

# Two Types of Paratactic Word-Order Variation

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“All movements go too far.”  
— Bertrand Russell

## -1 Historical Background

There have historically been two types of approaches to “movement,” one typified by GB, in which movement was always possible (“move- $\alpha$ ”) unless prohibited (filters, ECP, etc.); and the other typified by Minimalism, in which movement is possible only when motivated (feature checking, Greed, etc.).

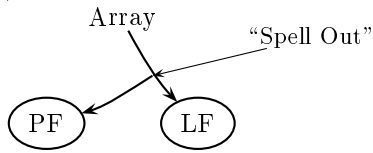
Traditionally, there have been two types of languages, “configurational,” in which GB and Minimalism accord well with observed word order, and “non-configurational,” in which neither theory accords well with observed word order.

But configurationality doesn’t always match-up with “freer word order,” (Hale 1989), and in any case, a theory that bifurcates languages seems undesirable.

And in fact, it seems that all languages exhibit two types of word-order variation: syntactic (or “Movement”) and paratactic.

## 0 Theoretical Background

### (1) General Architecture



The PF level interfaces with phonology, and the LF level with “interpretation,” whatever that might turn out to mean.

### (2) Word order:

- (a) Overt movement of X to Y occurs only if X and Y enter into a checking relation, that is, checking “strong” features. (Chomsky 1995)<sup>1</sup> (“Greed” and “Procrastinate.”)
- (b) More economic movement prohibits less economic movement.
- (c) Asymmetric C-command among constituents orders those constituents (Kayne 1993).
- (d) Every element must be ordered (Kayne).

I reject (d).

## 1 Data

### (3) Russian:

- (a) John videl svoju mašinu  
John saw self's car  
'John saw his (own) car.'

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<sup>1</sup>Chomsky leaves open the possibility that, when X moves to Y via Z, the movement to Z need not be motivated by strong features, even though the final movement to Y must be.

- (b) videl svoju mašinu John  
saw self's car John
- (c) svoju videl John mašinu  
self's saw John car
- (d) svoju mašinu videl John  
self's car saw John
- (e) John svoju mašinu videl  
John self's car saw
- (f) John svoju videl mašinu  
John self's saw car
- (g) mašinu videl John svoju  
car saw John self's
- (h) mašinu videl svoju John  
car saw self's John

*etc.*

(4) Latin (Horace, *Odes* 1.22):

- (a) Namque mē silvā lupus in Sabīnā dum meam cantō  
Lalagēn et ultrā terminum cūrīs vagor expeditīs fūgit  
inermem.
- (b) For me-Acc forest-Abl wolf-Nom in Sabine-Abl while  
my-Acc I-was-serenading Lalage-Acc and beyond [the]  
border cares-Abl I-was-wandering set-free-Abl avoids  
unarmed-Acc
- (c) For the wolf in the Sabine forest avoids me [in my state  
of being] unarmed [or “an unarmed me”] while I was  
serenading my Lalage and wandering beyond the border  
care-free [lit: cares set-free]
- (d) For me<sub>i</sub> [forest<sub>l</sub> wolf in t<sub>l</sub> Sabine] [[while my<sub>k</sub> I-was-  
serenading [t<sub>k</sub> Lalage]] and [beyond the border cares<sub>j</sub>  
I-was-wandering [t<sub>j</sub> set-free]]]m avoids t<sub>i</sub> unarmed t<sub>m</sub>.

(5) More Russian:

- (a) ja svojevo dumaju što ty videla brata  
I self's-ACC think that you saw brother  
'I think that you saw your/\*my (own) brother'
- (b) ja svojevo videl brata  
I self's-ACC saw brother  
'I saw my (own) brother.'

(6) English:

- (a) Often John has kissed Mary.
- (b) John often has kissed Mary.
- (c) John has often kissed Mary.
- (d) \*John has kissed often Mary.
- (e) John has kissed Mary often.

(7) French:

- (a) Souvent Jean a embrassé Marie  
often Jean has kissed Marie
- (b) \*Jean souvent a embrassé Marie  
Jean often has kissed Marie
- (c) Jean a souvent embrassé Marie  
Jean has often kissed Marie
- (d) Jean a embrassé souvent Marie  
Jean has kissed often Marie
- (e) Jean a embrassé Marie souvent  
Jean has kissed Marie often

Examples (3–7) demonstrate **m-scrambling**, and (6) and (7) demonstrate **a-scrambling**.

## 2 M-scrambling

M-scrambling (“mobile” scrambling) obtains when two (or more) sub-trees of a sentence do not merge into one single-rooted tree before Spell-Out:

- (8) If  $\alpha$  does not check strong features on  $\beta$ , and  $\beta$  does not check strong features on  $\alpha$ ,  $\alpha$  and  $\beta$  cannot merge until after Spell-Out. If one checks weak features on the other, they must merge after Spell-Out.
- (9) If  $\alpha$  and  $\beta$  are sent to PF un-merged,  $\alpha$  may appear before or after  $\beta$  (other conditions notwithstanding), but neither may intervene within the other.

### 2.1 DP’s

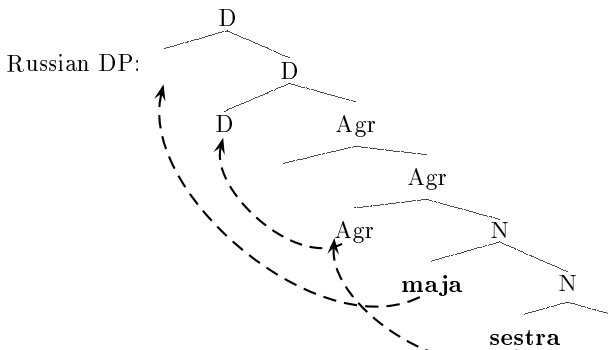
Cross-linguistically, it seems that those languages that do not have either a definite or indefinite determiner can break up a DP, as in Latin, Russian, Polish, ASL(?) and others:

- (10) maju ja videl sestru (Russian)  
       my I saw sister  
       ‘I saw my sister’

This is impossible in English, French, Spanish, Hebrew, etc:

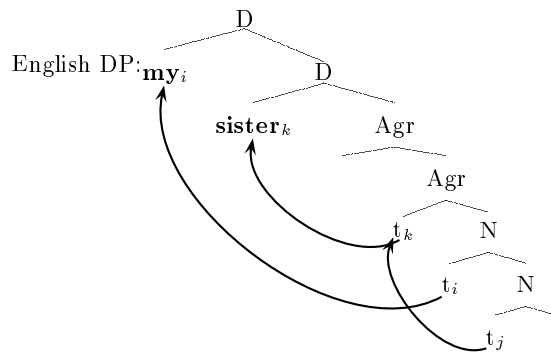
- (11) \*\*My I saw sister.

(12)



(Dashed lines indicate covert movement.)

(13)



## 2.2 PP's

Nothing can come between a Russian P and its object:

- (14) (a) maja kniga na stale  
my book on table  
'My book is on a/the table'
- (b) kniga maja na stale  
book my on table
- (c) kniga na stale maja  
book on table my
- (d) \*kniga na maja stale  
book on my table

The object of a Russian P cannot m-scramble:

- (15) (a) na stale  
on table  
'on a/the table'
- (b) \*stale na  
table on
- (c) u menja knigi  
chez me books  
'I have books.'

(d) knigi u menja  
books chez me

(e) \*u knigi menja  
chez books me

But this is not because of considerations of Case:

(16) (a) u menja nyet knig  
chez me no books-Gen  
'I have no books.'

(b) u menja knig nyet  
chez me books-Gen no

If the P's object has more than one word, part (but not all) of the object can m-scramble:

(17) silvā lupus in Sabīnā  
forest wolf in Sabine  
'[a] wolf in the Sabine forest'

(18) (a) bjez majim bratam  
without my brother  
'without my brother'

(b) majim bjez bratam  
my without brother

(c) bratam bjez majim  
brother without my

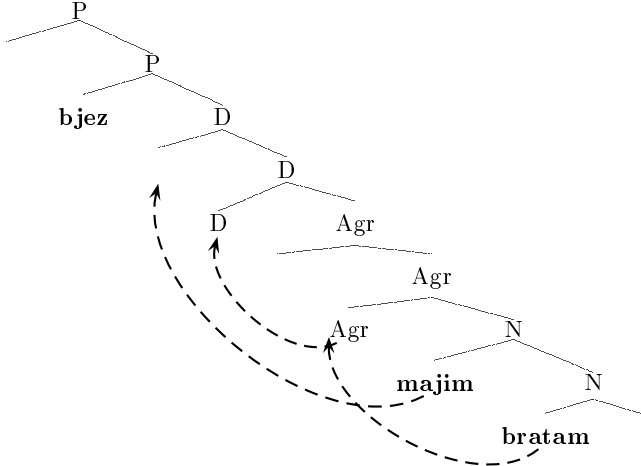
(d) bjez bratam majim  
without brother my

(e) \*majim bratam bjez  
my brother without

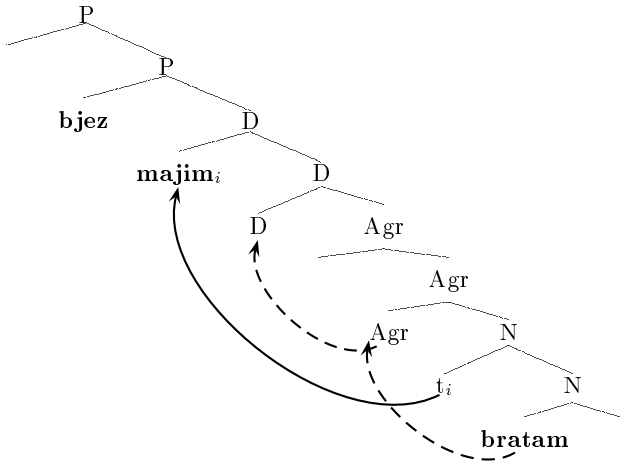
But this is not for phonological reasons:

(19) ja idu bjez  
("Are you going with your brother?" "No,) I go without  
'I am going without [him].'

(20)

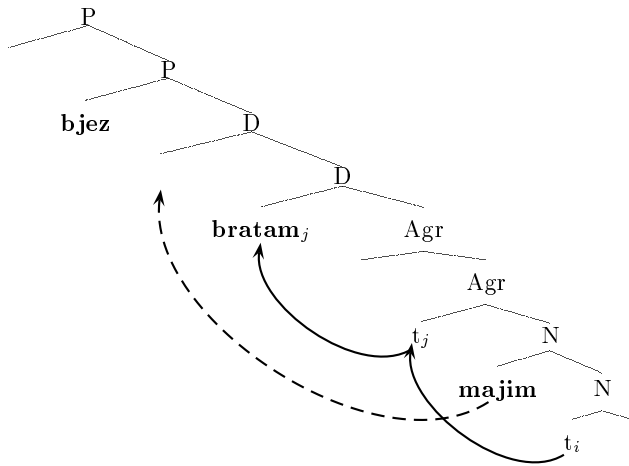


(21)





(22)



### 2.3 Scope of m-scrambling

This m-scrambling is not limited to a CP, and can cross barriers, as expected:

(23) (a) ja svojevo dumaju što ty videla  
I self's-ACC think that you saw  
brata  
brother  
'I think that you saw your/\*my (own) brother'

(b) ja brata dumaju što ty videla svojevo  
I brother think that you saw self's  
'I think that you saw your (own) brother'

(c) svojevo brata ja ne znaju pocemu  
self's brother I Neg know why  
ty ne videl  
you Neg saw  
'I don't know why you didn't see your brother.'

- (d) svojevo brata mnje interesna pocemu  
 self's brother to-me interests why  
 Sasha ne videl  
 Sasha Neg saw  
 'I wonder why Sasha didn't see his (own) brother.'
- (e) ?svojevo mnje interesna pocemu Sasha ne  
 self's to-me interests why Sasha Neg  
 videl brata  
 saw brother  
 'I wonder why Sasha didn't see his (own) brother.'
- (f) ničevu ja znaju počemu on ne videl  
 nothing I know why he Neg see  
 'I know why he didn't see anything.'

### 3 Reconstruction

“Reconstruction” in regard to m-scrambling is not construction anew, but simply post-Spell-Out construction.

#### 3.1 Criteria

(24) Three criteria for reconstruction:

- (a) Binding.
- (b) Negative Polarity Items.
- (c) Idioms.

#### 3.2 Binding

(25) English:

- (a) %Himself<sub>i</sub> he<sub>i</sub> saw.
- (b) %Him<sub>i</sub> he<sub>i</sub> saw.

(26) Russian:

- (a) brata<sub>i</sub> svojevo<sub>\*i/j</sub> videl John<sub>j</sub>  
 brother self's saw John  
 'John saw his own brother'

- (b) \*yevo<sub>i</sub> brata Sasha<sub>i</sub> videl  
 his brother Sasha saw  
 'Sasha<sub>i</sub> saw his<sub>i</sub> brother.'

(27) Spanish:

- (a) vio Pedro su auto  
 saw Pedro his car  
 'Pedro<sub>i</sub> saw his<sub>i</sub> car.'
- (b) \*su auto vio Pedro  
 his car saw Pedro  
 'Pedro<sub>i</sub> saw his <sub>\*i/j</sub> car'

(28) Hebrew:

- (a) Dani ra'a et acmo  
 Dani saw Acc himself  
 'Dani saw himself.'
- (b) Dani et acmo ra'a  
 Dani Acc himself saw
- (c) et acmo Dani ra'a  
 Acc himself Dani saw
- (d) et acmo ra'a Dani  
 Acc himself saw Dani
- etc.*

### 3.3 NPI's

(29) Russian:

- (a) Ivan ničevu ne videl  
 Ivan nothing Neg saw  
 'Ivan didn't see anything.'
- (b) Ivan ne videl ničevu  
 Ivan Neg saw nothing
- (c) ničevu Ivan ne videl  
 nothing Ivan Neg saw

- (d) ničevó ne videl Ivan  
nothing Neg saw Ivan
- (e) ne videl Ivan ničevó  
Neg saw Ivan nothing
- (f) ne videl ničevó Ivan  
Neg saw nothing Ivan
- (g) \*Ivan ničevó videl  
Ivan nothing saw

(30) English:

- (a) John didn't see anything.
  - (b) \*Anything John didn't see.
  - (c) \*John anything didn't see.
- etc.*

(31) Hebrew:

- (a) Dani lo ra'a af-exad  
Dani Neg saw no-one  
'Dani didn't see anyone.'
  - (b) \*Dani ra'a af-exad  
Dani saw no-one
  - (c) af-exad Dani lo ra'a  
no-one Dani Neg saw
  - (d) ?af-exad lo ra'a Dani  
no-one Neg saw Dani
  - (e) af-exad lo ra'u Dani v'Sara  
no-one Neg saw Dani and Sara  
'Dani and Sara din't see anyone'
- etc.*

### 3.4 Idioms

(32) Russian:

(a) Ivan zakusil udila  
Ivan bit mouth  
'Ivan was/became stubborn'

(b) \*udila byli zakušeny Ivanom  
mouth was bitten by Ivan  
'Ivan became stubborn.'

(c) udila Ivan zakusil  
mouth Ivan bit

(d) zakusil Ivan udila  
bit Ivan mouth

*etc.*

(e) Ivan nalomal drov  
Ivan broke logs  
'Ivan make a lot of mistakes.'

(f) \*drova nalomany im  
logs were-broken by-him  
'A lot of mistakes were made by him.'

(g) drov nalomal Ivan  
logs broke Ivan

(h) Ivan drov nalomal  
Ivan logs broke

*etc.*

(33) English:

(a) \*The road we hit. ( $\neq$  We hit the road)

(b) \*The bucket he kicked ( $\neq$  He kicked the bucket.)

(c) \*The coop he flew ( $\neq$  He flew the coop)

*etc.*

(34) Hebrew:

(a) ha-xevra pašta et ha-regel  
the-company simplified Acc the-foot  
'The company went bankrupt.'

- (b) \*ha-regel nif's'ta al yade ha-xevra  
 the-foot was-simplified by the-company  
 'The company went bankrupt.'
- (c) et ha-regel ha-xevra pašta  
 Acc the-foot the-company simplified
- (d) et ha-regel pašta ha-xevra  
 Acc the-foot simplified the-company
- etc.*

## 4 M-scrambling in English

- (35) (a) I saw Bill lying in the sun.  
 (b) \*[Lying in the sun]<sub>i</sub> I saw Bill<sub>i</sub>.
- (36) (a) [Lying in the sun]<sub>i</sub> I saw Bill<sub>i</sub> reading a book.  
 (b) [Reading a book]<sub>i</sub> I saw Bill<sub>i</sub> lying in the sun.
- (37) (a) John saw Bill reading a book about himself.  
 (b) \*Reading a book about himself<sub>i</sub> John saw Bill<sub>i</sub>.  
 (c) John saw Bill lying in the sun reading a book about himself.  
 (d) [Reading a book about himself<sub>i</sub>]<sub>i</sub> John<sub>j</sub> saw Bill<sub>i</sub> lying in the sun.  
 (e) [Reading a book about himself<sub>j</sub>]<sub>j</sub> John<sub>j</sub> saw Bill<sub>i</sub> lying in the sun.
- (38) (a) [Often criticized for their unreliability]<sub>i</sub> the *New York Times* startled many readers by praising the two flamboyant researchers<sub>i</sub>.  
 (b) [Unable to fly]<sub>i</sub> many people wonder why Penguins<sub>i</sub> are considered birds.  
 (c) The zoologist explained why although [unable to fly]<sub>i</sub> people would err to consider Penguins<sub>i</sub> anything but birds.

- (d) [Unable to publish material formally]<sub>i</sub> the Internet has made it possible for rank amateurs<sub>i</sub> nonetheless to reach wide audiences with their insipid ideas.
  - (e) Many rank amateurs think that [living in their ivory towers]<sub>i</sub> the media devotes too much attention to professors<sub>i</sub> and their publications.
- (39)
- (a) \*Who did the *New York Times* startle many readers by praising?
  - (b) \*Who/What do many people wonder why are considered birds?
  - (c) \*The zoologist explained why Penguins<sub>i</sub> people would err to consider t<sub>i</sub> anything but birds.
  - (d) \*Who<sub>i</sub> has the Internet made it possible for <sub>i</sub> nonetheless to reach wide audiences with their insipid ideas.
  - (e) \*Many rank amateurs think that professors<sub>i</sub> the media devotes too much attention to t<sub>i</sub> and their publications.

## 5 A-scrambling

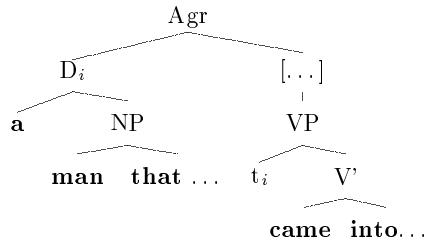
A-scrambling (“adjunct” scrambling) obtains when two phrases fail to enter into an asymmetric c-command (ac-command) relation.

- (40) If  $\alpha$  and  $\beta$  do not enter into an ac-command relation, they are sent to PF unordered.
- (41) An element  $\alpha$  of tree  $T$  may appear anywhere in  $T$  provided that it does not violate ordering constraints and that it does not violate adjacency constraints.
- (42) Elements  $\alpha$  and  $\beta$  must be adjacent if they enter into a strong-feature-checking relation.
- (43) If  $\alpha$  or a phrase containing  $\alpha$  ac-commands  $\beta$  or a phrase containing  $\beta$ , then  $\alpha$  must appear linearly before  $\beta$  at PF.

## 5.1 Extraposition

“A man that no one knew came into the room.”

(44)



Using the notation  $\text{acc}(\alpha, \beta)$  to indicate that  $\alpha$  ac-commands  $\beta$ , we find that  $\text{acc}(a, \text{man})$ ,  $\text{acc}(a, \text{that...})$ ,  $\text{acc}(\text{man}, \text{that...})$ ,  $\text{acc}(\text{man}, \text{came})$ ,  $\text{acc}(\text{came}, \text{into})$ . So  $a$  must precede  $\text{man}$ , which must precede  $\text{came}$ , which in turn precedes  $\text{into}$ , yielding, “A man came into.” However, the phrase “that...” is not ordered w.r.t. “into the room.”

(45) (a) A man that no one knew came into the room.

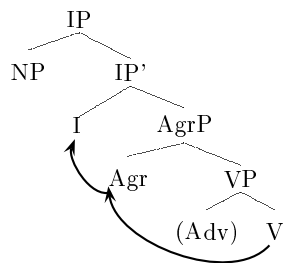
(b) A man came into the room that no one knew.

(This is contra Culicover & Rochemont (1990), who argue for a movement approach to extraposition.)

## 5.2 Adverb placement

French (Pollock 1989):

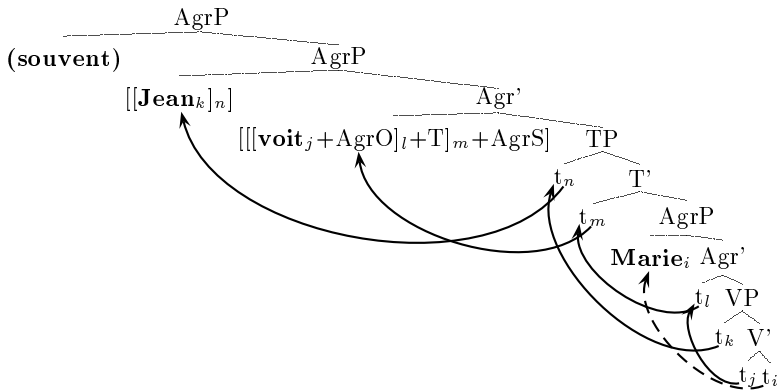
(46)





French (Chomsky (1995)-ish):

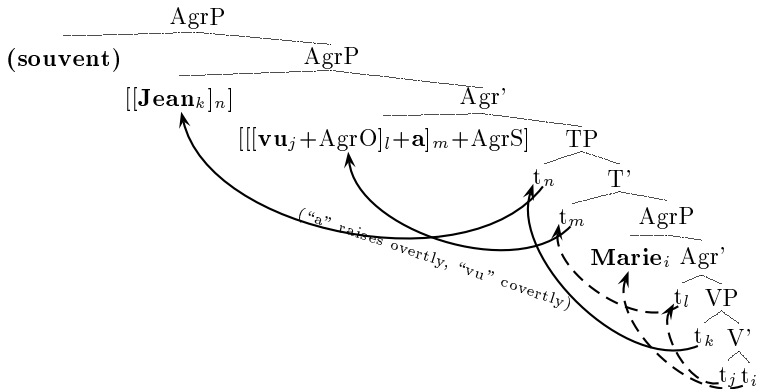
(47)



(48) (souvent) Jean (\*souvent) voit (souvent) Marie (souvent)

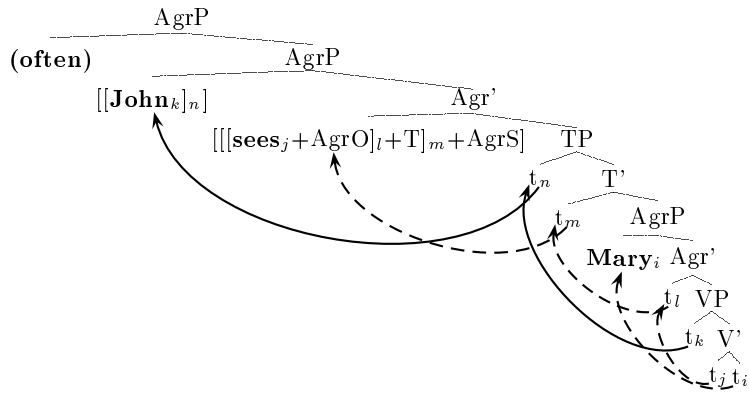
French:

(49)



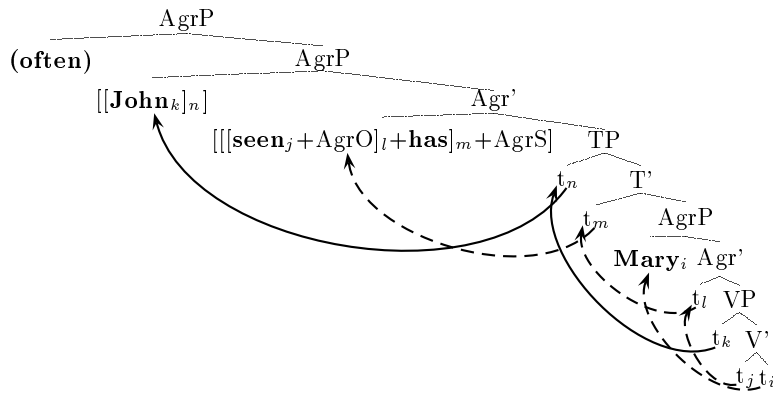
(50) (souvent) Jean (\*souvent) a (souvent) vu (souvent) Marie (souvent)

(51)



(52) (Often) John (often) sees (\*often) Mary

(53)



(54) (Often) John (often) has (often) seen (\*often) Mary

### 5.3 Adverb Interpretation

The actual attachment site, rather than the location at PF, determines interpretation:

(55) (a) Happily Mary saw John.

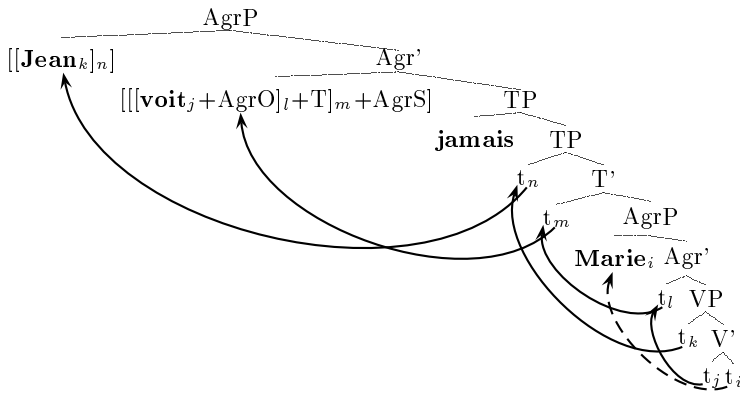
- (b) Mary happily saw John. (ambiguous)
  - (c) \*Mary saw happily John.
  - (d) Mary saw John happily. (ambiguous)
- (56) (heureusement) Marie (\*heureusement) a (heureusement) vu  
 (heureusement) Jean (heureusement).

### 5.4 Negation — another solution

Perhaps negation adjoins to TP?

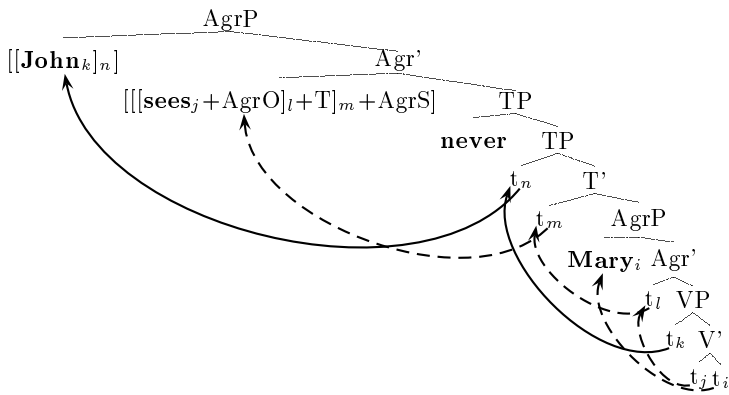
French:

(57)



English:

(58)



## 5.5 More adjuncts

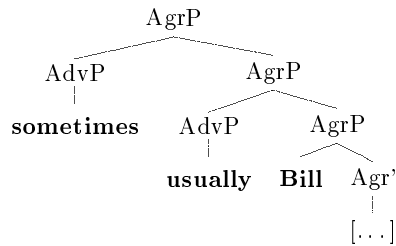
- (59) Bill didn't go outside because it was raining.
- (60) (a) The reason Bill didn't go outside was that it was raining.  
 (b) That Bill went outside because it was raining is not true.
- (61) (a) Not all items available in all stores.  
 (b) Not all items available in some stores.

## 5.6 Scope among adjuncts

- (62) (a) Bill sometimes usually buys semi-sweet chocolate.  
 (b) Bill usually sometimes buys semi-sweet chocolate.
- (63) (a) It is sometimes the case that Bill usually buys semi-sweet chocolate.  
 (b) It is usually the case that Bill sometimes buys semi-sweet chocolate.

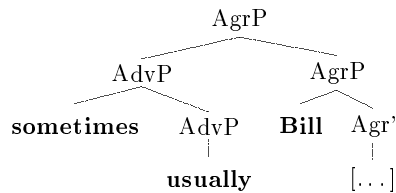
Impossible structure:

(64)



Correct structure:

(65)



## 6 Summary

Some word-order variation differs from classical “movement” in the following ways:

1. The apparent movement must “reconstruct” (as determined by binding, NPI’s and idiom interpretation).
2. The apparent movement need not be syntactically motivated, contra movement criteria in Minimalism, and is not constrained by filters such as the ECP, contra GB.
3. The apparent movement need not obey island constraints.
4. The apparent movement correlates with (so far) either weak feature checking (m-scrambling) or lack of ac-command (a-scrambling).

Based on this evidence, a dual approach to word-order variation, in which some variation results from classical movement, and some variation from a failure of the syntax to order words, seems desirable. M-scrambling and a-scrambling are two instances of this paratactic word-order variation.

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A musical staff with a treble clef on the left. The letters "JMH" are written across the staff in a large, elegant, cursive font. The letters are positioned such that they span across the middle lines of the staff.