A multidominance analysis of expletive verbs in Vietnamese *

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Abstract

Vietnamese shows instances of negation and modals which seem to have on effect on the meaning of the sentence. I argue against an account of these redundancies in terms of syntactic agreement and propose an analysis in which all occurences of negation and modals are semantically interpreted. The proposal contributes to the continuing debate on how syntactic structures are built and interpreted.

1 Expletive negation

1.1 Observation

Negation in the complement of negative implicatives is optionally interpreted. There is a reading of (1b) in which it is equivalent to (1a), i.e. 'John forgot to read the books.'[1]

(1) a. John quên đọc sách
John forget read books
'John forgot to read books'

b. John quên không đọc sách
John forget not read books
'John forgot to (not) read books'

The same holds for **tránh** 'avoid,' **từ chối** 'refuse,' **thôi** 'stop': (3a-c) can be read as semantically equivalent alternatives of (2a-c).

(2) a. John tránh đọc sách
John avoid read books

b. John từ chối đọc sách
John refuse read books

c. John thôi đọc sách
John stop read books

(3) a. John tránh không đọc sách
John avoid not read books

b. John từ chối không đọc sách
John refuse not read books

c. John thôi không đọc sách
John stop not read books

1.2 Negative implicatives

We take "negative implicatives" to be verbs which entail the negation of their complement. Examples are **forget**, **avoid**, **refuse**, and **stop**: every sentence in (4) entails that John did not read books.[2]

*I benefited from discussions with Lisa Cheng, Nicholas Fleisher, Andreas Haida, Roni Katzir, Hamid Ouali, David Pesetsky, Norvin Richards, and the audiences at UWM S-Group and TEAL-9. My thank goes to them. All mistakes are my own.

[1] Tense and agreement are not morphologically realized in Vietnamese. Nevertheless I assume a head to be present between the surface position of the subject and the rest of the sentence. Keeping to familiar notation, I call this head "I" and its projection "IP."

[2] I assume that the complement of the matrix verb in (4a-d) is a sentence whose subject refers to John.

(4) a. John forgot to read books
b. John avoided reading books
c. John refused to read books
d. John stopped reading books

The entailment comes about in different ways, cf. **forget** (Karttunen 1971) and **stop** (Heim 1990).

(5) a. $[\![\text{forget}]\!](x, p)$ asserts that x does not have in mind her obligation to make p true, and presupposes that x keeping in mind this obligation is necessary and sufficient condition for the truth of p
b. $[\![\text{stop}]\!](x, p)$ asserts that $\neg p$ is true, and presupposes that p was true

Thus, $[\![\text{forget}]\!](x, p)$ asserts that a necessary and sufficient condition for p fails to obtain, while $[\![\text{stop}]\!](x, p)$ asserts that $\neg p$ is true. Both of these assertions entail $\neg p$.

Such differences as those between **forget** and **stop** will not be of concern in our discussion. Nor will the fact that complements of implicatives must be non-finite clauses (cf. Abrusán 2011).

2 Three analyses to be abandoned

2.1 Optional interpretation

A simple hypothesis is that interpretation of negation is optional. But (6) suggests this is not the case.

(6) a. John không quên đọc sách
John not forget read books
'John did not forget to read the books' / *'John forgot to read the books'
b. John định không đọc sách
John intend not read books
'John intends not to read the books' / *'John intends to read the books'

2.2 Agreement

Expletive negation may be an instance of "agreement" (cf. Zeijlstra 2008, Biberauer and Zeijlstra 2012)

(7) he$_{[3sg]}$ read-s$_{\cancel{[3sg]}}$ books

Note that different readings may result depending on whether certain feature on a lexical item is intrinsic and hence interpretable, or resulting from agreement and hence uninterpretable (cf. Heim 1994, Kratzer 1998, 2009, Stechow 2003).

(8) a. only I$_{[1sg]}$ did my$_{[1sg]}$ homework
'No one but me did my homework'
b. only I$_{[1sg]}$ did my$_{\cancel{[1sg]}}$ homework
'No one but me did his or her homework'

We could tell a similar story: negation is expletive when it is $[neg]$, non-expletive when it is $\cancel{[neg]}$.

(9) a. John forget$_{[neg]}$ not$_{[neg]}$ read books
'John forgot not to read the books'
b. John forget$_{[neg]}$ not$_{\cancel{[neg]}}$ read books
'John forgot to read the books'

Problem 1

Vietnamese has another negative head, **chưa**, which has roughly the same semantics as 'not yet': it presupposes that the prejacent will (likely) be true in the future.

(10) $[\![\text{chưa}]\!](p) = \frac{p \text{ is not true}}{p \text{ will be true}}$

It turns out that even under the "expletive" reading of **chưa**, its presupposition projects. This makes assimilation of (9) to (8) difficult.

(11) $[\![\text{John forget } \underline{\text{chưa}} \text{ read books}]\!] = \frac{\text{John forgot to read books}}{\text{John will read books}}$

Problem 2

Expletive negation is sufficient and necessary condition for the occurence of NPIs in the complement of the negative implicative. Thus, they pattern just like "real" negation (cf. Linebarger 1987).

(12) a. John *(không) buồn chào Mary
John *(not) bother greet Mary

b. John *(không) bao giờ đọc sách
John *(not) ever read books

(13) a. John quên *(không) buồn chào Mary
John forget *(not) bother greet Mary

b. John tránh *(không) bao giờ đọc sách
John avoid *(not) ever read books

The relevant observation here is that without the embedded negation, the sentences in (13) are deviant, no matter whether negation is expletive or not!

2.3 Extraposition

A possible analysis for EN constructions is to say they involve ATB extraposition of the most deeply embedded VP out of a coordinate phrase headed by a silent conjunction ~~and~~.

(14) John [$_{\text{XP}}$ [forgot t_{VP}] ~~and~~ [not t_{VP}]] ... [$_{\text{VP}}$ read books]

ATB extraction out of conjunction headed by the overt counterpart of ~~and~~ is in fact possible.

(15) a. John quên và không đọc sách
John forget and not read books

b. John nên và phải đọc sách
John should and must read books

Problem

It is not clear why (16a) cannot be parsed as (16b) and mean the same as (15b).

(16) a. John nên phải đọc sách
John should must read books
'John should be obligated to read books' / *'John should and must read books'

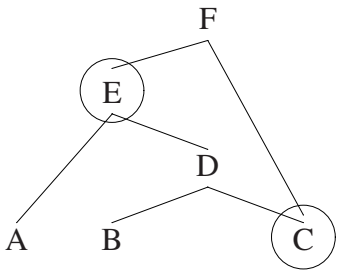
b. John [XP [should t_{VP}] ~~and~~ [must t_{VP}]] ... [VP read books]

3 Constructing and interpreting syntactic structures

3.1 The operations MERGE and LABEL

Hierarchical structures are built by the operation MERGE which maps two syntactic objects to one. It can apply to non-roots, resulting in "multidominance." The operation LABEL applies to some outputs of MERGE and assign them labels (cf. Chomsky 1995 and many subsequent works).

(17) a.



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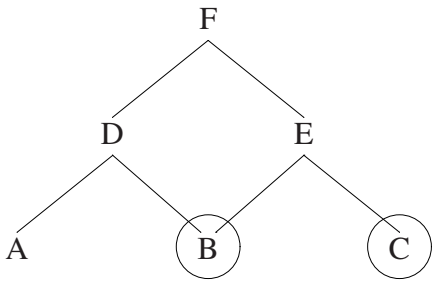
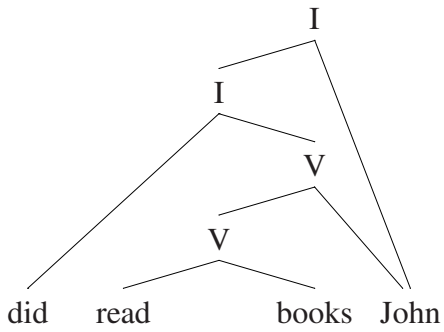


(18) Endocentrism
The label of MERGE(α, β) must be the label of either α or β

(19)



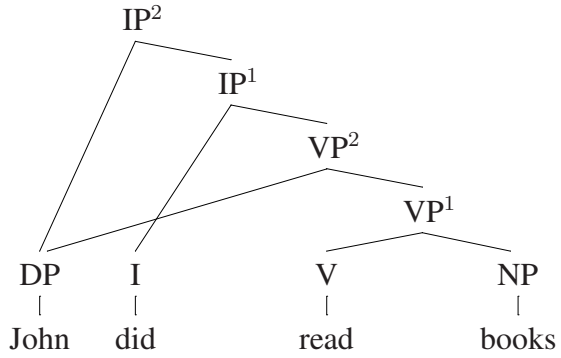
Terminology

+ A "head" is a lexical item that projects
+ A "specifier" is a non-projecting sister of a non-head

For this talk

+ I will notate non-head constituents of category X as XP
+ I will put lexical items in the order they are pronounced, letting tree branches cross when necessary
+ I will represent a lexical item a of category X as

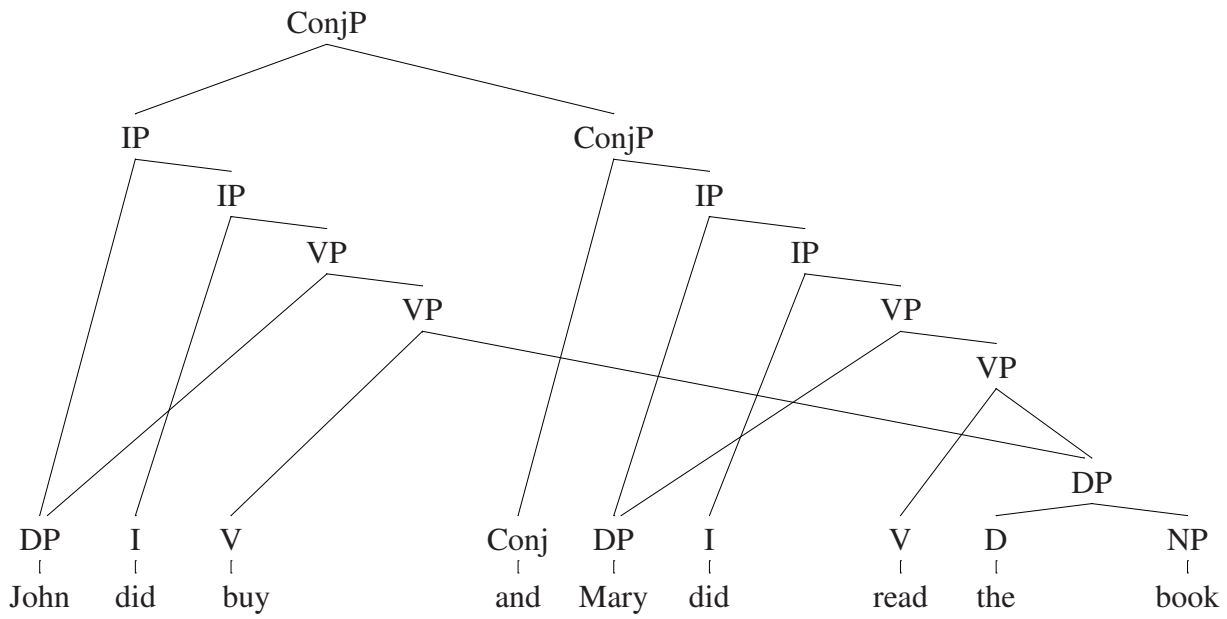
(20)



Notes

+ Representing lexical items this way is just another way to say that a lexical item "dominates itself"
+ Following Chomsky (2012), I assume that LABEL applies "only when necessary," allowing nodes without labels

(21)



3.2 Linearization

Several proposals on linearization of syntactic structures share the scheme in (22) and the constraint in (23) (cf. Kayne 1994, Bachrach and Katzir 2009, Wilder 1995, 2008, Fox and Pesetsky 2007, among others).

(22)

input structure
↓ step 1
precedence relation on non-terminals R_1
↓ step 2
precedence relation on terminals R_2

(23) Linear Correspondence Axiom (Kayne 1994)
R_2 is a linear ordering

(24) A relation R on a set S is a linear ordering iff
+ R is total $\forall x, y \in S : Rxy \vee Ryx$
+ R is antisymmetric $\forall x, y \in S : Rxy \wedge Ryx \rightarrow x = y$
+ R is transitive $\forall x, y, z \in S : Rxy \wedge Ryz \rightarrow Rxz$

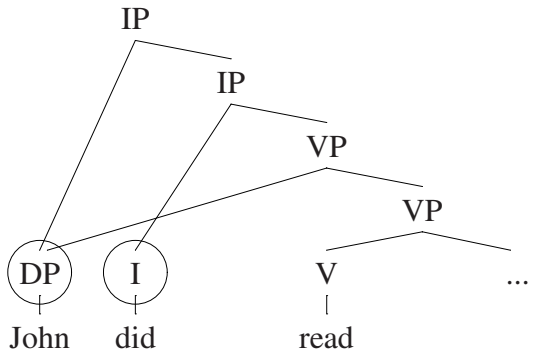
The Kaynean system

Kayne (1994) proposes an influential theory.

(25) $R_1 = \{\text{X<Y} \mid \text{X asymmetrically c-commands Y}\}$
$R_2 = \{\text{a<b} \mid \text{there is an X<Y} \in R_1 \text{ such that X dominates a and Y dominates b}\}$

The Kaynean system is designed to rule out multidominance.

(26)



+ The non-terminals DP and T c-command each other
+ Hence, neither DP<T nor T<DP is in R_1
+ Hence, neither **John<did** nor **did<John** is in R_2
+ Hence, R_2 is not total, therefore not a linear ordering.

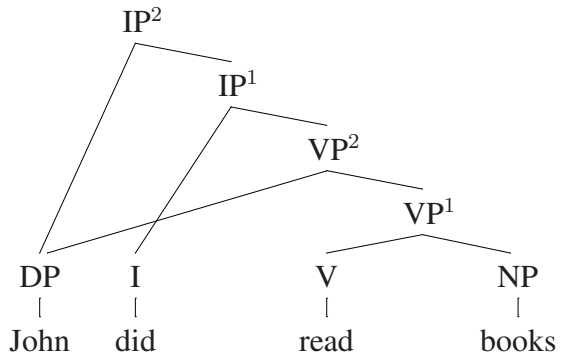
The proposed system

I propose the following procedure for linearization which is inspired by Bachrach and Katzir (2009) Wilder (2008) and Fox and Pesetsky (2007) but differ from each in ways that cannot be discussed in this talk.[3]

(27) $R_1 = \{\text{X<Y} \mid \text{X is a specifier or head and Y is the sister of X}\}$
$R_2 = \{\text{a<b} \mid \text{there is an X<Y} \in R_1 \text{ such that X fully dominates a and Y fully dominates b}\}$

(28) Full domination
X fully dominates Y if X dominates Y and every upward path from Y to the root node passes through X

(29)



(30)

R_1	R_2
T<VP^2	did<read, did<books
V<NP	read<books
DP<IP^1	John<did, John<did, John<books
DP<VP^1	John<read, John<books

$\Rightarrow R_2$ is a linear ordering

We assume that phonology has an operation, Ω, which map R_2 to a sequence of words. Informally, Ω interpret a<b as 'a is spoken before b.'[4]

(31) $\Omega(R_2)$ = John$^\frown$did$^\frown$read$^\frown$books

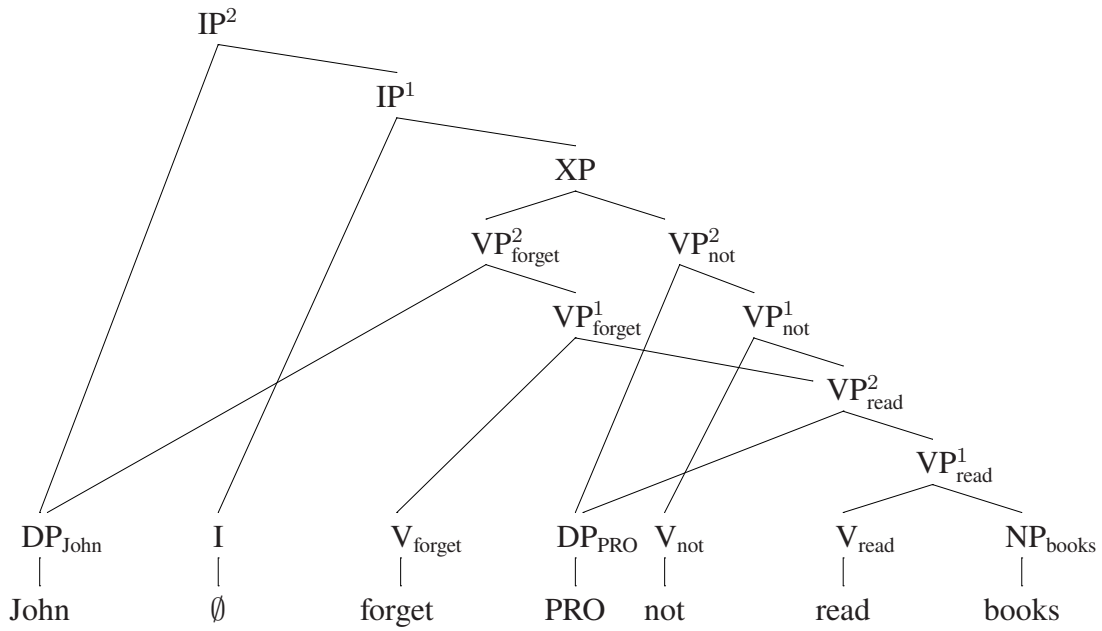
[3] Specifically I talk of linearization as a non-incremental procedure, applying all-at-once to a complete syntactic structure. As far as I can see, it is trivial to translate my proposal into a cyclic version in the spirit of Bachrach and Katzir (2009) or Fox and Pesetsky (2007), for example. For arguments that linearization is in fact non-cyclic see de Vries (2009).

[4] On why a<b is not interpreted as 'a is spoken after b' see Kayne (1994).

4 A multidominance analysis of expletive negation

I propose that (32) underlies the expletive reading of negation in **John forget not read books**.[5]

(32)



4.1 Semantic interpretation

How is the meaning of XP computed so that the whole sentence ends up as if negation is not interpreted? A "propositional" variant of Predicate Modification will do.

(33) Propositional Modification (first version, to be revised)
If A and B are daughters of C, both $[\![A]\!]$ and $[\![B]\!]$ are members of $2^{\mathcal{W}}$, then $[\![C]\!] = [\![A]\!] \cap [\![B]\!]$

(34) a. $[\![VP^2_{forget}]\!] \subseteq [\![VP^2_{not}]\!]$
b. $[\![XP]\!] = [\![VP^2_{forget}]\!] \cap [\![VP^2_{not}]\!] = [\![VP^2_{forget}]\!]$ = 'John forgot to read books'

4.2 Linearization

4.2.1 A problem

There is a problem with (38): R_2 will not be a linear ordering. Specifically, neither **forget**<PRO nor PRO<**forget** will be in R_2. Let us show this:

+ The nodes which fully dominate PRO are XP, IP^1, IP^2
+ The nodes which fully dominate **forget** are V_{forget}, VP^1_{forget}, VP^2_{forget}, XP, IP^1, IP^2
+ X<Y only if Y is the sister of X
+ None of the above mentioned nodes is the sister of any other
+ Hence, there is no X<Y in R_1 such that X or Y fully dominates PRO or **forget**
+ Hence, neither PRO<**forget** nor **forget**<PRO is in R_2

[5] For arguments that negation is a verb in Vietnamese see Trinh (2005).

4.2.2 Solution 1

4.2.2.1 Reconceptualizing the LCA

(35)

...

↓

precedence relation on terminals R_2

↓ step 3

precedence relation on overt terminals R_3

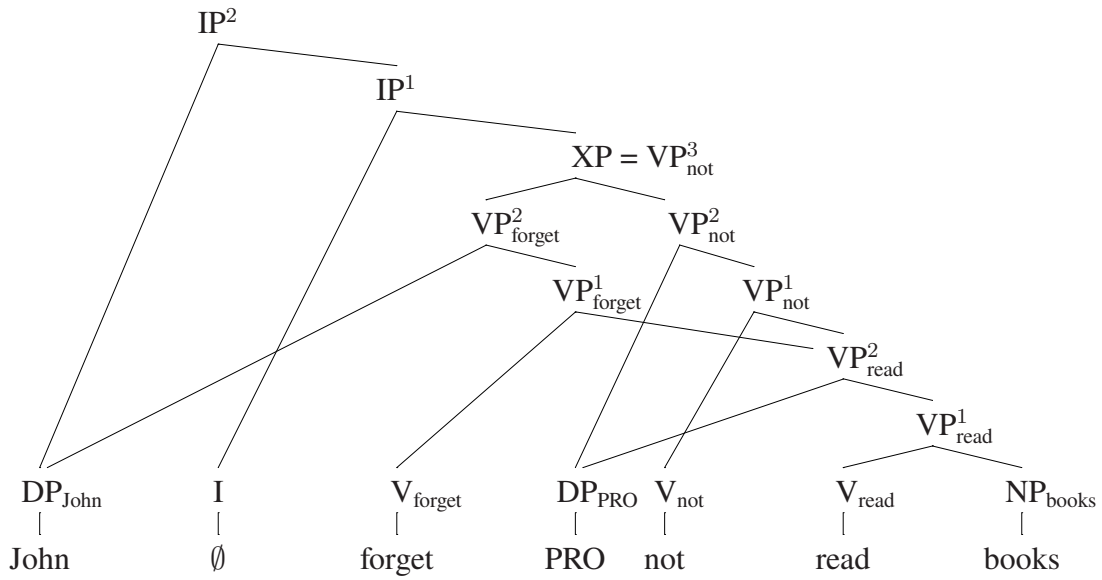
(36) R_3 = $R_2 \cap$ {a<b | a and b have phonetic content}

(37) LCA II
R_3 is a linear ordering

+ Question: Should a condition on syntactic structure know/care about whether a lexical item has phonetic content or not?

4.2.2.2 Labelling XP

(38)



(39)

R_1	R_2
V_{read}<NP_{books}	read<books
V_{not}<VP^2_{read}	not<read, not<books
V_{forget}<VP^2_{read}	forget<read, forget<books
I<XP	∅<forget, ∅<PRO, ∅<not, ∅<read, ∅<books
DP_{PRO}<VP^1_{read}	PRO<read, PRO<books
DP_{PRO}<VP^1_{not}	PRO<not
VP^2_{forget}<VP^2_{not}	forget<not
DP_{John}<IP^1	John<∅, John<forget, John<PRO, John<not, John<read, John<books

$R_3 =$ {read<books, not<read, not<books, forget<read, forget<books, forget<not, John<forget, John<not, John<read, John<books}
$\Rightarrow$ R_3 is a linear ordering (on the set of overt terminals)

+ Question: why should the label of XP be VP^3_{not} and not VP^3_{forget}?

Suppose XP = VP^3_{forget}, then we will have VP^2_{not}<VP^2_{forget} and not<forget instead of VP^2_{forget}<VP^2_{not} and forget<not, with everything else remaining the same.

(40)

R_1	R_2
V_{read}<NP_{books}	read<books
V_{not}<VP^2_{read}	not<read, not<books
V_{forget}<VP^2_{read}	forget<read, forget<books
I<XP	∅<forget, ∅<PRO, ∅<not, ∅<read, ∅<books
DP_{PRO}<VP^1_{read}	PRO<read, PRO<books
DP_{PRO}<VP^1_{not}	PRO<not
VP^2_{not}<VP^2_{forget}	**not<forget**
DP_{John}<IP^1	John<∅, John<forget, John<PRO, John<not, John<read, John<books

$R_3 = \{$read<books, not<read, not<books, forget<read, forget<books, **not<forget**, John<forget, John<not, John<read, John<books$\}$

But (41) suggests that (39) must be ruled out.

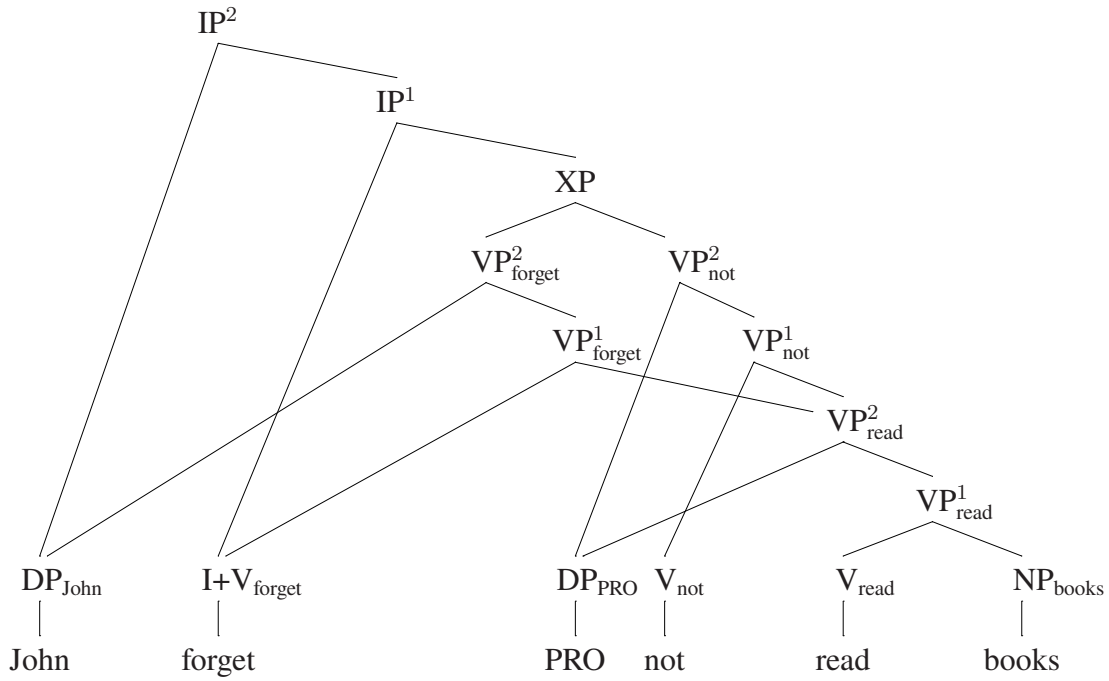
(41) John không quên đọc sách
John not forget read books
'John did not forget to read books' / *'John forgot to read books'

The question is how!

4.2.3 Solution 2

We keep the LCA as a condition on R_2 but allow for the possibility of V moving to the auxiliary position as "last resort operation" which takes place to rescue the structure from violating the LCA.

(42)



(43)

R_1	R_2
V_{read}<NP_{books}	read<books
V_{not}<VP^2_{read}	not<read, not<books
I+V_{forget}<VP^2_{read}	forget<read, forget<books
I+V_{forget}<XP	forget<PRO, forget<not, forget<read, forget<books
DP_{PRO}<VP^1_{read}	PRO<read, PRO<books
DP_{PRO}<VP^1_{not}	PRO<not
DP_{John}<IP^1	John<forget, John<PRO, John<not, John<read, John<books

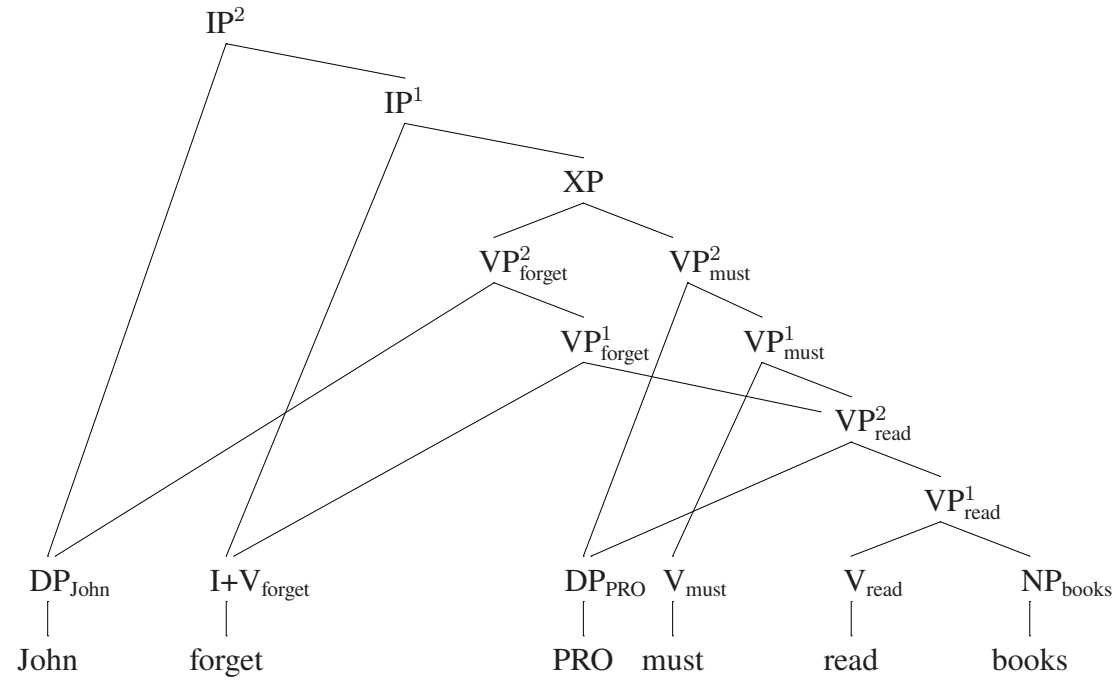
$\Rightarrow R_2$ is a linear ordering!

+ Note that neither VP^2_{forget} nor VP^2_{not} appears in R_1, but this ends up having no effect on R_2
+ Thus, it makes no difference which daughter of XP projects
+ We might say LABEL does not apply to XP since there is no need for it (cf. Chomsky 2012)

4.3 Revising Propositional Modification

We predict that (44) is possible.

(44)



But (45) is evidence that (44) must be ruled out.

(45) #John quên phải đọc sách
John forget must read books
'John forgot to have to read books' / *'John had to but forgot to read books'

One solution to this problem is to restrict the domain of Propositional Modification.

(46) Propositional Modification (final version)
If A and B are daughters of C, $[\![A]\!]$ and $[\![B]\!]$ are members of $2^{\mathcal{W}}$, and $[\![A]\!] \subseteq [\![B]\!]$, then $[\![C]\!] = [\![A]\!] \cap [\![B]\!]$

5 Expletive modals

The revised version of Propositional Modification turns out to account for a puzzling fact: the sentences in (48a-c) can be read as semantically equivalent alternatives of (47a-c).

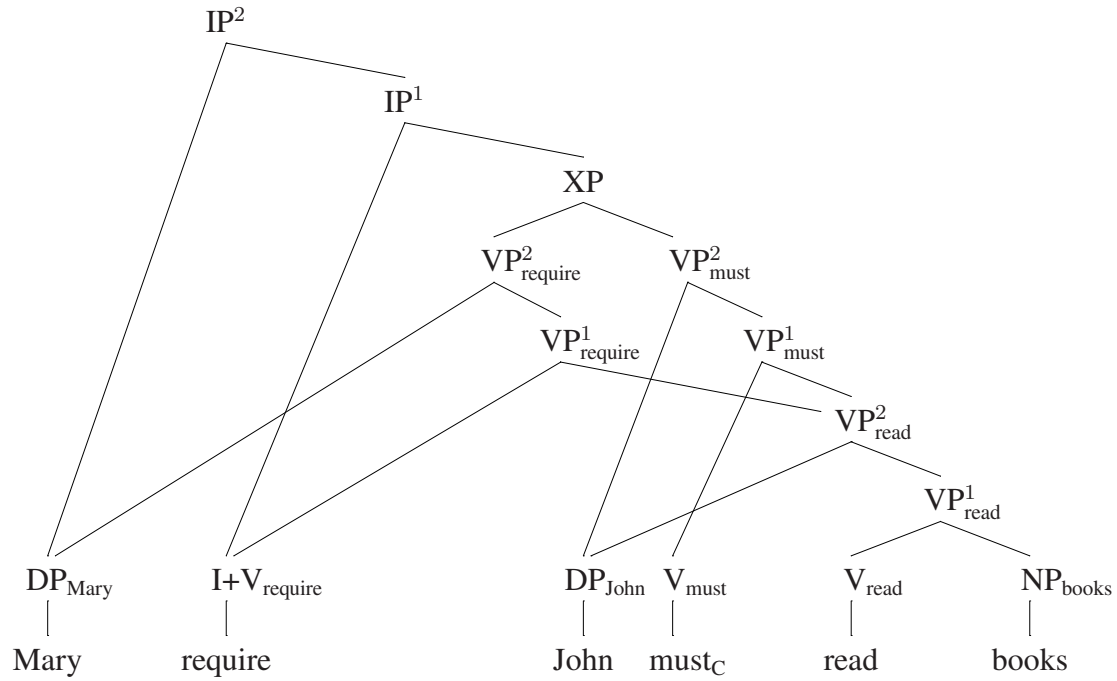
(47) a. Mary bắt John đọc sách
Mary require John read books
b. Mary cho John đọc sách
Mary allow John read books
c. Mary cấm John đọc sách
Mary forbid John read books

(48) a. Mary bắt John phải đọc sách
Mary require John must read books
b. Mary cho John được đọc sách
Mary allow John may read books
c. Mary cấm John không được đọc sách
Mary forbid John not may read books

We make the standard assumption that the interpretation of modals is indexical: they quantify over a contextually determined set of possible worlds.

(49) a. $[\![\text{must}_C]\!]^g(p) = 1$ iff $\forall w \in g(C) : p(w) = 1$
b. $[\![\text{may}_C]\!]^g(p) = 1$ iff $\exists w \in g(C) : p(w) = 1$

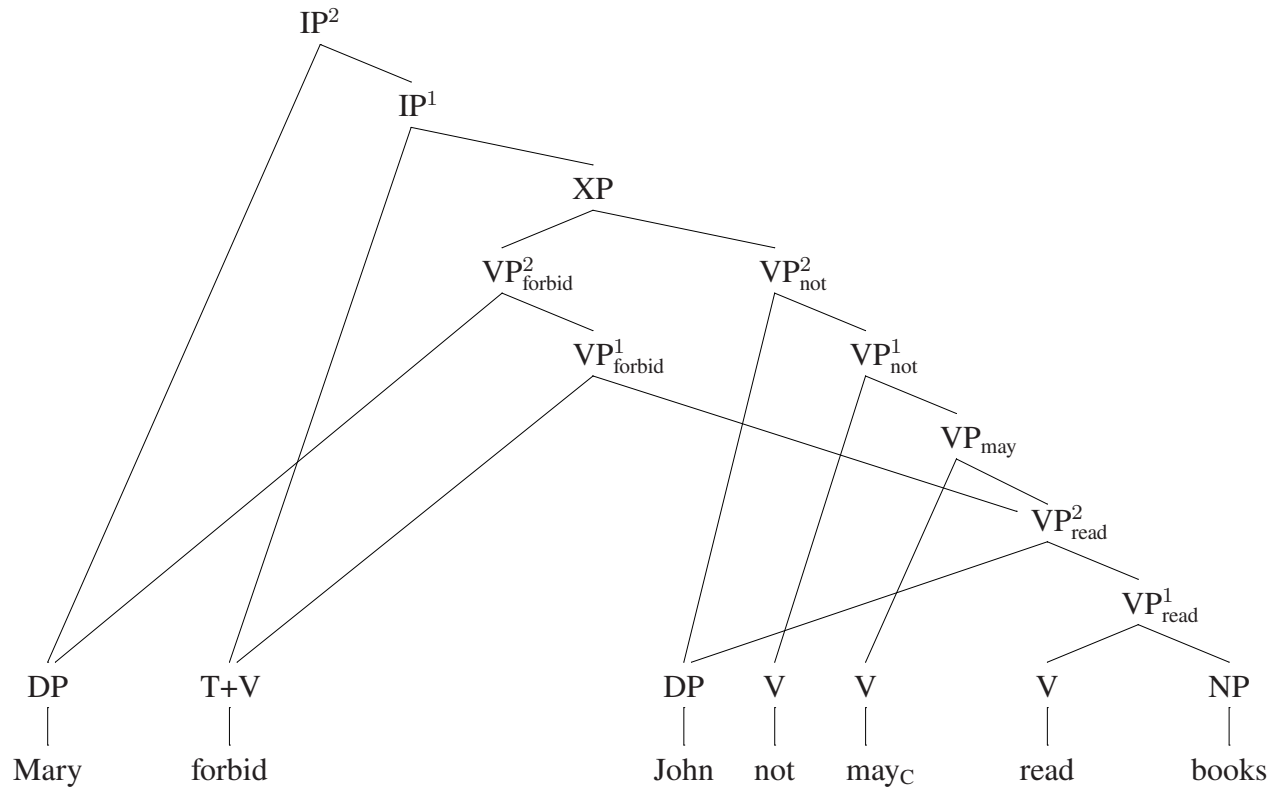
(50)



Given the final version of Propositional Modification, we predict that C must be resolved to the set of possible worlds compatible with the injunctions issued by Mary. This prediction is born out.

(51) A: Mary bắt John phải đọc sách.
Mary require John must read books
B: #Không đúng! Nội quy nhà trường cho phép John chơi thay vì đọc sách.
(Translation: Not true! School regulation allows John to play instead of read books.)

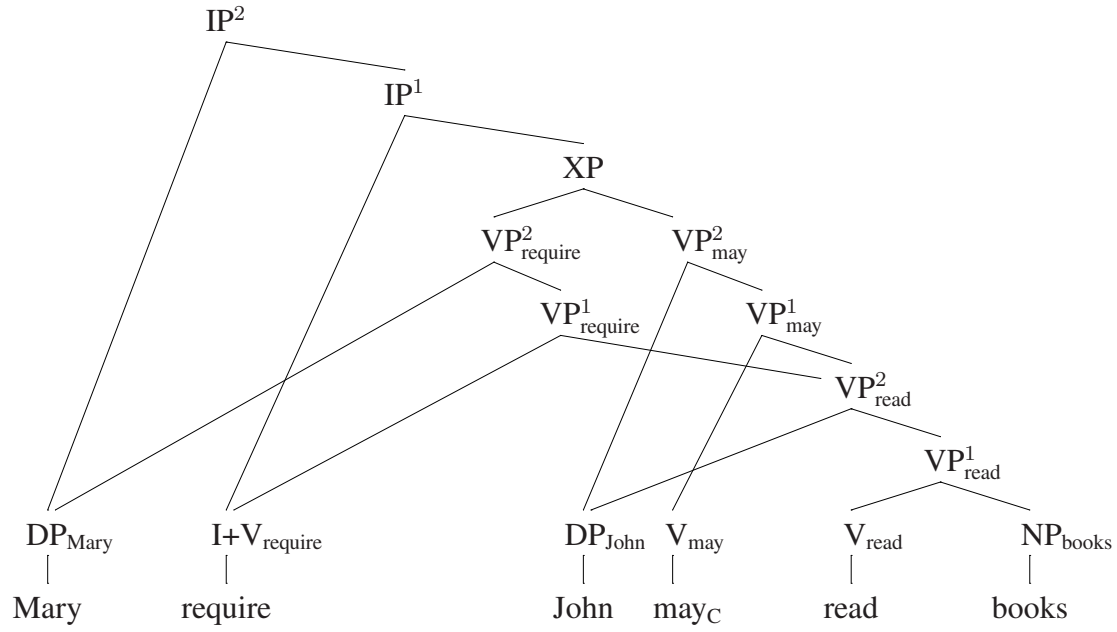
(52)



(53) A: Mary cấm John không được đọc sách
Mary forbid John not may read books
B: #Không đúng. Nội quy nhà trường cho phép John đọc sách.
(Translation: Not true! School regulation allows John to read books.)

But what about (54)?

(54)

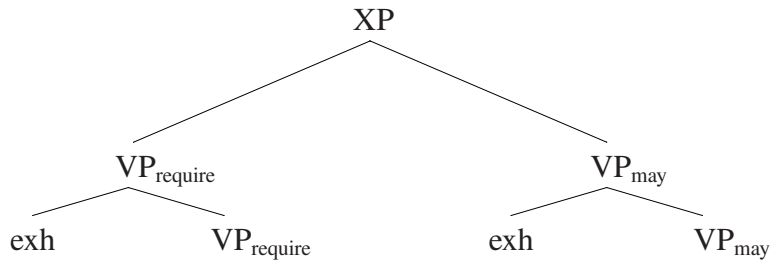


We predict (54) is possible. Then why the judgement in (55)?

(55) Mary bắt John được đọc sách
Mary require John may read books
'Mary requires John to be allowed to read books' / *'Mary requires John to read books'

Tentative answer: embedded exhaustification (cf. Krifka 1995, Fox 2007, Chierchia et al. 2012, Magri 2009, 2011, Sauerland 2012, among many others). Specifically, we assume that the sister of I, i.e. XP, in (55) is parsed as (56).

(56)

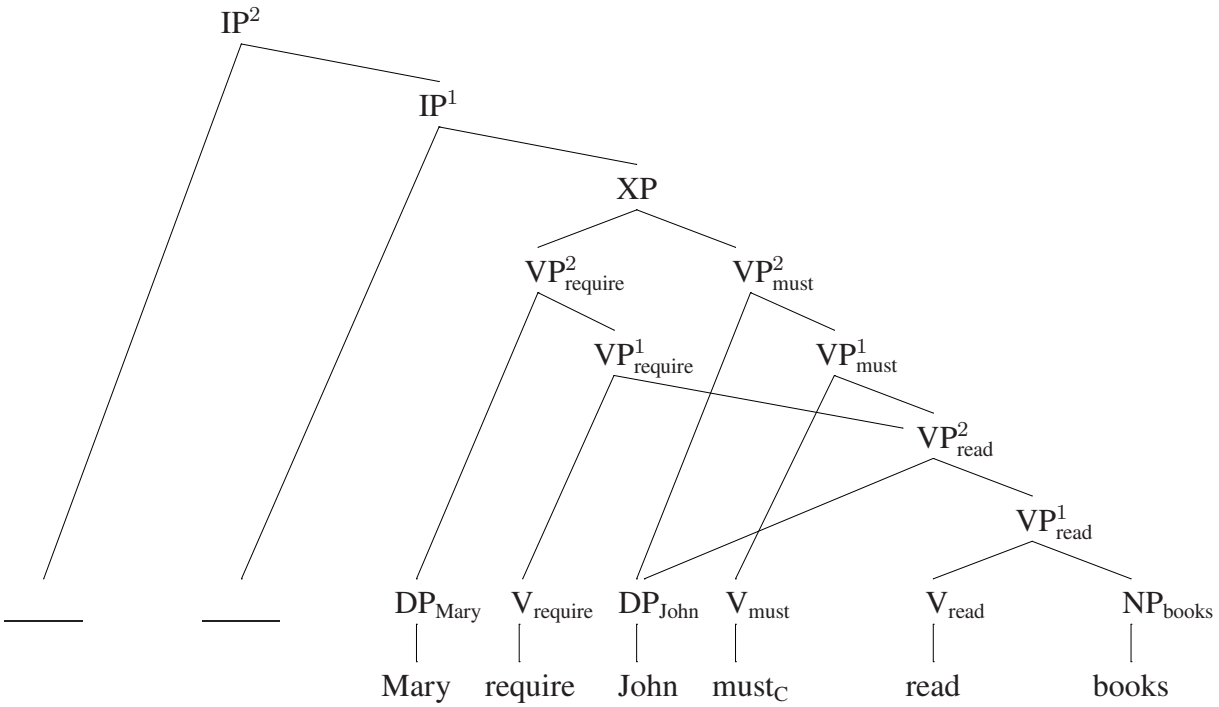


(57) a. exh(Mary require John read books) = Mary require John read books
b. exh(John may read books) = John may read books ∧ ¬John must read books

6 Residual issues

6.1 Choice of subject and main verb

(58)



(59) a. $V_{require}$ moves to I and DP_{Mary} moves to [Spec,IP]
⇒ attested word order: Mary⌢require⌢John⌢must⌢read⌢books
b. V_{must} moves to I and DP_{John} moves to [Spec,IP]
⇒ unattested word order: John⌢must⌢Mary⌢require⌢read⌢books

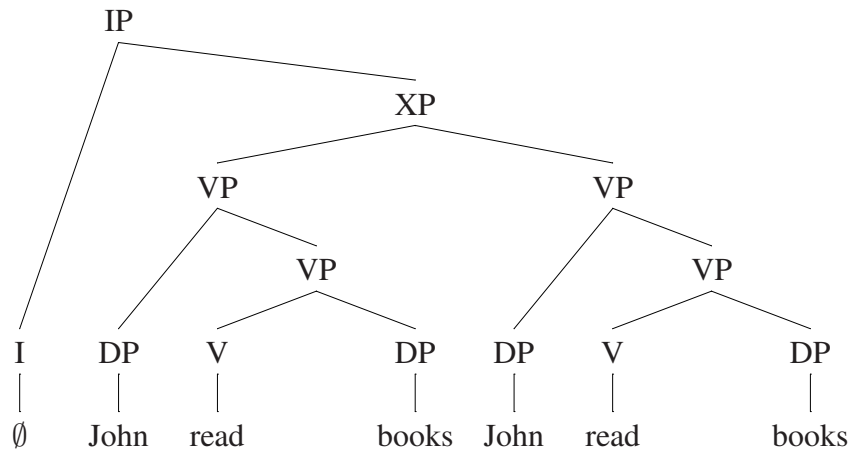
+ Question: Why is (59a) chosen by the grammar?

+ Tentative answers: (i) DP_{Mary} moves instead of DP_{John} because the former asymmetrically c-commands the latter; (ii) $V_{require}$ moves instead of V_{must} because there is a preference to preserve Spec-Head relations

6.2 Lack of non-multidominance structures

We predict that such structures as (60) cannot be derived because (i) XP cannot be labeled and (ii) none of the specifiers asymmetrically c-commands the other.

(60)



The judgement for (61) suggests that our prediction is correct.

(61) *John đọc sách đọc sách
John read books read books

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