans who supported.
 - (50) **Island-sensitivity with covert movement**
John knows a man who likes only one movie. ($a > \textit{only}$, $*\textit{only} > a$)
- Island-sensitivity is similarly observed with RNR. First example:
 - (51) **Recall: *only* > *and* in non-island configuration**
Ted Kennedy proposed many pieces of legislation, but George Bush was willing to pass just one of them. Kennedy proposed and Bush signed into law only one bill.
 - (52) **Island configuration**
 - a. **Available: *and* > *only***
During the last week in session, Kennedy and Bush felt that their respective parties should focus, and they objected to anyone in their party who wanted to discuss more than one bill. Kennedy supported democrats who discussed and Bush supported republicans who discussed only one bill.
 - b. **Degraded: *only* > *and***
Kennedy and Bush were usually on opposite sides of legislative efforts. ?#Kennedy backed democrats who supported and Bush (simultaneously) backed republicans who supported only one bill.
- Second example:
 - (53) **Recall: *only* > *and* in non-island configuration**
John likes many movies and Mary hates many movies, but their tastes are nearly identical. John likes and Mary (simultaneously) hates only The Fantastic Mr. Fox.
 - (54) **Island configuration**
 - a. **Available: *and* > *only***
It seems some critics like or dislike almost every movie, but the Fantastic Mr. Fox elicits strange reactions. John found a critic who likes and Mary found a critic who hates only The Fantastic Mr. Fox.
 - b. **Degraded: *only* > *and***
It's sometimes hard to find critics that disagree with each other. ?#John found a critic who likes and Mary (simultaneously) found a critic who hates only The Fantastic Mr. Fox.

⁶ It seems that *even* shows a different pattern compared to *only* with respect to island sensitivity—we will not explore this here.

Test 2: combing only and each

- (55) **Non-island configuration**
S&P accepted and *Lingua* rejected (only) one article each.
- (56) **Island configuration**
?*I edit the journal that accepted and you edit the journal that rejected (only) one article each.

Further evidence for island-sensitivity

Test 3: Distributive readings with different

- (57) **Contrast from Abels (2004)**
- a. **Non-island configuration (distributive reading available)**
(My friend Konrad has written a song called Revolution #10 and my friend Friederike has recorded a song called Revolution #11. The songs have similar titles, but they are quite different from each other. Revolution #10 is the only song Konrad ever recorded and Revolution #11 is the only song Friederike recorded.)
Konrad has written and Friederike has recorded two quite different songs.
- b. **-Island configuration (distributive reading degraded)**
(My friend Konrad has written a song called Revolution #10 and my friend Friederike has recorded a song called Revolution #11. The songs have similar titles, but they are quite different from each other. I would like to know when Konrad wrote his Revolution #10 and you would like to find out when Friederike recorded Revolution #11.)
?#I wonder when Konrad wrote and you would like to know when Friederike recorded two quite different songs.
- (58) **Contrast using example from above**
- a. **Non-island configuration**
Bob and Sally brought their partners over for dinner. Their partners did not get along. Bob dates and Sally married two quite different people.
- b. **Island configuration**
Our co-workers, Bob and Sally, do not get along. At Thanksgiving, I always go over to Bob's house and you always go over to Sally's house. So, ?#I know the man who married and you know the woman who married these two quite different people.

Test 4: Cumulative readings with total

- (59) **Recall: non-island configuration (cumulative reading available)**
There seems to have been an odd sort of concert going on in the street last night. A man hummed and a woman whistled four songs total.
- (60) **Island configuration (cumulative reading degraded)**
There seems to have been an odd sort of concert going on in my street last night. ?#I heard a man who hummed and my sister heard a man who whistled four songs total.

PART 3: TOWARDS AN ACCOUNT OF THE GENERALIZATIONS

- Recall the generalizations:

- 1: The pivot can take wide scope above *and*.
- 2: In island configurations, *pivot* > *and* may be bled, but *and* > *pivot* is available.

→ The analysis of RNR must have a way of distinguishing island and non-island configurations:

Constraints on a theory of RNR

- 1: RNR must have an *ex situ* analysis, which shows (at least some) island-sensitivity.
- 2: RNR must have an *in situ* analysis available even in island-configurations.

- Hypothesis 3:** a “hybrid” approach: two mechanisms deliver identical strings (cf. Valmala 2013).

(61) Mechanism 1: Island-sensitive rightward ATB-movement

a. Non-island configuration

[[John likes t_1] and [Mary hates t_1]] Hamlet₁

b. Island configuration

*[[John knows the man who likes t_1] and [Mary knows the man who hates t_1]] Hamlet₁

(62) Mechanism 2: an *in situ* analysis, e.g. backward ellipsis

a. Non-island configuration

[[John likes Hamlet] and [Mary hates Hamlet]] (scope = (61a) + ATB-reconstruction)

b. Island configuration

[[John knows the man who likes Hamlet] and [Mary knows the man who hates Hamlet]]

Reconciling Sabbagh’s (2007) data

- We believe the hybrid approach can be reconciled with data in Sabbagh (2007), which appear to require that the ATB-movement analysis of RNR not be island-sensitive:

(63) John knows someone who speaks and Bill knows someone who wants to learn every Germanic language.

(64) Available reading: *every* > *someone*

$\forall x [\exists y [\text{John knows } y \ \& \ y \text{ speaks } x] \ \& \ \exists z [\text{Bill knows } z \ \& \ z \text{ wants to learn } x]]$

- Two derivations could yield the observed reading:

(65) **Derivation I: island-insensitive rightward ATB-movement**

[[_{&P} [_{TP} John knows someone who speaks t_1]
and [_{TP} Bill knows someone wants to learn t_1]] $\lambda 1$ [every Germanic language]]

\leadsto Scope: *every* > *and* > *someone*, as in (64).

(66) **Derivation II: in situ analysis + QR**

a. **In situ structure**

[_{&P} [_{TP} John knows someone who speaks every Germanic language]
and [_{TP} Bill knows someone wants to learn every Germanic language]]

b. **Every Germanic language QRs separately in each conjunct**

[_{&P} [_{TP} [every Germanic language] $\lambda 1$ John knows someone who speaks t_1]
and [_{TP} [every Germanic language] $\lambda 2$ Bill knows someone wants to learn t_2]]

c. **Predicted reading (*every* > *and* > *someone*) = (64)**

$\forall x \exists y$ [John knows y & y speaks x] & $\forall x' \exists z$ [Bill knows z & z wants to learn x']]

- Derivation II is compatible with our analysis, but Derivation I is not. Is Derivation II viable? To assess, Sabbagh considers one disjunct of (63) in isolation:

(67) **Can every Germanic language QR above someone within the conjunct?**

John knows someone who speaks every Germanic language.

\rightarrow **Sabbagh on (67):** \checkmark *some* > *every*, **every* > *some*; rules out Derivation II.

\rightarrow **Our informants on (67):** \checkmark *some* > *every*, \checkmark *every* > *some*; consistent with Derivation II.

- Conclusion based on our informants: Derivation II can account for the judgment in (74); Derivation I may be unavailable, as Hypothesis 3 predicts.

Do we really need two mechanisms to derive the surface string?

- **Two directions to go for a more uniform analysis:**

\rightarrow **Ex situ only:** narrow syntax produces an ex situ structure; the pivot optionally reconstructs in non-island configurations, and obligatorily reconstructs in island configurations.

\rightarrow **In situ only:** the string derives via one of an in situ; an ex situ LF is derivable via island-sensitive covert movement of the pivot above *and*.

- Let us sketch an **in situ** unification in more detail ...

- **What won't work:** ellipsis + covert ATB-movement

(68) a. **Narrow syntactic structure; ellipsis derives surface string**
 [[John likes ~~Hamlet~~] and [Mary hates Hamlet]]

b. **Optional covert ATB-movement derives ex situ LF**
 [[John likes t_1] and [Mary hates t_1]] Hamlet₁]

(69) **Problem: covert ATB-movement is impossible, for example:**

a. Bob dates and Sally married two quite different people.

b. Bob dates two quite different people and Sally married two quite different people.

→ No distributive reading in (69b): no covert ATB-movement of *two quite different people*.

- **Hypothesis 4:** multi-dominance + QR of the shared constituent.

(70) a. **Narrow syntactic structure: multi-dominance** (McCawley 1982, Wilder 1999, Bachrach & Katzir 2007).
 [John likes

\

Hamlet]]

/

[and [Mary hates

b. **Optional covert movement of the shared constituent (*not* ATB!)⁷**

[[John likes

\

t_1]] Hamlet]

/

[and [Mary hates

- **How to dissociate Hypothesis 3 (hybrid) and Hypothesis 4 (multi-dominance + QR):**

Hypothesis 3 has *pivot* > *and* derived by overt ATB-movement while Hypothesis 4 derives *pivot* > *and* by QR; constraints on overt ATB movement differ from constraints on QR.

→ Judgments remain somewhat unclear in many relevant test cases (e.g. with finite clauses). We leave dissociation of the two hypotheses to future work.

⁷ In pursuing the idea that an in situ analysis with multi-dominance may be compatible with the pivot scoping above *and*, we follow Bachrach & Katzir (2007), who propose a mechanism of delayed spell out which allows for wide scope readings. Their proposal, however, predicts that *pivot* > *and* should be possible even in island configurations, so is not consistent with Generalization 2. We assume that covert movement in (70b) is subject to typical constraints on QR and thus displays island-sensitivity.

APPENDIX: A residual puzzle (*respectively* and conjunctive pivots)

- Island-sensitivity seems not to be observed with *respectively* and conjunctive pivots:
 - (71) **Recall: non-island configuration (pivot must be ex situ)**
Madonna sang *American Pie* and *Let it Be* and McCartney wrote *American Pie* and *Let it Be*.
 - (72) **Island configuration (also grammatical)**
I know the artist who sang and John has met the artist who wrote *AP* and *Let it Be*, respectively.
- **The puzzle runs deeper:** although the pivot must be ex situ, the individual conjuncts in the pivot behave syntactically as though they were within their respective conjuncts.
 - (73) **The conjuncts *can* syntactically reconstruct separately**
 - a. John likes and Mary hates himself and herself, respectively. (Condition A)
 - b. Madonna won't sing and McCartney won't record any song and any album, resp. (NPIs)
 - (74) **The conjuncts *must* syntactically reconstruct separately**
 - a. *John₁ likes and Mary₂ hates him₁ and her₂ respectively. (Condition A)
 - b. *He₁ likes and she₂ hates John₁ and Mary₂, respectively. (Condition B)
- Perhaps the entire pivot, in (71) *American Pie* and *Let it Be*, ATB-moves above the conjunction and then the individual conjuncts *American Pie* and *Let it Be* are “metalinguistically” reconstructed as syntactic objects into separate positions in the two clausal conjuncts. If island effects arise through an interaction of syntax and interpretation, this metalinguistic strategy may not respect islands. If such an analysis is viable for conjoined pivots, maybe an ex-situ-only analysis of RNR would be implementable more generally. We leave this as a topic for future research.