

# EXTENDING THE EXTENSION CONDITION

Sabine Mohr  
mohrse@ims.uni-stuttgart.de  
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## ABSTRACT:

In this talk I propose a new approach to (a) head-movement, (b) the Extension Condition and (c) the EPP. I will argue that head-movement does exist, that it is part of narrow syntax and that it is subject to the Extension Condition. In fact, I will postulate that there is a correlation between the need to satisfy the Extension Condition and the presence of an EPP-feature. Before actually presenting my analysis I will give a short introduction to my assumptions about clause structure (esp. German clause structure).

My analysis is based on the following two assumptions:

- (i) Some heads require PF-realisation (Roberts & Roussou 1998, Roberts 2000). This PF-realisation can be achieved either by Merge (e.g. of a particle as in Welsh or of a complementiser as in German embedded clauses) or by Move (e.g. V-movement as in German main clauses)
- (ii) The Extension Condition (Chomsky 1993, 1995), ie. the requirement that syntactic operations extend the tree at the root, holds for both substitution and adjunction operations.

Whenever a head is PF-realised by first merge, the Extension Condition is clearly met as we merge a head Y with an already constructed XP to form a new YP.

However, if we employ V-movement to phonetically realise a head, the Extension Condition is not met because V-movement is an adjunction operation and therefore does not extend the tree at the root. Now, I propose that a head that can be PF-realised only by head-movement is automatically associated with an EPP-feature. This EPP-feature makes sure that the head-movement operation is immediately followed and amended by a substitution operation (either XP-movement or first merge). This complex operation of head-movement + substitution operation satisfies the Extension Condition.

As regards the C-system, this analysis accounts for the root-embedded asymmetry ((2) vs (1)) found in the Germanic V2-languages and for the V2 phenomenon itself in that it tells us why we get exactly one constituent preceding the verb which has moved to Fin. V1 is ruled out by the Extension Condition and V3 by a refined version of Relativised Minimality (Roberts 2000).

- (1) ...daß Peter das Buch gelesen hat.
- (2) Peter hat das Buch gelesen.

As regards the I-system and the "universal EPP", I propose the following. In most cases, what has been called the EPP reduces to [Nom]-Case checking in SpecTP ( $\Rightarrow$  [Nom] is checked no matter whether T is overtly realised or not). Only if no Nominative is assigned in a clause, T is associated with an EPP-feature independent of whether T is PF-realised or not ( $\Rightarrow$  we always have to realise some part of TP for semantic reasons – if it isn't T, it must be SpecTP). Null subject languages may realise T by merger of inflectional affixes (Alexiadou & Anagnostopoulou 1998) – subsequent movement of the verb stem to bind these affixes does not qualify as syntactic head-movement which requires that SpecTP be filled but is a morphological operation (yet part of narrow syntax).

So all verbal head-movement is part of narrow syntax, the EPP-feature is truly a feature which ensures that the projection is extended, and the need to satisfy the Extension Condition and the presence of an EPP-feature are correlated.

**AIMS:**

- Show that head-movement, esp. V-movement does exist and that it is a narrow syntactic operation, not a PF-phenomenon ( $\neq$  among others Kayne 1998, Nilsen 2000, Müller 2001, Chomsky 1999)
- Revise the Extension Condition
- Postulate a correlation between the need to satisfy the Extension Condition and the presence of an EPP-feature

**THE DATA:**

- (1) Peter read the book.
- (2) Mi welais i Megan. (Welsh; Roberts 2000)  
*Prt saw I Megan*
- (3) ... daß Peter das Buch gelesen hat. (German)  
*... that Peter the book read has*  
=> embedded clause with the  $V_{fin}$  in clause-final position
- (4) Peter hat das Buch gelesen. (German)  
*Peter has the book read*  
=> subject-initial main clause with the  $V_{fin}$  in second position (V2)
- (5) Dieses Buch hat kein Mensch gelesen. (German)  
*This book has no human being read*  
"No-one has read this book."  
=> main clause with a topicalised object and the  $V_{fin}$  in second position

(4) and (3) illustrate the so-called root-embedded asymmetry. Den Besten (1983) was the first to suggest that in main clauses the finite verb occupies  $C^\circ$  (COMP in his terms), whereas in embedded clauses this position is taken by the complementiser forcing the finite verb to stay lower down in the clause.

**THE FRAMEWORK:****Clause structure:**

C-system: (Force) (Top) (Foc) (Fin)  
I-system: (Ref) (Top) (Foc) T (Aux)  
V-system: v, V

- As the list above indicates I assume a Split-CP, following Rizzi (1997).
- Brackets indicate optionality. However, the optionality of Fin is different from the optionality of the other heads. The presence or absence of Force, Top, Foc and Ref

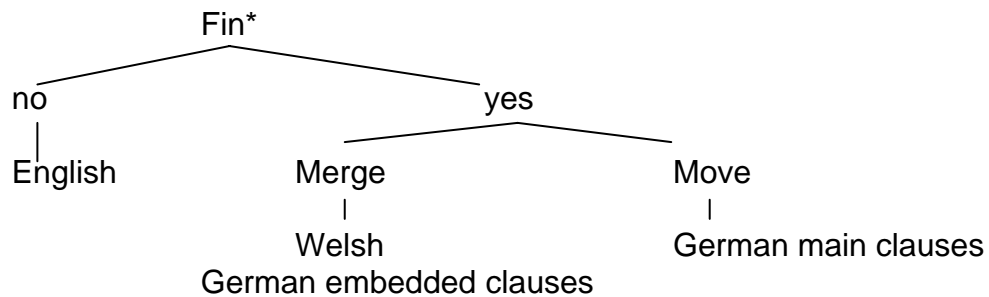
depends on semantic, interpretational, discourse-related needs, whereas presence or absence of Fin is basically a question of which language you look at (e.g.: Fin is obligatory in V2 languages while in English it is present in residual V2 constructions only).

- RefP stands for "ReferencePhrase". Definite subjects have to go into SpecRefP. (Koopman & Szabolcsi 2000)
- Scrambling is analysed as movement to TopP and FocP in the I-system.
- vP is obligatory. However, vP does not have a Spec if the verb is passive or unaccusative.
- I assume that the internal argument DP (=> direct object or derived subject) is merged in SpecVP (Hale & Keyser 1993, Roberts 2000)
- I do not consider AdvPs here.

### The \*-parameter (Roberts & Roussou 1998, Roberts 2000)

- heads are parametrised as to whether they require PF-realisation or not
- a \* symbolises the need for PF-realisation
- \* can be realised by either Merge or Move

e.g. (i)

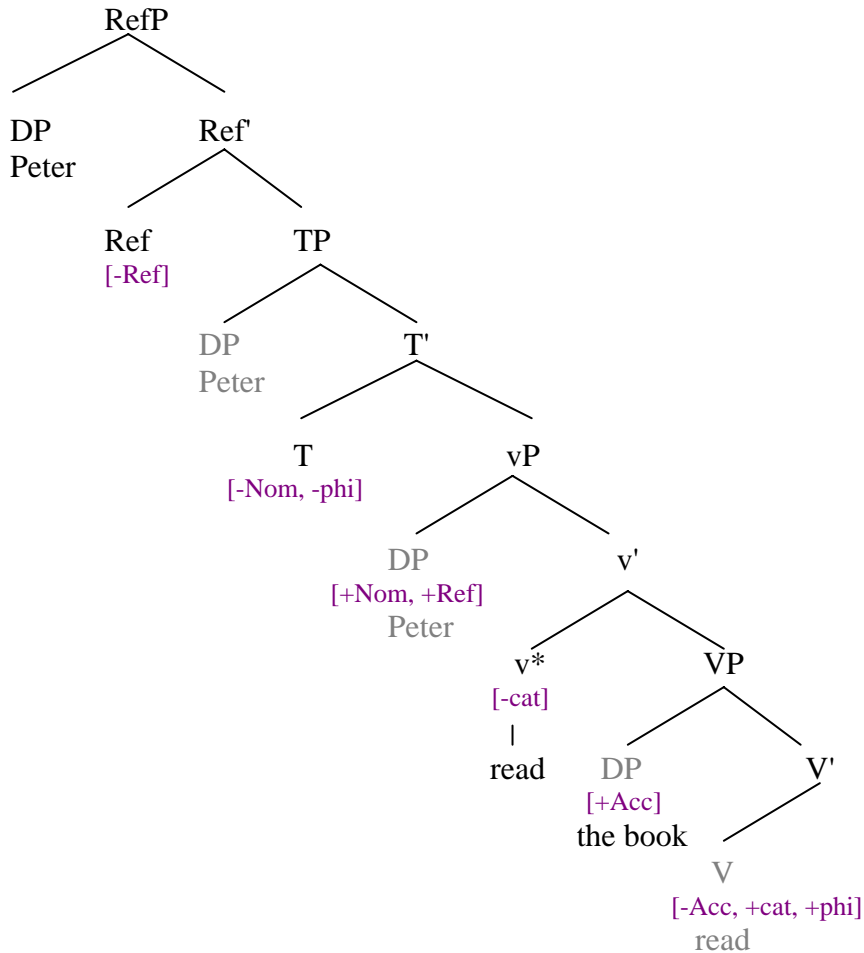


### The Extension Condition (Chomsky 1993, 1995)

- requires that **syntactic operations extend the tree at the root**
  - only holds of substitution operations and not of adjunction operations (esp. head-movement)
- => head-movement is not part of narrow syntax. (This idea is elaborated in Chomsky 1999.)

Trees illustrating the various options with respect to checking of Fin\*

(1') English – no Fin\*



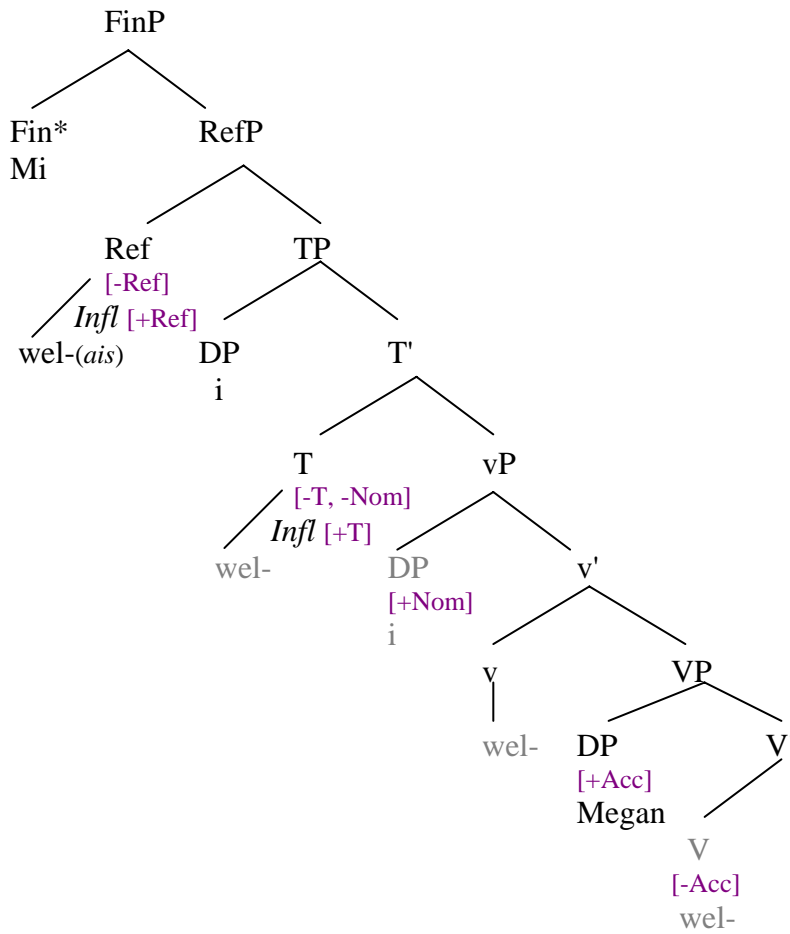
**Assumptions:**

- All checking is done in head-head or Spec-head relations (looking into Spec is possible).
- Long-distance agree is not possible, except for checking of verbal phi-features in languages with poor verbal morphology.

Alternative (work in progress):

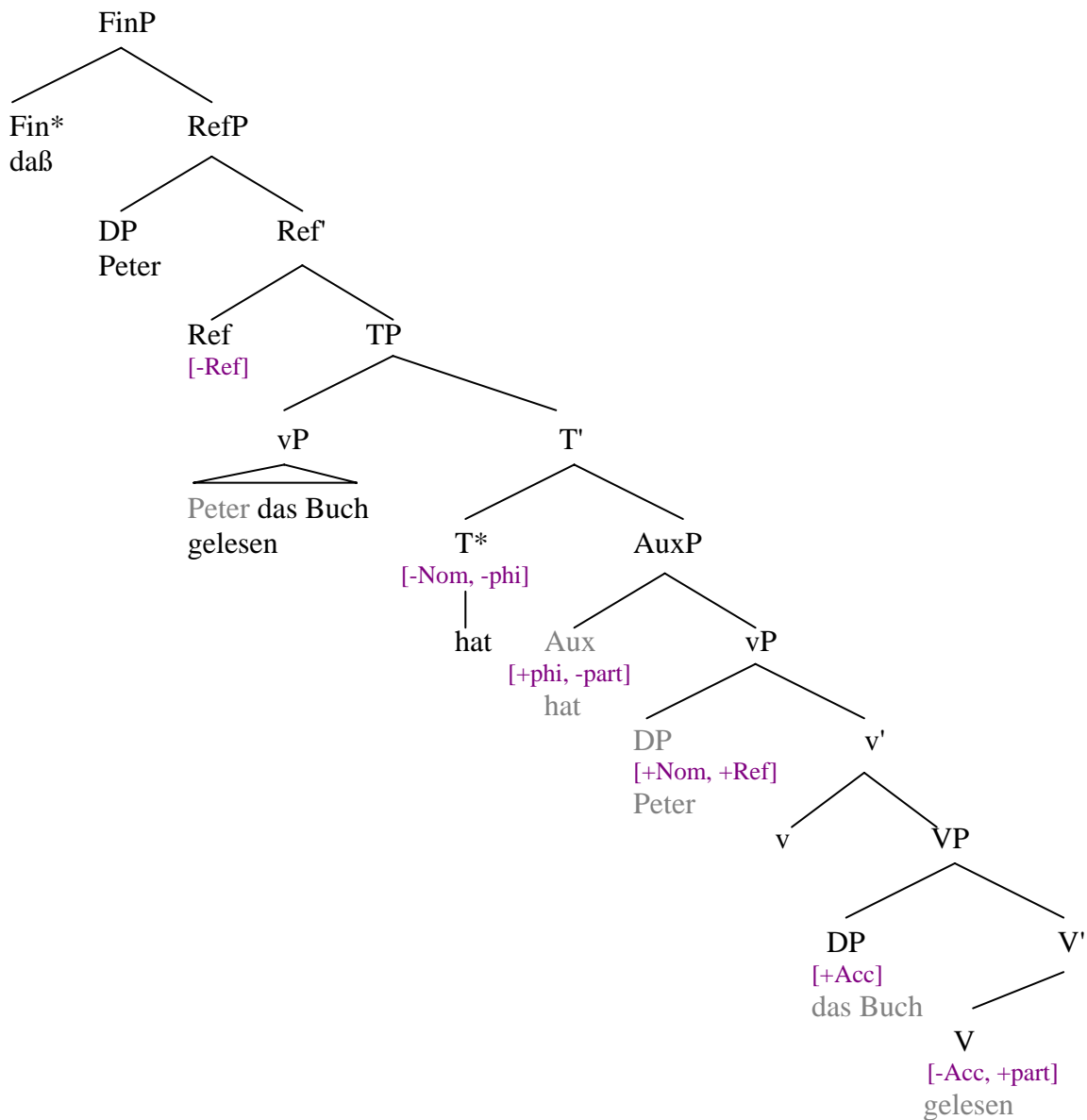
- reduce \* to presence vs absence of Q, Fin and phi
- no long-distance agree at all because phi would simply not be there if we have e.g. a finite lexical verb in English
- All features (except for EPP) come in a [+]- and in a [-]-version and checking means that we have to end up with a +/- pair. Neither version can survive on its own and failure to check a feature will make the derivation crash.

(2') Welsh – Fin\* satisfied by Merge<sup>1</sup>



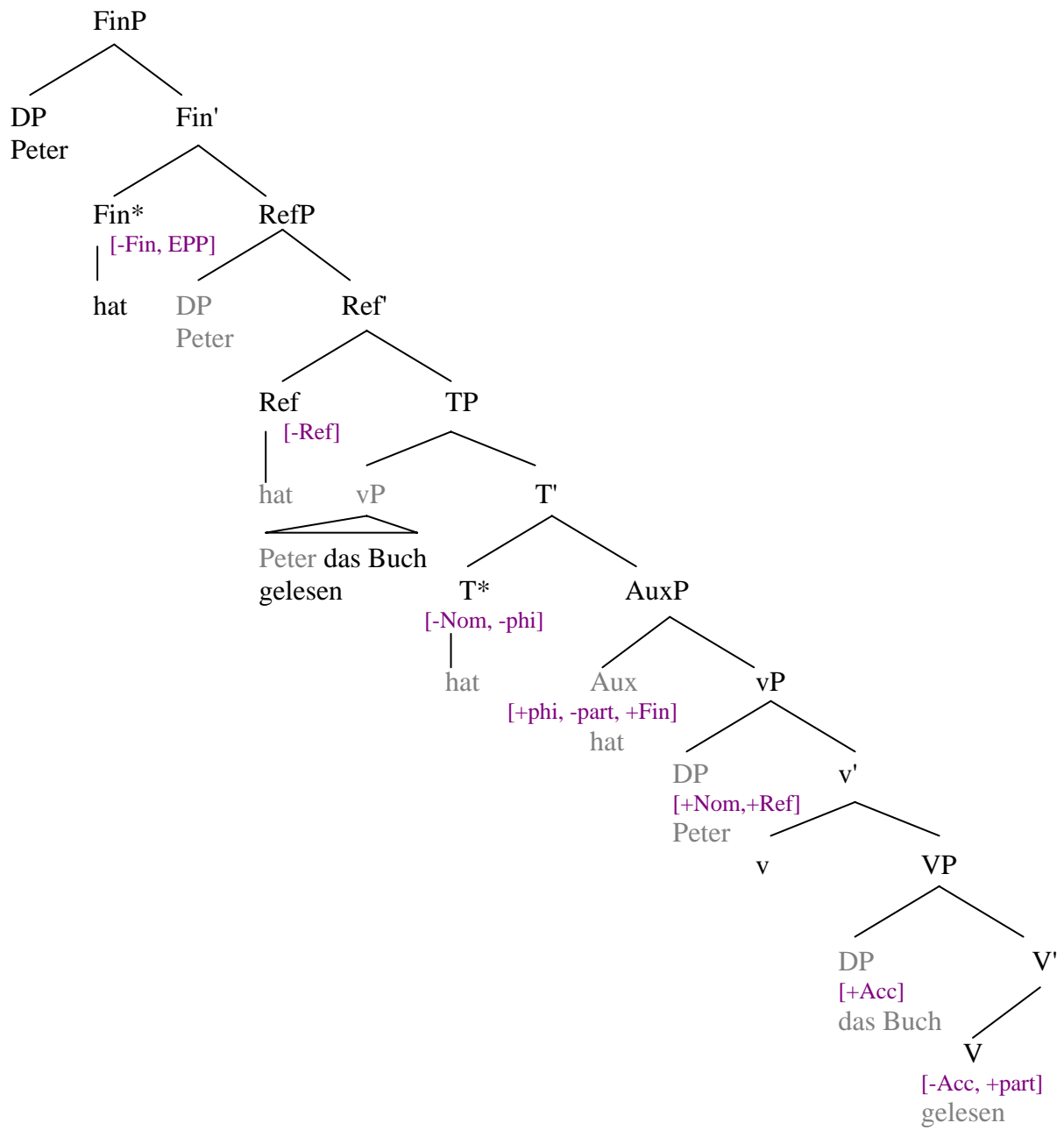
<sup>1</sup> I took the tree from Roberts (2000) and adapted it to my system – all errors are mine. The verb form *welais* can be decomposed into the verb stem *wel-* and tense and agreement inflection *-ais*. I assume that part of the inflection is merged in T and part in Ref and that the verb stem moves to pick up the inflection (cf. the section on the universal EPP on T, p. 10). However, as I don't know how the inflection splits up I just merge "Infl" in the tree.

## (3') German embedded clauses – Fin\* satisfied by Merge

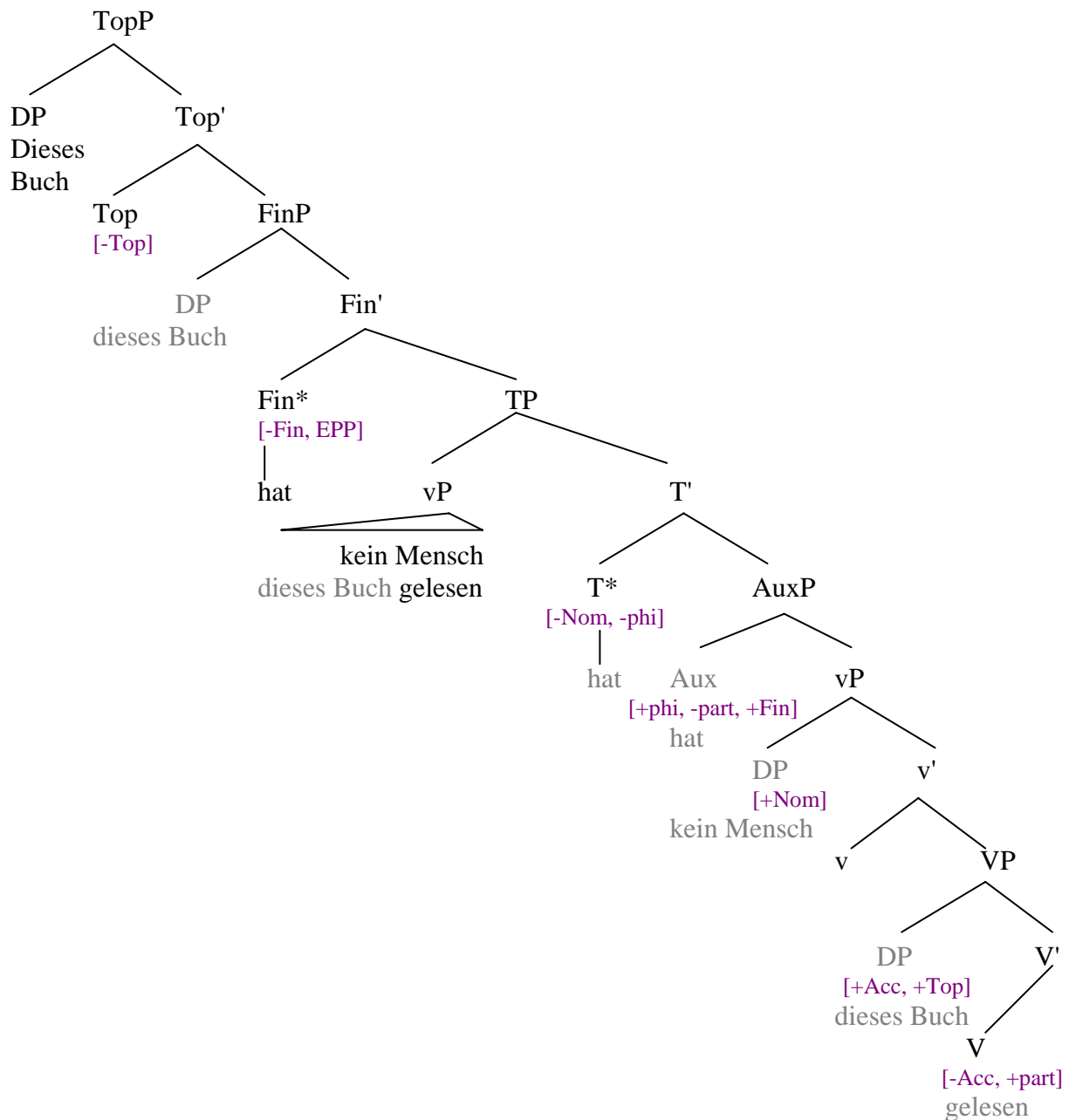
**Note:**

(Remnant) vP-movement to SpecTP can account for the vP-internal character of indefinite subjects (Diesing 1992) and at the same time allow for [Nom]-Case-checking in SpecTP. Furthermore, movement of the complete vP allows for checking of two unrelated features ([Nom] and [part(icipale)]) in a single position.

(4') German main clauses – Fin\* satisfied by Move



## (5') German topicalisation



The root-embedded asymmetry as illustrated in (4') and (3') is due to "checking" Fin\* by Move or Merge respectively.

**MERGE** (trees (2') and (3')):

If Fin\* is satisfied by merger of a particle (Welsh) or of a complementiser (German embedded clauses), the Extension Condition is met.

**MOVE** (trees (4') and (5')):

If Fin\* is satisfied by V-movement, this operation alone does not satisfy the Extension Condition.



**SOLUTION:****EPP-feature:**

First of all, the EPP (-feature), which started out as a requirement that clauses must have a subject (Chomsky 1982) and has ended as a feature that allows for XP-movement to the edge of a phase and for creating an extra Spec (Chomsky 1999), will be redefined once more – the new definition coming very close to justifying the name "Extended Projection Principle"-feature.

- The EPP-feature can sloppily be defined as follows:  
"I need a Spec in order to extend my projection."
- Heads with a \* that trigger head-movement but have no other feature that requires XP-movement are automatically associated with an EPP-feature. (The *but*-clause is crucial for what will be said with respect to T.)
- Only T, Fin and Force can ever have an EPP-feature.
  - (a) All other functional categories are discourse-linked/interpretational and therefore only present if an XP needs to check a feature. E.g.: In the case of topicalisation we have an XP that is associated with a [+Top]-feature which has to be checked against a [-Top]-feature on Top. Top will only be present for that purpose, so there is no need for Top to be associated with an EPP-feature because the topic XP will move to SpecTopP anyway.
  - (b) V-to-v movement does not affect the presence or absence of SpecvP because this presence or absence is determined by the type of verb (e.g. transitive vs unaccusative)

**The Extension Condition:**

The Extension Condition has to be phrased in a way that ensures that the condition is not evaluated as soon as head-movement has taken place.

=>

**The "New" Extension Condition**

The Extension Condition is satisfied if as a result of all feature-checking on a given head the tree is extended at the root.

**Relativised Minimality (Rizzi 1990, Roberts 2000):**

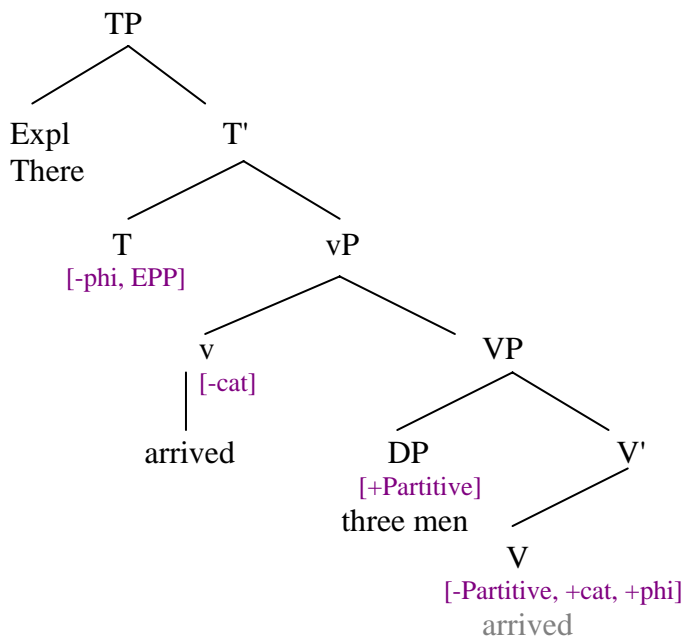
- All XPs that target the C-system are operators (subjects are underspecified and turn into operators once they are in SpecFinP; if they were operators right from the start a topicalised object could never move across a subject), i.e. they are all of the same type
- => a topicalised XP cannot move across a subject in SpecFinP
- German main clauses: If we have an XP with a [+Top]-feature this XP has to move through SpecFinP, checking the EPP on Fin\*, and then move on to SpecTopP while the subject stays in SpecRefP or SpecTP, depending on whether it is definite or not.

=> Relativised Minimality rules out V3  
=> The Extension Condition rules out V1

### WHAT ABOUT THE "UNIVERSAL EPP" ON T?

- In most cases, what has been called the EPP reduces to [Nom]-case checking in SpecTP
- => [Nom] is checked no matter whether T is overtly realised or not (see trees above)
- Only if no Nominative is assigned in a clause, T is associated with an EPP-feature (independent of whether we have T or T\*)
- => If we have V-movement to T\*, the EPP is needed to satisfy the Extension Condition
- => If we have T, we can say that one part of TP has to be realised for some semantic reason (e.g. the need to turn the lexical information given in vP into an event, to locate it in time) – if it isn't T, it must be SpecTP (6), cf. Holmberg's (2000) [p]-feature

(6) English expletive *there* checking EPP on T



- Or phrased slightly differently:
  - EPP and Case (here [Nom]) are both features that trigger movement (Alexiadou & Anagnostopoulou 2001)
  - EPP can be checked by any XP (also by featureless expletives or by a PP; (cf. Collins (1997): PP checks EPP on T in Locative Inversion) while [Nom] can only be checked by a DP
  - Under the conditions given above, the heads in question are associated with

an EPP-feature. However, as T is associated with [Nom] most of the time and as checking of [Nom] basically has the same effect as checking of EPP, namely creating a Spec, the EPP-feature is omitted in this case.

- Null-subject languages (NSL) may have T\* which is satisfied by merger of inflectional affixes (Alexiadou & Anagnostopoulou 1998)
- => subsequent movement of the verb stem does not qualify as syntactic head-movement which requires that SpecTP be filled but is a morphological operation
- To be more precise:  
I assume that morphologically triggered head-movement takes place in the narrow syntax too.
- What I call syntactic head-movement is triggered by the need to check phi-, Fin- or Q-features (or by look-ahead/HMC in the case of the discourse-related heads). In NSLs, however, the phi-features/T\* can be checked by merger of inflectional affixes.
- The affixes, however, cannot survive on their own and have to be bound (cf. the "old" Stray Affix Filter) and therefore raising of the verb stem is triggered.

### **CONCLUSION:**

- All verbal head-movement is part of narrow syntax.
  - EITHER it is forced by the need to check some feature \* (Q, Fin or phi)
    - => then the head in question has to have an EPP-feature, or [-Nom] in the case of T
    - OR it is forced by the HMC (kind of look-ahead) as in T-to-Ref-to-Fin movement, where the Extension Condition is met anyway because Ref is only projected when a DP has to check its [+Ref]-feature
    - OR it is morphologically triggered
- The EPP-feature is truly a feature which ensures that the projection is extended.
- The need to satisfy the Extension Condition and the presence of an EPP-feature are correlated.

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