

TOP-DOWN DERIVATION AS FLEXIBLE SYNTAX

Jan-Wouter Zwart and Marjolein Wietske Talsma

University of Groningen

c.j.w.zwart@rug.nl

m.w.talsma@rug.nl



Flexible Syntax (Neeleman & Weerman 1999)

- Subjects and objects are **base generated** in their **grammatical function positions**
- No A-movement
- Arguments **don't have theta-roles** in syntax
- Thematic roles are **LF interpretations** of case features

Are there theta-positions?

- Traditionally, argument noun phrases become associated with a certain theta-role by being generated in particular **positions within the vP** (theta-positions) (Chomsky 1981)
- In Chomsky et al. (2023) argument noun phrases *must* be generated in a **vP-internal** theta-position

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- In Chomsky et al. (2023) argument noun phrases *must* be generated in a **vP-internal** theta-position
- Argument noun phrases often occur **outside** of the vP

(1) ... dat **Jan Marie** *waarschijnlijk niet* [_{vP} gezien heeft]
that John Mary probably not seen has
'... that John probably did not see Mary'

Are there theta-positions?

- Thematic roles are typically **not morphologically marked** on argument noun phrases (unlike grammatical functions)
- Syntactic position is not a reliable indicator of thematic interpretation
→ Subjects and objects can be interpreted as carrying a **range** of thematic roles
- The association of grammatical functions and thematic roles can be affected by **syntactic operations** (e.g. passivisation)

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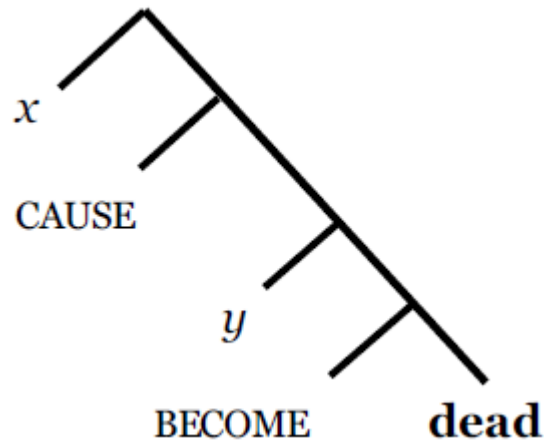
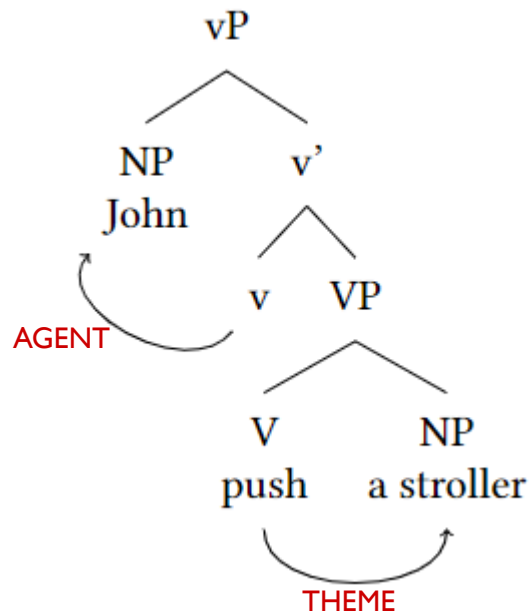
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 - The association of grammatical functions and thematic roles can be affected by **syntactic operations** (e.g. passivisation)
- We do not need to assume that theta-roles are assigned to arguments in theta-positions in (narrow) syntax

Syntactic decomposition

- vP-internal theta-positions are linked to the idea that there are **verbal shells** (Larson 1988; Hale & Keyser 1993; Kratzer 1994), leading to a decomposition into **roots** and **event structure heads** (Harley 1995; Ramchand 2008)

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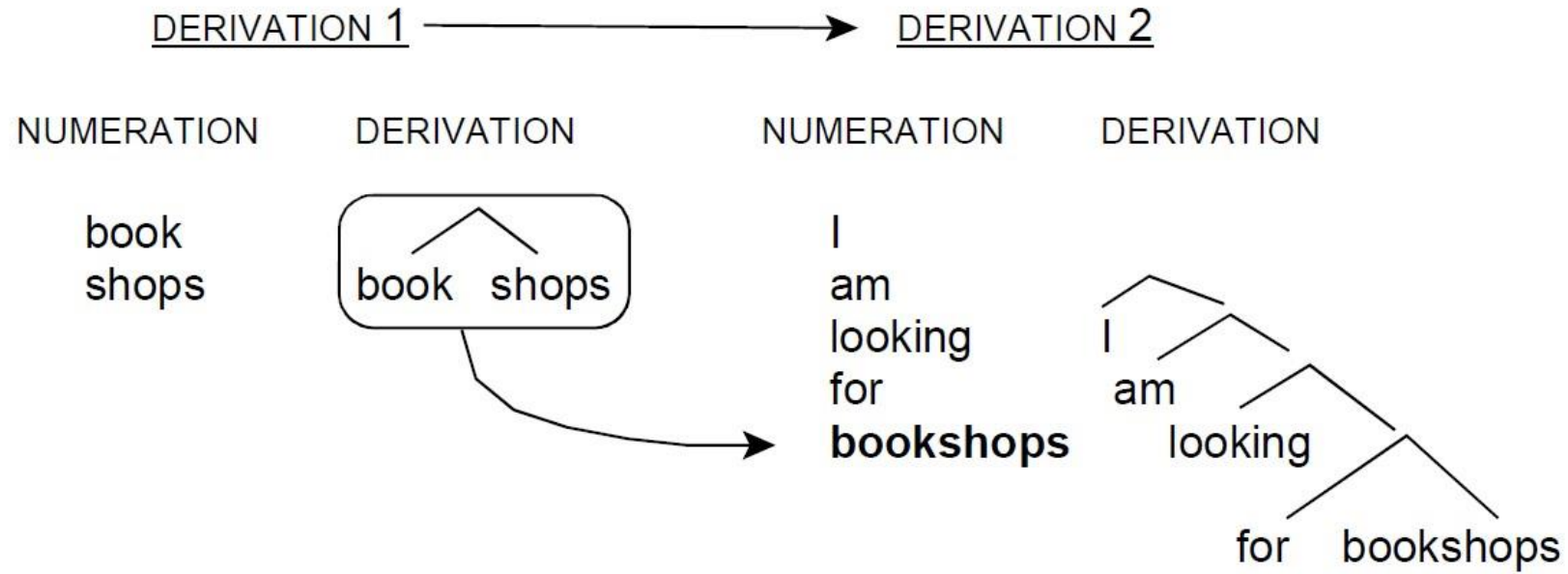
Hale and Keyser paradox

- “The proper representation of predicate argument structure is itself **a syntax**” (Hale & Keyser 1993:53)
- “All verbs are to some extent **phrasal idioms**” (Hale & Keyser 1993:96)

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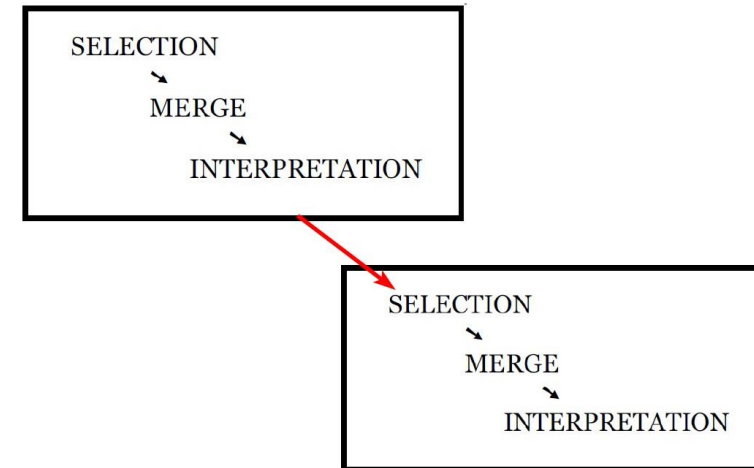
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- Lexical or syntactic **decomposition**?

Layered derivations



Layered derivations

- Every derivation is a **network of derivations**
- What is complex in one derivation can be an **atomic** element in the next
- If atomic means ‘opaque’, we derive a very general **locality** condition
- **Idiomaticity** is determined at the **interfaces**



Locality: in any subderivation, you can only merge material that is in the selection (Numeration) of that subderivation.

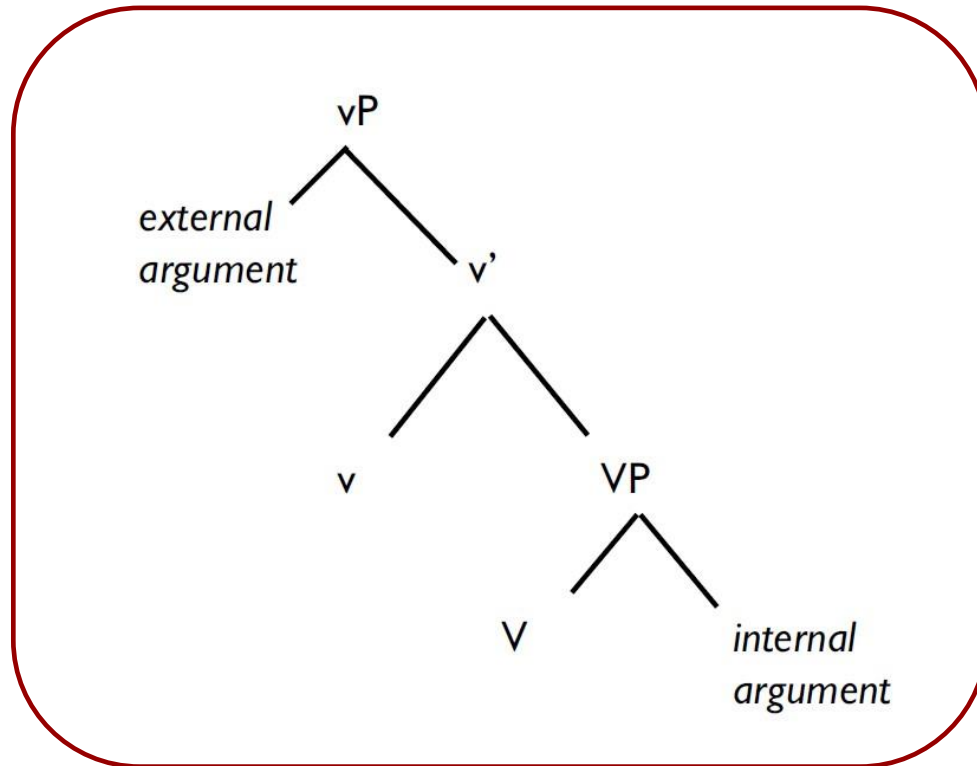
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- Predicates seem to have both **syntactic** and **lexical** qualities
- Lexical or syntactic **decomposition**?
 - Predicates are built in a separate derivation
 - They have an **internal syntactic structure**
 - They behave like **atoms** (single lexical items) in the clausal derivation

VP-internal argument positions



← VERB = derived in a subderivation

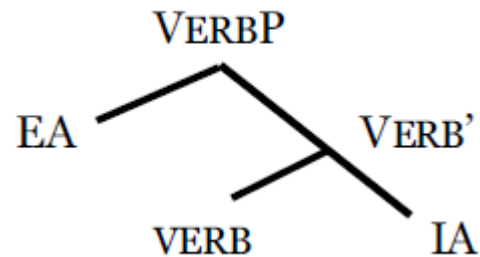
- is then included in the next Numeration as a single atomic element
- If so, the arguments of the verb **cannot** be generated inside *vP* (because they would never be able to move out, by the general principle of locality)

Theta-role interpretation

- Predicates are built in a separate derivation (VERBS) → No A-movement
- How do arguments become associated with predicates?

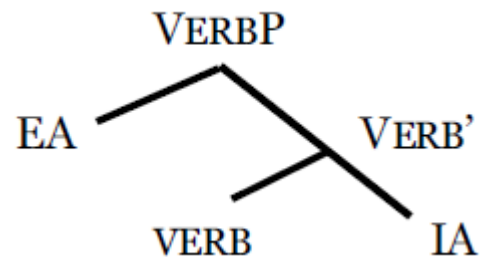
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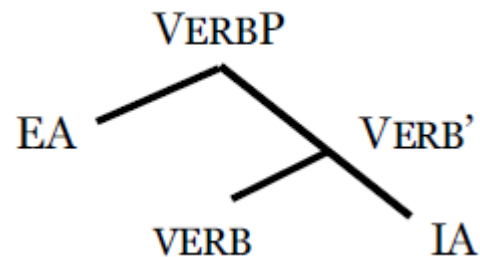
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- We would need (A-)**movement** to derive sentences like (1)

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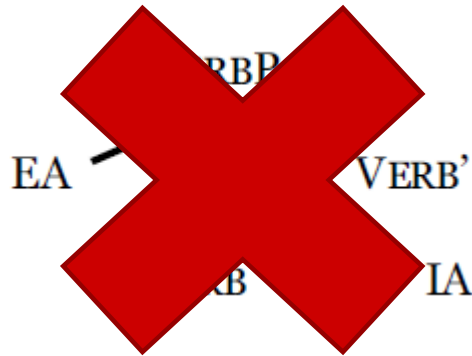
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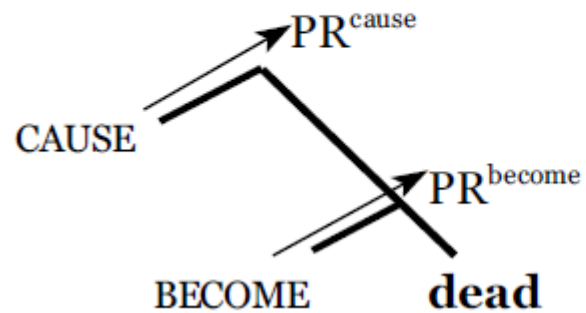
Talsma (to appear):

- The subcomponents of the VERB (*Cause, Become*) make **PR** (participant requirement) **features** available
- These express the VERB's **valency**

Theta-role interpretation

Talsma (to appear):

derivation of the complex verb



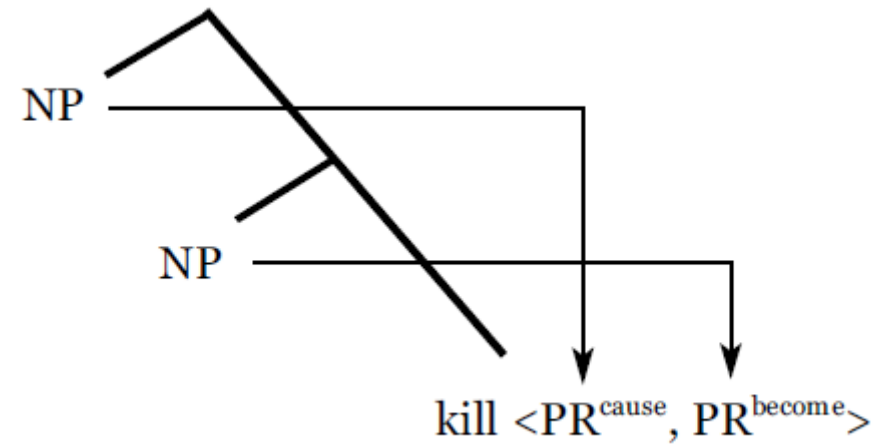
resulting lexical item

kill $\langle PR^{cause}, PR^{become} \rangle$

Theta-role interpretation

Talsma (to appear):

- In the clausal derivation, NPs **value** these features under **c-command** (top-down)



Theta-role interpretation

- Arguments are **interpreted** as playing a certain role in the event at LF
- *Interpretation-Determining Arguments' Hierarchical Order*
The interpretation of the arguments, i.e. the “role” they play in the event, is determined by their **hierarchical order**, which reflects the hierarchical order of the functional heads in the internal structure of the predicate.

Theta-role interpretation

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NP/PR-feature mismatches

- More PR-features than NPs results in an **existential object** interpretation

(2) John was eating (pasta)

- More NPs than PR-features results in an **uninterpretable** structure

(3) *John was eating pasta the Bible

Alternations with “IA” subjects

- Passives: the “external” theta-role is **suppressed**

(4) The pasta was eaten *eat*<~~Pr^{cause}~~, PR^{become}>

- Unaccusatives: there is **no Cause layer present** in the VERB’s the internal structure

(5) The vase broke *break*<PR^{become}>

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(6) John broke the vase *break*<Pr^{cause}, PR^{become}>

Unergatives versus unaccusatives

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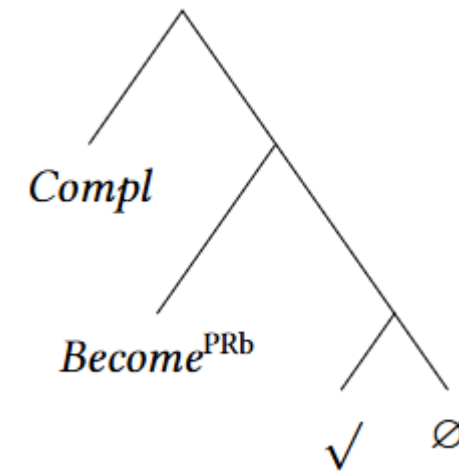
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 - Unergatives: *eat*<Pr^{cause}, PR^{become}>, *walk*<PR^{do}>
 - Unaccusatives: *break*<PR^{become}>

Unergatives versus unaccusatives: semantics

- -er nominalization (unergatives: **yes**, unaccusatives: **no**)
 - *walker, eater, *breaker*
 - -er is **inherently agentive** (semantics)
 - -er can value a PR-feature
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- Prenominal past participle (PPP) (unergatives: **no**, unaccusatives: **yes**)
 - *The *walked/*eaten/broken man*
 - The PPP is formed by affixation of a **Completive head** (Compl)
 - Compl combines with a BECOME head (the only head expressing a **transition to a final state** (semantics))
 - CAUSE is not part of this structure
 - The modified noun cannot be associated with this head



Unergatives versus unaccusatives: Spell-Out

- Auxiliary selection in the periphrastic past (unergatives: HAVE, unaccusatives: BE)
 - *Ik heb gegeten/gelopen* *Ik ben gebroken/gestorven*
 - Auxiliaries are a **spell-out of features on V** (Zwart 2017)
 - Contributing features on V:
 - PST + ANT: periphrastic past
 - highest valued PR-feature: auxiliary selection (PR^{cause}/PR^{do}: HAVE, PR^{become}: BE)
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- Why the highest valued PR-feature?
 - Related to type of predicate
 - Auxiliaries are a **vehicle of subject agreement**
 - Importance subject agreement becomes clear when looking at certain Italian dialects (e.g., Abruzzese: 1st & 2nd → BE, 3rd → HAVE (D'Alessandro & Roberts 2010))

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- Passives: highest valued PR-feature → PR^{cause} is skipped

Unergatives versus unaccusatives: licensing

- Secondary resultative predicates (unergatives: **yes**, unaccusatives: **no**)
 - *He walked his shoes to shreds* **The lamp fell itself broken*/**He died his children rich*
 - The matrix and embedded predicate form a **complex predicate** (cf. Neeleman 1994), formed in a separate derivation
 - The complex predicate expresses a **single, complex event** with one set of PR-features
 - The highest PR-feature of the embedded predicate and the lowest PR-feature of the matrix predicate **fuse** (*paint white*<PR^{cause}, PR^{become/be}>)
 - Links the two predicates together as a single event
 - Creates **order** among the PR-features (necessary for IDAHO)

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 - A secondary resultative predicate can only be integrated into the complex event if there is a CAUSE
 - The secondary resultative predicate **must be licensed** by the matrix predicate
 - Unaccusatives lack a CAUSE head

Unergatives versus unaccusatives: licensing (cont.'d)

- Impersonal passives (unergatives: **yes**, unaccusatives: **no**)
 - *Er werd gegeten/gelopen* **er werd gebroken/gestorven*
 - The passive makes one PR-feature **unavailable** for valuation
 - The passive cannot affect the BECOME head (similar to existing proposals stating that passive affects the (head introducing the) external argument)
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Conclusion: the **internal structure** of the predicates in combination with **IDAHO** ensures that there is **no need to assume different base positions** of unergative and unaccusative subjects to account for their difference in behavior

Traditional approach vs our approach

	Traditional approach	Our approach
Mismatch theta-roles allowed	✗	✓
Single configuration for “theta-assignment”	✗	✓
Same predicate for pseudotransitive alternation	✗	✓
Dispenses with A-movement	✗	✓

Duality of semantics and a top-down derivation

- Chomsky et al. (2023): there is a **binary split** among syntactic positions
 - External Merge (EM): theta-positions
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 - In our system, there are **no theta-positions**
 - Grammatical function positions
 - Discourse/information structure positions
- The EM/IM distinction hinges on the Chomsky et al. (2023) conception of duality of semantics and is now untenable
- The **special status** of theta-positions and EM is rooted in a commitment to a **bottom-up** orientation of the derivation

Duality of semantics and a top-down derivation

- Traditionally EM combines two elements (a verb and an NP) into a set, which results in theta-role assignment (and the creation of a theta-position)
- But:
 - Noun phrases do not ‘carry’ theta-roles
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Duality of semantics and a top-down derivation

- Traditionally EM combines two elements (a verb and an NP) into a set, which results in theta-role assignment (and the creation of a theta-position)
 - But:
 - Noun phrases do not ‘carry’ theta-roles
 - There are no theta-positions
- The bottom-up approach therefore loses much of its intuitive appeal

A top-down approach

- **Split-Merge** (Zwart 2009:162):

“Each derivation of syntactic structure needs (a) a set of elements N manipulated in the course of the derivation, called ‘numeration’ and (b) a procedure establishing relations among the members of N, called ‘merge’.

Simplicity considerations then demand:

- (1) a. Merge manipulates **a single element of N** at each step of the derivation.
b. Merge manipulates each element from N **only once**.

These requirements are not met in standard conceptions of the derivational procedure [...].”

A top-down approach

- Split-Merge targets **one** element at a time
- This element is an element **in the Numeration** (an unordered set)
- Split-Merge **splits the element off** from the Numeration, creating an **ordered pair** where the split-off element is the first member and the remainder of the Numeration the second
- This creates a **dependency relation** where the second member depends on the first
- Split-Merge continues until there are **no more unordered elements** (the Numeration is empty)

A top-down approach

- (7) a. $\{\alpha, \beta\}$ Numeration
b. $\{\alpha, \{\alpha, \beta\}\}$ Result of Split Merge
c. $\langle \alpha, \beta \rangle$ ordered pair

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→ No need for the EM/IM distinction

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- Split Merge is **formally identical to IM** (extraction of a member of a set Σ and joining it to Σ)
→ No need for the EM/IM distinction
- Grammatical function is a function of Merge: the first NP merged becomes the subject

Bottom-up versus top-down

Bottom-up:

- Theta-positions most important

Top-down:

- Grammatical function positions most important

Returning to Flexible Syntax (Neeleman & Weerman 1999)

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Questions?



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