

# The ups and downs of head displacement

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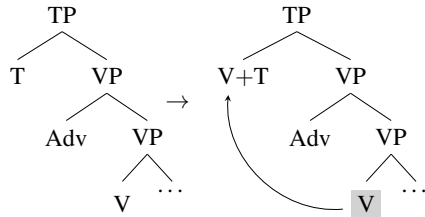
## 1. Introduction

### Two types of head displacements:

- (1) **Head Movement:** *V moves up to T in French* → *V+T Adv*

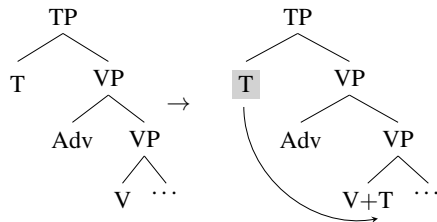
Jean {\*souvent embrasse / embrasse souvent} Marie.  
Jean often kisses / kisses often Marie  
'Jean often kisses Marie.'

Pollock 1989:367



- (2) **Lowering:** *T moves down to lexical V in English* → *Adv V+T*

Sue {often eats / \*eats often} fish.



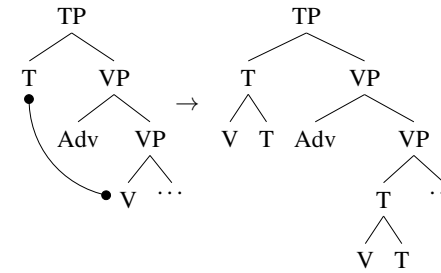
(Chomsky 1957, Emonds 1970, 1978, Lasnik 1981, Pollock 1989, Halle & Marantz 1993, Bobaljik 1995, Embick & Noyer 2001)

### Proposal: upward and downward head displacement are the same operation

- **Generalized Head Movement** creates complex head copies in the two positions.
- **Copy pronunciation** determines whether the effect is upward or downward.

Similar to: Mirror Theory (Brody 2000, Adger, Harbour & Watkins 2009, Svenonius 2016), Minimalist Grammars (Stabler 2001), Harizanov & Gribanova, to appear..

- (3) *Generalized Head Movement in French and English*



**French:** pronounce **higher** copy

**English:** pronounce **lower** copy

### Overarching argument

Upward and downward head displacement have the same properties.

#### Argument 1: Cyclic downward head displacement in Ndebele relative clauses

- Lnk, C & T form a complex head **pronounced in T, the lowest position.**
- Internal structure obeys **Mirror Principle**: [Lnk [C T]].

⇒ **Cyclic upward and downward head displacement generate the same structures.**

#### Argument 2: Negation blocks downward displacement in Vallader imperatives

- **Upward T-to-C** in Romance imperatives, **blocked by negation.**
- **Vallader imperatives: downward C-to-T blocked by negation.**

⇒ **Upward and downward head displacement blocked in the same configurations.**

#### Argument 3: Upward head displacement correlates with *do*-support in Monnese

- **Downward T-to-V** alternates with *do*-support in English.
- **Monnese: upward V-to-T** alternates with *do*-support.

⇒ ***Do*-support correlates with both upward and downward head displacement.**

## Outline

- §2. Generalized Head Movement
- §3. Cyclic downward head displacement obeys the Mirror Principle
- §4. Downward displacement blocked in the same configurations as upward displacement
- §5. Upward head displacement alternates with *do*-support
- §6. Conclusions
- §7. Current work

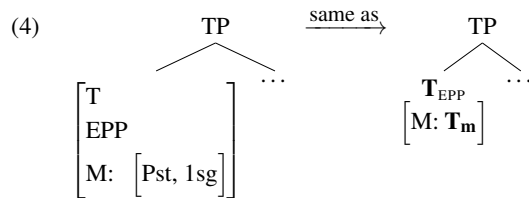
## 2. Generalized Head Movement (GenHM)

### 2.1. Syntactic vs. morphological features

- **Syntactic features** trigger Merge, Move, etc.
- **Morphological features** are responsible for exponence.  
(Similar to p-signature in Hale & Keyser 2002, Harley 2004.)

#### Syntactic vs. morphological features: X vs. X<sub>m</sub>

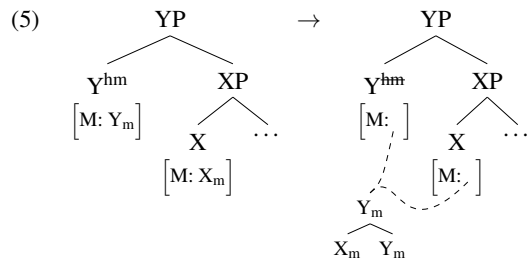
Morphological features are bundled as value of M-feature:



### 2.2. The syntax of GenHM

#### GenHM manipulates morphological features

#### Generalized Head Movement



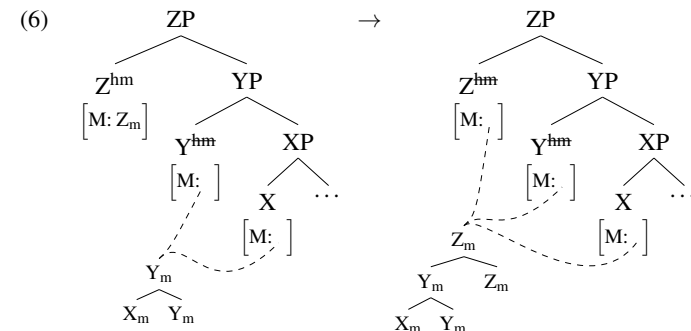
(This abstracts away from linear order: left/rightmost heads; left/right head adjunction.)

- **GenHM creates a complex head as a new M-value.**  
It doesn't alter hierarchical relations among syntactic terminals.
- **Neutral between upward/downward displacement:** new M-value **shared by both heads.**
- Triggered by feature [hm] on higher head.

#### Like standard head movement, GenHM is local

It incorporates the Head Movement Constraint and the on excorporation.  
(Travis 1984, Baker 1988)

#### Further application of GenHM shares extended complex head in all positions



#### Like standard head movement, GenHM is cyclic

Cyclicality and locality derive Baker's (1985) Mirror Principle.

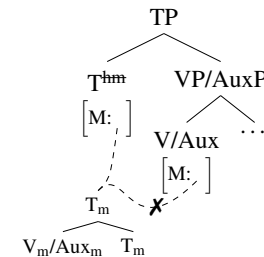
### 2.3. Spellout and linearization

#### Upward vs. downward effect is due to postsyntactic rules of pronunciation

- (7) A head chain position can be lexically **strong** (X\*) or **weak** (cf. Svenonius 2016).
- (8) a. **Delink** M-value from **all but highest strong position**, if any;  
b. otherwise, delink M-value from **all but highest position**.

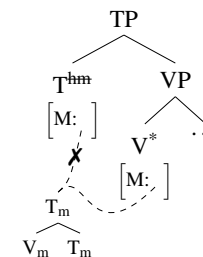
V & T in French and English:

(9) *Upward: weak T & weak V/Aux*



- (10) a. *French*  
Jean **embrasse** souvent Marie.  
Jean **kisses** often Marie  
'Jean often kisses Marie.'
- b. *English auxiliaries*  
Sue **is** not eating fish.

(11) *Downward: weak T & strong V*



- (12) *English lexical verbs*  
Sue often **eats** fish.



4. Downward displacement blocked in the same configurations as upward displacement

Polarity-form-position correlation in Romance imperatives

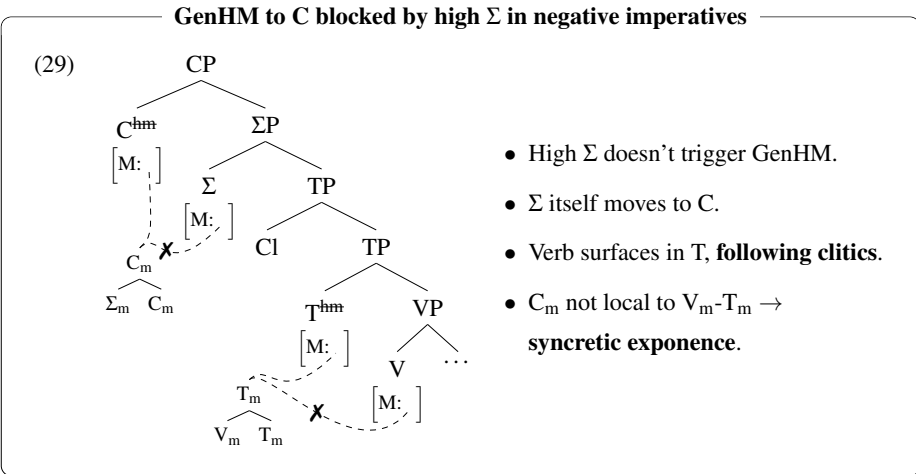
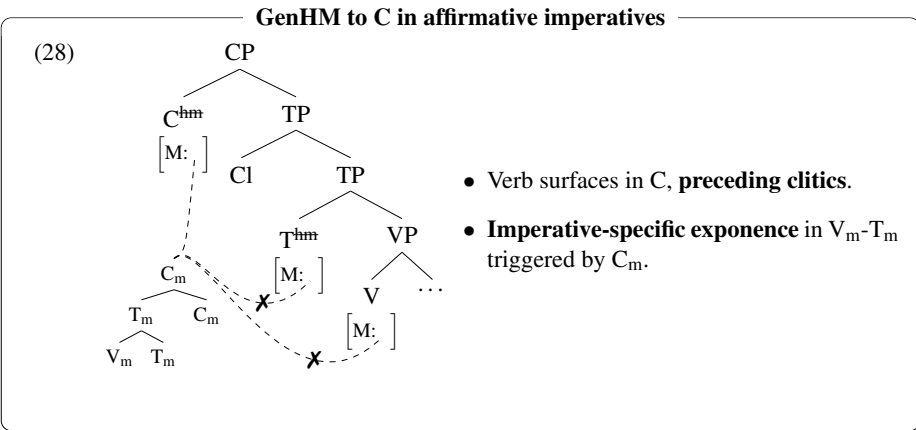
**Affirmative imperatives: imperative-specific exponence & enclisis.**

- (25) Llamad nos!  
 call.IMP.2PL us  
 'Call us!' Iberian Spanish

**Negative imperatives: syncretic exponence & proclisis.**

- (26) \*No llamad nos!  
 not call.IMP.2PL us  
 'Don't call us!' Iberian Spanish
- (27) No nos {llaméis / \*llamad}!  
 not us call.IMP/SBJV.2PL call.IMP.2PL  
 'Don't call us!' Iberian Spanish

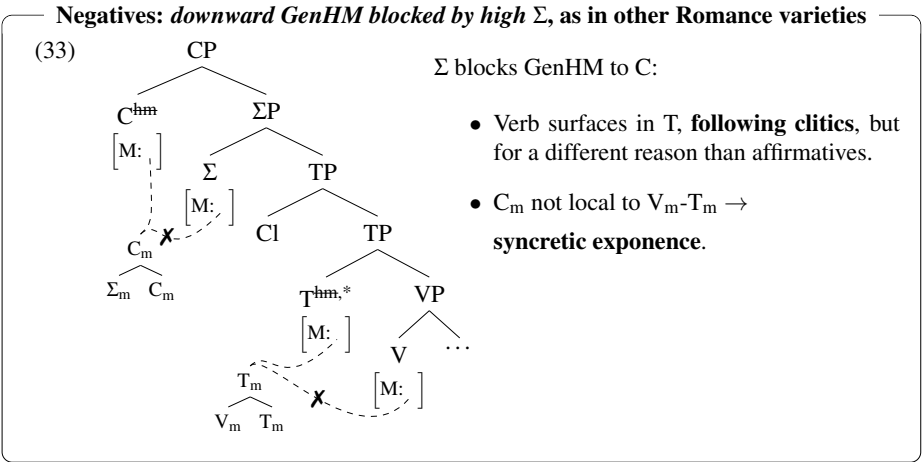
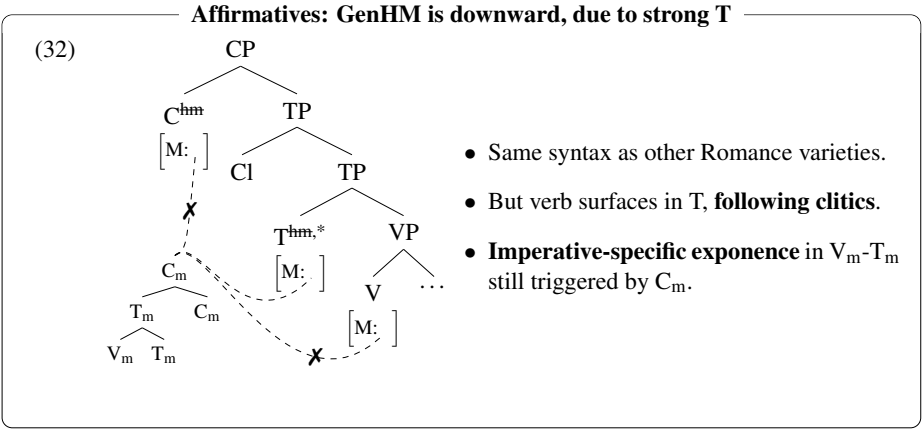
Based on Rivero 1994, Rivero & Terzi 1995, Zanuttini 1997:



Vallader Romansh: polarity correlates with form, not position

- (30) *Affirmatives: imperative exponence, proclisis*  
 ans klo'mai  
 us call.IMP.2PL  
 'Call us!' Scuol (Manzini and Savoia 2005:424)
- (31) *Negatives: syncretic exponence, proclisis*  
 nu ns kloma'rai  
 not us call.IMP/INF.2PL  
 'Don't call us!' Scuol (Manzini and Savoia 2005:424)

GenHM analysis  
 Vallader imperatives have downward GenHM to C



Downward displacement blocked in the same configurations as upward displacement

## 5. Upward head displacement alternates with *do*-support

### Downward head displacement alternates with *do*-support in English

Triggered when elements in a head chain with **strong V\*** are **not adjacent**:

- (34) *Intervening negation*                      (35) *Intervening subject (under inversion)*  
 Sue {does **not** eat / \*eats not} fish.                      {Does **Sue** eat / \*Eats Sue} fish?

Weak Aux undergoes upward displacement and doesn't alternate with *do*-support:

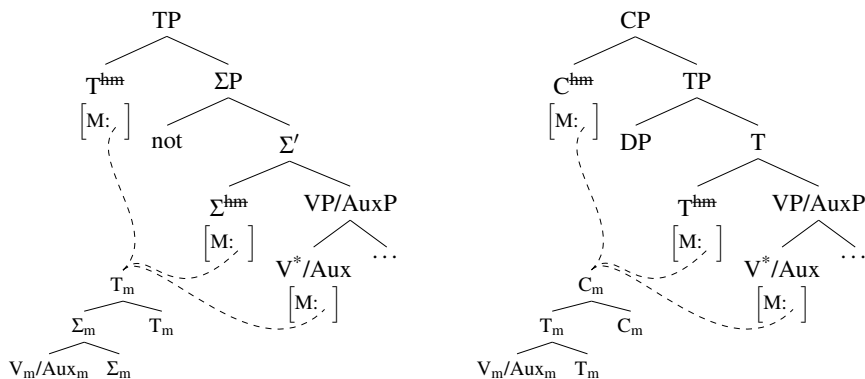
- (36) Sue {is not / \*does not be} eating fish.    (37) {Is Sue / \*Does Sue be} eating fish?

### Proposal: It's about strength, not directionality of head displacement

- Head chains containing V\* have special **adjacency requirements**.
- *Do* is the **defective pronunciation** of V<sub>m</sub> when adjacency requirement isn't met.

Upward displacement isn't blocked by interveners, so downward displacement isn't either:

- (38) *GenHM applies across negation*                      (39) *GenHM applies across subjects*



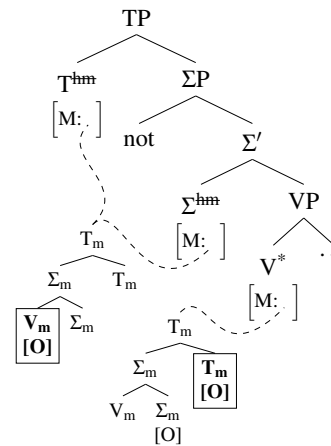
The proposal is that **GenHM does apply, but the resulting chain is split postsyntactically**:

### Chain Splitting and Defective Chain Repair

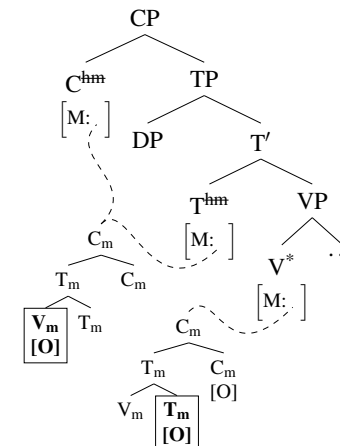
- (40) *Chain Splitting*  
 In a head terminating in V\* such that a specifier intervenes between the top of the chain and V\*, split the chain at V\*. The resulting chains are **defective**.
- (41) *Defective Chain Repair*  
 A morphological terminal X<sub>m</sub> in a head chain that does not contain the syntactic terminal X is an **orphan**. Orphan morphological terminals are assigned [O].

**Because of Chain Splitting, V<sub>m</sub> is an orphan, defectively pronounced as *do*.**

- (42) *Chain Splitting with negation*



- (43) *Chain Splitting with subjects*



- V<sub>m</sub>[O] is pronounced as *do* in higher chain, overriding V's usual exponence.
- T<sub>m</sub>[O] is pronounced as bare in lower chain, overriding finite T's usual exponence.

### Prediction: Upward V-to-T can alternate with *do*-support

*Do*-support is about strength, and strength and directionality are only indirectly related.

The prediction is borne out by **Monnese (Lombard)** (Benincà & Poletto 2004).

1. Both **finite Aux and lexical V surface in T**:

- (44) l **tfàkola** semper  
 he **speak.PRS.IND.3SG** always  
 'He always speaks.'                      Monnese (Benincà & Poletto 2004:59)
- (45) l **à** semper tfakolà  
 he **have.PRS.IND.3SG** always spoken  
 'He has always spoken.'                      Monnese (Benincà & Poletto 2004:59)

2. Aux surfaces in C in inversion contexts:

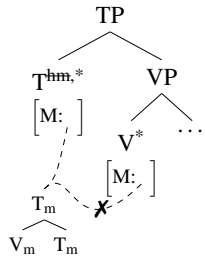
- (46) kwal è -t tferkà fora?  
 which **have.PRS.IND.2SG** -you searched out  
 'Which have you chosen?'                      Monnese (Benincà & Poletto 2004:63)

3. But **lexical V triggers *do*-support** in inversion contexts:

- (47) ke **fe** -t **majá?**  
 what **do.PRS.IND.2SG** -you **eat.INF**  
 'What do you eat?'                      Monnese (Benincà & Poletto 2004:68)

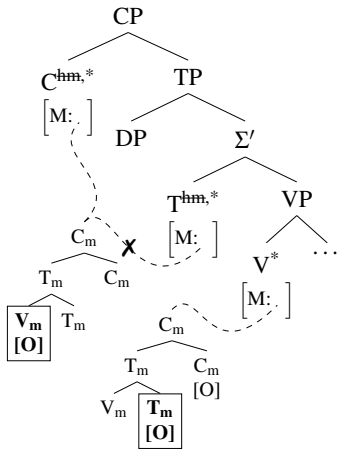
Lexical V undergoes upward head displacement to T:

(48) *Both V and T are strong*



Complex head surfaces in T<sub>m</sub>, the highest strong position.

(49) *Under inversion, subject triggers Chain Splitting and Defective Chain Repair*



- V<sub>m</sub>[O] is pronounced as *do* in higher chain, overriding V's usual exponence.
- T<sub>m</sub>[O] is pronounced as infinitive in lower chain, overriding finite T's usual exponence.

**Like downward displacement, upward displacement alternates with *do*-support**

## 6. Conclusion

3 arguments for unification of upward and downward head displacement under GenHM:

1. Like upward displacement, downward displacement obeys the Mirror Principle. (Ndebele)
2. Like upward displacement, downward displacement can be blocked by negation. (Vallader)
3. Like downward displacement, upward displacement can alternate with *do*-support. (Monnese)

## 7. Current work

Extension to other cases of *do*-support confirms the predictions of GenHM framework:

- *Do*-support in VP ellipsis/fronting: deletion of XP containing lower part of head chain with V\* results in defective pronunciation of V<sub>m</sub>. Parallel to V-stranding constructions.
- Two sources for *do*-support: Chain Splitting and Deletion. They can't be unified, and shouldn't: Mainland Scandinavian has the latter, not the former.
- Mainland Scandinavian confirms that *do*-support is about strength, not directionality of head displacement: VP ellipsis triggers *do*-support even with upward displacement (V2).

(Koopman 1984, Davis & Prince 1986, McCloskey 1991, Bobaljik 1995, Ngonayni 1996, Doron 1999, Harbour 1999, Abels 2001, Travis 2003, Cable 2004, Goldberg 2005, Landau 2006, Vicente 2007, Sailor 2009, 2018, Houser et al 2011, Thoms 2012, Platzack 2012, Bentzen et al 2013, Gribanova 2013, Saab 2017, Harizanov & Gribanova, to appear)

These and other arguments in Arregi & Pietraszko 2018a, 2018b:

- <http://dx.doi.org/10.3765/plsa.v3i1.4285>
- <http://ling.auf.net/lingbuzz/004096>

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