

The end of the Extended Projection Principle (EPP)

ante portas?

Joanna Blaszczak
 ZAS, Berlin
 e-mail: joanna.blaszczak@googlemail.com

The issue:

- ❶ The Extended Projection Principle (EPP), originally understood as a configurational requirement that clauses have a subject → usually invoked to account for cases like (1). → Everybody is using or appealing to the EPP.

- (1)
- a. * came a man.
 - b. A man came.
 - c. There came a man.

BUT:

- ❷ The EPP as "a pervasive mystery since it was first formulated by Chomsky (1981)" (Lasnik 2002:1); "an ill-understood" principle (Epstein and Sealy 2006:49) → cf. (2) → Nobody understands the EPP.

- (2)
- a. Przyszedł jakiś mężczyzna. (Polish)
 - b.

came _{3.SGM}	[some man] _{NOM.3.SGM}	
jakiś mężczyzna	przyszedł.	
[some man] _{NOM.3.SGM}	came _{3.SGM}	'Some/a man came.'

↓

given ❶ + ❷

- ❸ Two extreme positions (see, among others, Svenonius 2002, Epstein and Sealy 2006 for a recent discussion):
 - The EPP is indeed a universal principle of grammar.
 - There is no such principle as the EPP; it should be reduced to other principles of grammar.
- ↓
- As always, the truth lies somewhere in the middle.

The main goal of the talk:

- to put forward a proposal which – while admitting that nominative subjects usually occur in a preverbal ("subject") position – does not derive this effect via the EPP in its traditional understanding. ↓
- The gist of the proposal:
 - The EPP is no longer understood as some special property of T (Infl).
 - Rather, the analysis makes use of what is needed anywhere: uninterpretable features of phase heads → edge features and phi-features + the feature inheritance idea (Chomsky 2005, Richards 2007). ↓
 - More precisely, the "traditional" EPP is reduced to the edge feature (= EF) of C, the phase head. When the EF of C is passed on together with phi-features to T, a feature-ree will be formed (→ a complex probe). ↓
 - As a consequence, the EF can be satisfied only by elements simultaneously undergoing an Agree relation with T. → the "traditional EPP" effect

Outline:

- ❶ PART ONE: THE EPP: SOME PROBLEMS → Section 1.1
- The original idea → Section 1.1
- Different views regarding the universality and the nature of the EPP → Section 1.2
- Different mechanisms of satisfaction of the EPP → Section 1.3
- ❷ PART TWO: A PROPOSAL → Section 2.1
- The mystery of the EPP-feature on T → Section 2.1
- Solving the mystery: A new view → Section 2.2
- The gist of the proposal → Section 2.3
- Details of the analysis → Section 2.4
- ❸ PART THREE: FURTHER ISSUES → Section 3.1
- Economy of computation: The number of required search/probing operations → Section 3.1
- Possible extensions → Section 3.2
- ❹ PART FOUR: CONCLUSIONS → Section 3.2

➊ PART ONE: THE EPP AND ITS PROBLEMS

1.1 The original idea

- The EPP (Chomsky 1981, 1982): generally understood as the requirement that every clause must have a subject.
- Formulated this way, the EPP is a universal requirement that the [Spec,IP] position (the 'subject position' at that time) be obligatorily realized.
- BUT: Two big problems:
 - **Problem ➀**: VP-internal Subject Hypothesis /an increase in the number of possible 'subject positions' → What does it mean that 'every clause must have a subject'? That is, which of the possible subject positions does actually have to be realized?
 - **Problem ➁**: subject-prominent languages (English-like) versus free word order or topic-prominent languages (Hungarian-like) → Is the EPP really a universally valid principle? And if there is indeed something like the EPP principle, what is the real nature of this principle and how can it be satisfied?

1.2 Different views regarding the universality and the nature of the EPP

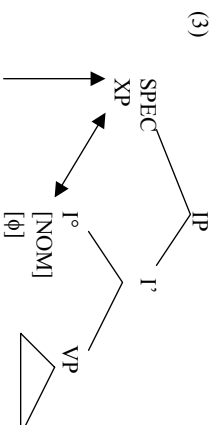
- No agreement in the literature regarding the question of universality of the EPP:
 - The EPP is as a universal principle: Chomsky (1995), (1998), (1999),¹ Alexiadou and Anagnostopoulou (1998), Bailyn (2004), and Miyagawa (2004).
 - The EPP is not a universal principle of grammar: Haider (1993), McCloskey (1996) or Rosegren (2002).
- No agreement in the literature regarding the nature of the EPP:
 - the EPP as a formal syntactic requirement: Chomsky (1995), McCloskey (1997), Alexiadou and Anagnostopoulou (1998), Collins (1997); see also Branigan (1992), Harley (1995), Babyonyshev (1996, 2003); cf. also Bailyn (2004);
 - the EPP as a kind of phonological requirement: Holmberg (2000); in some sense also Bailyn (2004);
 - the EPP as "a syntactic device in the service of semantics": Rosegren (2002); cf. also Roberts and Roussou (2002);
 - a "combined" view (É. Kiss 2002): the EPP has two functions:
 - ❖ *a formal grammatical function* (referred to by É. Kiss as the **EPP2**: "Of the arguments of a predicate, one must be marked as a subject," understood here as the grammatical subject, i.e., the argument which agrees with the finite verb and bears the NOM case in the unmarked case, etc.), and
 - ❖ *a semantic function* (referred to by É. Kiss as the **EPP1**: "A sentence expressing predication must contain a topic", understood here as the subject of the predication (Kiss 2002: 118f)).

1.3 Different mechanisms of satisfaction of the EPP

- In the 1980s: the EPP has been taken to mean that every clause must have a subject → the specifier of IP must be filled → the [Spec,IP] has also been the position to which the NOM case is assigned and where the agreement with the finite verb (via the specifier-head configuration) is established.

¹ But this view has been relativized in the more recent work of Chomsky; see the discussion below.

- Consequently, it became quite natural to relate the EPP requirement to NOM case and/or phi-features (cf. (3)).
 - "The subject of the clause" has come mainly to be understood as the grammatical subject; cf. É. Kiss' EPP2 above.



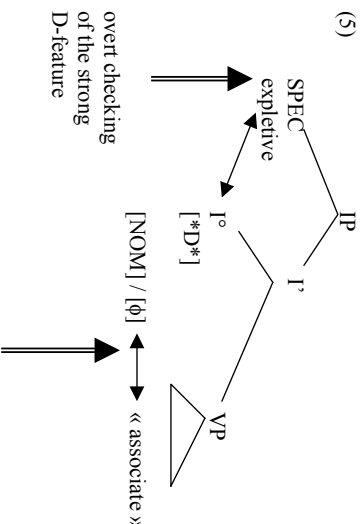
EPP-position
NOM-checking position
Agreement-checking position

- In the 1990s (the Minimalist Program): change of perspective → "the Extended Projection Principle plausibly reduces to a strong D-feature of I'" (Chomsky 1995:232).

- Consequently, the EPP has been divorced from the NOM case checking and phi-feature checking; cf. (4) and (5) (cf. Collins 1997:14).

(4) There are three men outside.

(5)



covert checking of the weak NOM case and phi-features

- Two further important consequences: → new solutions to the EPP problem
 - The strong D-feature of T does not need to be exclusively satisfied by grammatical (nominal) subjects, but can also be satisfied by other elements having a D-feature. E.g.:

- ❖ The D-feature of T can also be checked by a fronted locative PP as in locative inversion constructions (cf. Collins 1997).

(6) **Down the hill** rolled John.

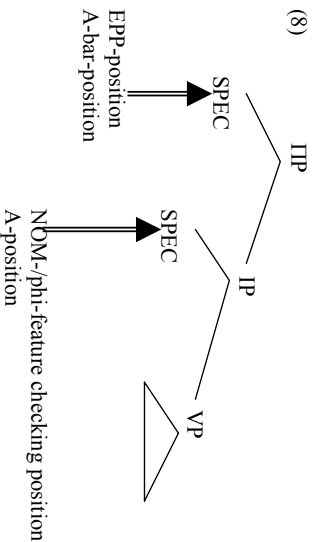
“EPP-checker”

- ❖ In null-subject languages, which lack (overt and covert) expletives and need not have an overt subject, the EPP is satisfied by overt movement of the finite verb hosting a nominal feature [D] (cf. Alexiadou and Anagnostopoulou 1998).

(7) **Przyszedł** jakiś mężczyzna.
came_{3.SG.M} [some man]_{NOM.3.SG.M}
 ‘Some/a man came.’ (Polish)

“EPP-checker”

- The EPP position is distinct from the canonical “subject” position ([Spec,IP] or [Spec,TP] or [Spec,AgroP]), in which NOM and phi-features are checked.
- ❖ Branigan (1992) and Babyonyshev (1996, 2003) → the EPP is not a feature of I (or an analogue functional head), but is rather a property of a higher functional head, called Π; cf. (8).



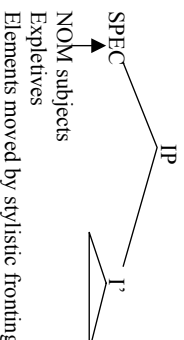
Partial conclusion:

One important consequence of the “EPP-research” in the 1990s was the fact the EPP is no longer associated with subjecthood (at least not in the traditional sense of this word).

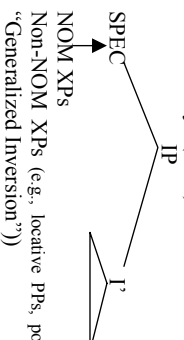
- Subsequent research: continuation or even strengthening of the EPP-research from the 1990s → the EPP checking is now regarded not only as distinct from NOM case and/or phi-feature checking, but in fact, according to many scholars, it does not involve any checking at all, not even a checking of the D-feature of T.
- Question: What is the EPP then? → Two/three different attempts at an interpretation can be found in the most recent linguistic literature:

- ❶ a “phonological” view (cf., e.g., Holmberg 2000, Bailyn 2004; see also Lasnik 2001) → the EPP is nothing else than a visibility or lexicalization (“overtness”) requirement of a specific functional specifier. → In other words, it requires that something overt be in the [Spec,IP] position; cf. (9).

(9) a. Holmberg (2000)



b. Bailyn (2004)



- ❷ a “semantic” view (cf., e.g., Kiss 2002) → the EPP as a requirement that the VP be predicated over some argument, possibly the Davidsonian event argument (É. Kiss’ EPP1: “A sentence expressing predication must contain a topic.”) → The burden of the EPP is shifted from (grammatical) subjecthood to discourse topicality.
- ❸ a combination of ❶ and ❷ (cf., e.g., Rosengren 2002))

Partial conclusion:

The analyses mentioned above (the “phonological” view and the “semantic” view) represent two important tendencies dominating the “EPP-scene” in the last few years: the tendency to emphasize either the “PF side” or the “LF side” of the EPP (Svenonius 2002:18ff.). These tendencies are on a par with – or in fact, at least partially, influenced or encouraged by – the recent minimalist developments.

- In his most recent papers, Chomsky takes a “combined PF + LF” view on the EPP.
 - Unlike his previous analysis (Chomsky 1995), the EPP is no longer an exclusive property of T (or an analogue functional head) and is no longer accounted for in terms of formal feature checking in the strict sense of the word.
 - The D-feature (cf. Chomsky 1995) has changed into an EPP-feature (Chomsky 1998, 1999)² (later referred to as an OCC(urrence) feature³ (Chomsky 2001) or

² In Chomsky (1998, 1999) it is somehow suggested that the EPP-feature might be understood as the feature [person] (in order to account for the fact that raising infinitives headed by T_(deficient) which is unable to determine case-agreement, also show EPP-effects. T_{def} has only the Feature [person]; Chomsky 1999:4f.).

- edge feature (= EF) (Chomsky 2005)), which turns into a *general, uninterpretable feature requiring visibility in order to be erased*.
- The EPP is a property of T, but – in addition – phase heads (v and C) may also have an EPP-feature.
 - However, there is still some asymmetry between the EPP-feature on T and that on v or C:

The EPP / EF on phase heads	The EPP-feature on T
optional	obligatory (at least for T _{complete}) ⁴
available only when necessary, contributes to an outcome at SEM (Chomsky 2001:11)	has no impact on SEM; just an overt manifestation of an already existent agreement relation in the derivation
indiscriminate: it can seek any goal in its domain, with restrictions determined by other factors (Chomsky 2005:17)	only elements that agree in phi-features with T can raise to its edge (the other option being merging of an expletive directly in Spec-T)

Partial conclusions:

- (i) The “traditional” understanding of the EPP has changed. → The EPP has mutated to some sort of a syntactic device which – since not forbidden – is allowed by grammar and exploited in a systematic way at the syntax-external interfaces (see Rosengren 2002).
- (ii) However, while the existence of an EPP-feature on phase heads is semantically motivated, the EPP-feature on T still remains a mystery.

➤ PART TWO: A PROPOSAL

2.1 The mystery of the EPP-feature on T

- **Problem 1:** In a phase model of Chomsky (1998 and the subsequent work), Case and agreement properties can be established in an in-situ Agree relation without an overt NP movement (but see Bošković 2002 and Epstein and Sealy 2006 for a different view). → But if this is correct, why do we observe an overt NP (or: XP) movement nevertheless?

- (10) a. * came a man.
b. A man came.

- **Problem 2:** If T has for some reason an EPP-feature (EF / OCC), and if this feature forces an overt NP movement to [Spec,TP], why is this movement not always obligatory? Cf. (11).
- How is the EPP-feature on T satisfied in (11a)? → by an expletive *pro* (cf. e.g. Wilkosz 2000)?



- BUT: Is an expletive *pro* as a semantically and phonetically “dummy” (empty) element really a suitable element to fulfil the EPP? (especially if the EPP is a kind of “overtness requirement”)

- (11) a. Przynszedł jakiś mężczyzna. (Polish)
came_{3.SG.M} [some man]_{NOM.3.SG.M}
b. Jakiś mężczyzna przynszedł.
[some man]_{NOM.3.SG.M} came_{3.SG.M}
‘Some/a man came.’



2.2 Solving the mystery: A new view

- According to Chomsky (2005), Tense does not have phi-features on its own, but rather inherits them from C.
- Assumption: T does not have any EPP-feature on its own. Rather, it might inherit this feature (understood here in terms of an “edge feature”) together with phi-features from C (cf. Chomsky 2005:22).
- More precisely, in discourse-neutral or unmarked contexts, i.e., in contexts in which no special requirements are imposed by the preceding discourse (see below), C will normally “pass” its edge feature onto T together with phi-features.



- An important consequence: In cases in which C relinquishes to T its right to have its own specifier, i.e., when C transfers its edge feature to T, it also abandons its “right of self-determination”, i.e., the ability to select on its own the candidate (goal) for internal merge.
- Rather, the inherited edge feature from C can be satisfied only by an element which simultaneously undergoes an Agree relation with Tense. → economy (see below): If two probes can be satisfied by one and the same goal, they might be “bundled” to one complex probe which as such will seek a goal (in other words: two probes can “work in tandem” (see also Miyagawa 2004)).

2.3 The gist of the proposal

- Assuming the following scenario: C has phi-features that are passed onto T and an EPP (edge) feature, there are (at least) two options of how the edge feature (EF) of C can be satisfied; cf. (12).⁵

- (12) a. Option 1:
EF is passed on together with phi-features to T; a feature-tie is formed: EF is bundled up with the features of T (i.e., features that T either has on its own or inherits from C) into a complex probe, as a consequence, EF can be satisfied only by elements simultaneously undergoing an Agree relation with T.
Possible variants:
(1-a) EF is satisfied by a (NOM) NP undergoing an Agree relation with Tense in phi-features; the resulting structure is interpreted as a canonical categorical sentence with a NOM NP as sentence topic.

⁵ Yet another possibility, not discussed below, would be an External Merge option, that is, the edge feature on C could be satisfied by merging some element directly at the target, thus creating a specifier of C.

³ The feature OCC(urrence) means: “I must be an occurrence of some β” (taking occurrence of β to be its sister) (Chomsky 2005:11; fn. 36).

⁴ In Chomsky (2001:16)/(2004:116), it is said that the EPP of T, i.e., the original Extended Projection Principle, is “perhaps universal, perhaps not; the jury is still out that on that.”

(1-b) EF is satisfied by a verbal element (v⁺V) undergoing an Agree relation with Tense (which is analyzed here, following the proposal by Pesetsky and Torrego 2004, as an agreement in Tense features); the resulting structure is interpreted as a canonical thetic sentence with the verb's situation argument in the function of sentence topic.

b. Option 2:

EF stays on C (i.e., it is not passed on together with phi-features to T); no feature-tie is formed (on the contrary, we have to do with so to speak independent probes: EPP (EF) on C and phi-features (inherited from C) on T, plus, of course, the Tense feature on T); consequently, EF can be satisfied independently of agreement relations determined by T. To put it differently, C can determine on its own the candidate to satisfy its EF.

Possible variants:

(2-a) C chooses a NOM (subject) NP to satisfy its EF; the resulting structure is (unlike that in Option (1-a)) "marked" in that the subject obligatorily receives a kind of contrastive or CLLD interpretation.⁶

(2-b) C chooses any other accessible (i.e., occupying the edge of the vP-phase) element to satisfy its EF: the resulting structure might also be considered as somehow "marked" (in comparison with the "unmarked" or canonical option (1-a)) in that the proposed element seems to be normally required to be discourse-linked.

2.4. Details of the analysis

2.4.1 Option 1: C passes on its EF to T

2.4.1.1 Variant (1-a): The case of T-NP_{NOM} agreement

- When T agrees with a NOM NP, such an NP will normally satisfy the edge feature of T (which T has inherited itself from C).
- The result: categorical statements in which the subject (the NOM NP) is the topic of the sentence; cf. (13). → Crosslinguistically, the topic strongly tends to coincide with the grammatical subject of the sentence (see, e.g. Gundel 1975, Givón 1976, Li and Thompson 1976, Reinhart 1981, Lambrecht 1994).
↓

- In other words, in an unmarked context the grammatical subject – unlike a nonsubject – can always – quasi per default – be interpreted as the topic of the sentence.

(13) a. Jan (nie) był na przyjęciu. (Polish)

John_{NOM} NEG BE_{3SGM}PAST at party

b. Jan (nie) był na przyjęciach.

John_{NOM} NEG BE_{3SGM}PAST HABIT at parties

'John didn't use/used to come to parties.' (Lit.: 'John didn't use/used to be at parties.')

(14) a. C T [np NP v [vp V ...]]

$i\phi_{[]}$ $i\phi_{[val]}$
 uEF $uCase_{[]}$
 'Feature transfer' from C to T

b. C T [np NP v [vp V ...]]

uEF $i\phi_{[]}$ $Agree$ $i\phi_{[val]}$ $uCase_{[]}$
 Agree in phi-features between T and NP

c. C T [np NP v [vp V ...]]

uEF $\#\phi_{[]}$ $Agree$ $i\phi_{[]}$ $\#\text{Case}_{[NOM]}$
 Deletion of uninterpretable features [uF]/valuation as a result of Agree

d. C T [np NP v [vp V ...]]

uEF $\#\phi_{[]}$ $Agree$ $i\phi_{[]}$ $\#\text{Case}_{[NOM]}$
 The NP undergoing an Agree relation with T is chosen to satisfy the EF

e. C NP T [np NP v [vp V ...]]

$i\phi_{[]}$ $\#\phi_{[]}$ $\text{Movement/Internal Merge}$ $\text{<NP>}' v$ $\text{<Case}_{[NOM]}>$
 $\#\text{Case}_{[NOM]}$ $\#\text{EF}$ $\text{Deletion of [uEF] on T}$

2.4.1.2 Variant (1-b): The case of T-v/V agreement

- The edge feature is satisfied by the verb/verb complex v⁺V (which itself undergoes an Agree relation with T; see below).
- The result: the situation variable of the verb that serves as a topic. The interpretation we get in this case is that of a canonical thetic sentence.
↓

- Cf. Krifka (2006) or McNay (2007): though thetic judgements lack a topic constituent⁸ – they have a topic denotation, namely the situation itself (cf. also Marty

⁶ It would also be conceivable that C chooses a verbal element (v⁺V) to satisfy its EF. By analogy with (2-a), we would also expect the resulting structure in this case to receive (unlike in Option (1-b)) a kind of "marked" (e.g., obligatorily contrastive) interpretation.

⁷ The square brackets indicate the copy of the moved NP.

1884, Erteshik-Shir 1997, É. Kiss 2002, Zybatow and Junghanns 1998; see also Borschev and Partee 2001).



- In cases in which the verb's situation variable (see below) serves as a sentence topic that the sentence is about is exactly a situation as such, or more precisely, the fact that a situation as descriptively characterized by a given vP/VP exists or does not exist. → Cf. Sasse (1987:526f.): thetic sentences are assertions about the existence (or nonexistence) of some entity (referred to by Sasse as “*entity-central*” thetic expressions⁸) or some event (“*event-central*” thetic expressions⁹). Cf. (15) and (16).⁹

(15) a. Był tam duży ruch. (Polish)

BE_{3.SG.M.PAST} there [big traffic]_{NOM.SGM}

‘There was heavy traffic there.’

b. Nie było tam ruchu.

NEG BE_{3.SG.N.PAST} there traffic_{GEN.SGM}

‘There was no traffic there.’

(16) a. We wsi jest lekarz.

in village BE_{3.SG.PRES} doctor_{NOM.SGM}

‘There is a doctor in the village.’

b. We wsi nie ma (zadnego) lekarza.

in village NEG HA_VBE_{3.SG.PRES} [(no) doctor]_{GEN.SGM}

‘There is no doctor in the village.’

- Two questions:

➤ Question 1: What is the Agree relation between T and the verb?

➤ Question 2: How can the verb movement to T satisfy the edge feature of T (which T inherited from C)?

- Answers:

➤ Answer 1: An Agree relation between T and v/V might be motivated by the need of feature valuation for the purposes of the semantic interpretation of Tense; cf. Pesetsky and Torrego (2004):

❖ From the crosslinguistic point of view, it is usually or often the case that the finite verb and not T itself bears the morphology that makes tense distinctions.

❖ T on Tns is an interpretable feature that is unvalued and acts as a probe while T on the finite verb is an uninterpretable feature that is valued and acts as a goal.

❖ As the result of an Agree relation between Tns and V, interpreted here in terms of feature-sharing, we get a structure with a single valued feature shared by two locations (multiple instances of a single feature are indicated by means of indices in brackets).

(17) Tns [_v walked] ⇒ Tns [_v walked]



- ❖ In other words, while the tense feature is interpreted in Tns, its value comes from the finite verb; cf. (17) (from Pesetsky and Torrego 2004:6).

Agree

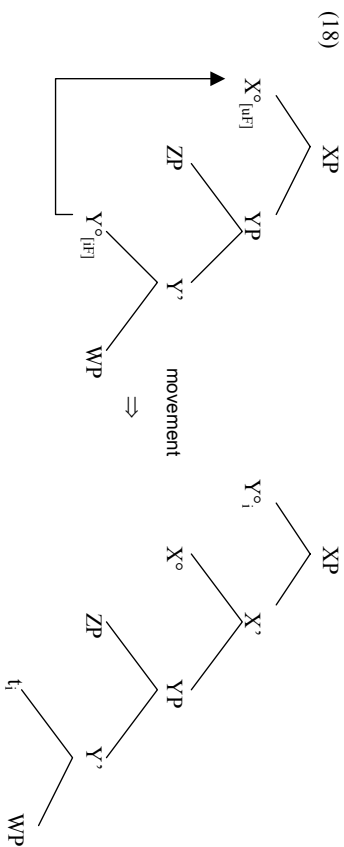
➤ Answer 2: A possible solution to the problem at hand offers Matushansky's

(2006) recent analysis of head movement.

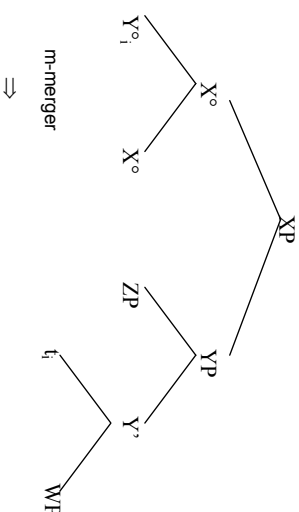
❖ According to Matushansky (2006), head movement consists in fact of two operations: a syntactic one and a morphological one.

❖ The first operation, the movement operation, targets – just like phrasal movement – the root of the tree and creates a specifier of the attracting head; cf. (18) (Matushansky 2006:81).

❖ The second operation, m(orphological) m(erge)r, occurs in the morphological component of the grammar and creates features bundles. More precisely, the m-merger takes as input two heads in a particular (specifier-head) configuration and creates one head whose internal structure is syntactically opaque; cf. (19) (Matushansky 2006:81, 94).



(19)



⁸ The notion of “topic constituent” is defined as follows (Kritika 2006:29):
 (i) The topic constituent identifies the entity or set of entities under which the information expressed in the comment constituent should be stored in the CG [Common Ground: J.B.] content.
⁹ But see footnote 11 for another possibility of how (16) can be interpreted.

➔ Applying these ideas to (15):

- (15) a. Był tam duży ruch.
 BE_{3.SG.M.PAST} there [big] traffic[NOM.SG.M]
 'There was heavy traffic there.'
 b. Nie było tam ruchu.
 NEG BE_{3.SG.N.PAST} there traffic[GEN.SG.M]
 'There was no traffic there.'

(Polish)

- (20) a. C T Vb
 $u\phi$ [] \leftarrow t [T] [] uT [val]
 uEF \leftarrow
 'Feature transfer' from C to T

- b. C T Vb
 uEF t [T] [] Agree uT [val]
 $u\phi$ []
 Agree in Tense-features between T and Vb

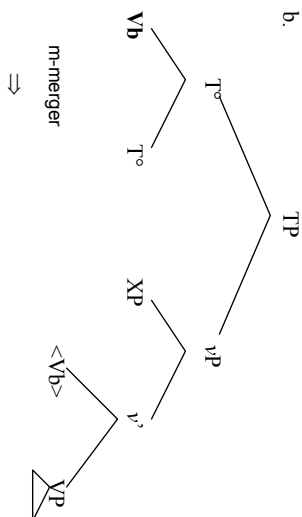
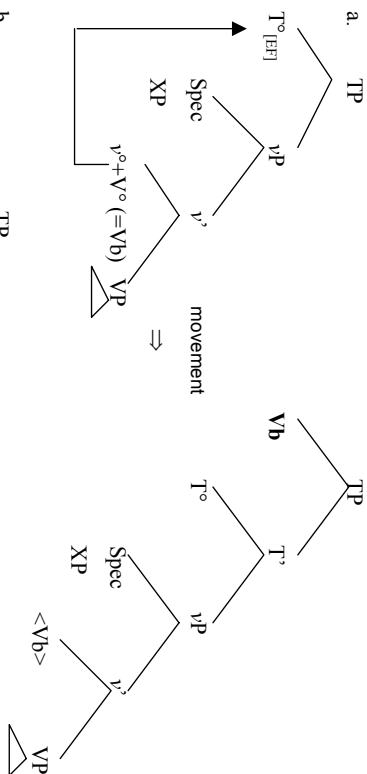
- c. C T Vb
 uEF t [T] [] Agree $\#t$ []
 $u\phi$ []
 Deletion of uninterpretable features [uF]/Valuation as a result of Agree

- d. C T Vb
 uEF t [T] [] Agree $\#t$ []
 $u\phi$ []
 The Vb undergoing an Agree relation with T is chosen to satisfy the EF

Movement/Internal Merge

- e. C \leftarrow Vb T \leftarrow Vb
 $\leftarrow \#t$ [] $\#t$ [] t [T] [] Agree $\leftarrow \#t$ []
 $\leftarrow u\phi$ [] \leftarrow
 Deletion of [uEF] on T

- (21) a.



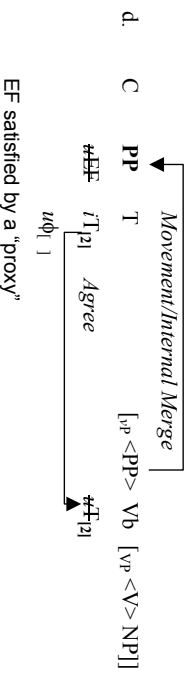
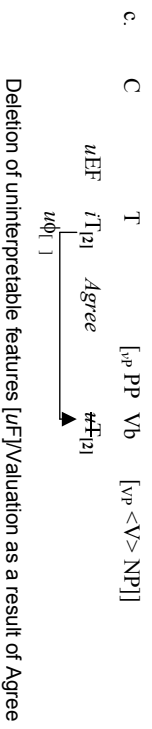
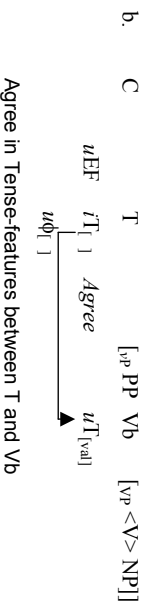
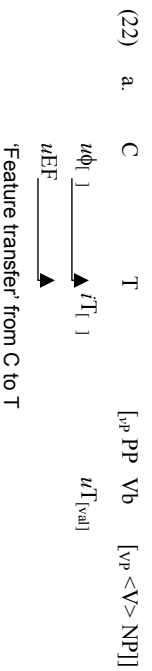
➔ What about the non-verb-initial thetic sentences in (16)? How is the edge feature of T (which is itself inherited from C; see above) satisfied in these cases, i.e., do we have an overt Vb-to-T movement there too? (But see footnote 11.)

- (16) a. We wsi jest lekarz.
 in village BE_{3.SG.PRES} doctor[NOM.SG.M]
 'There is a doctor in the village.'
 b. We wsi ma (zadnego) lekarza.
 in village NEG HAVE_{3.SG.PRES} [(no) doctor[GEN.SG.M]]
 'There is no doctor in the village.'

➔ Two possible options:

Option 1:

- ❖ There is an Agree relation between T and V (Vb), but instead of moving the verb itself to satisfy the edge feature of T, we move – as the verb's proxy so to speak – the highest accessible constituent (i.e., occupying the edge) of the vP-phase, the locative PP in the case of the existential sentences.



BUT:

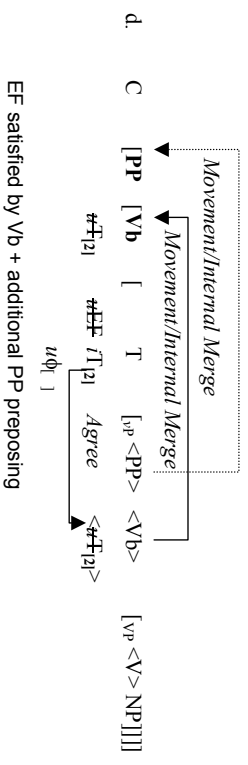
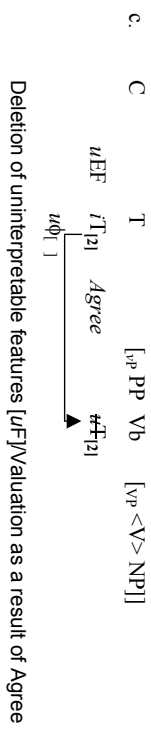
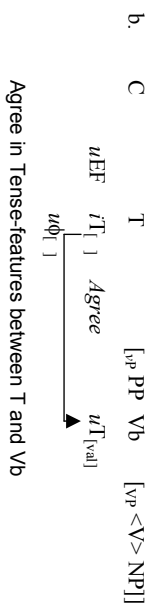
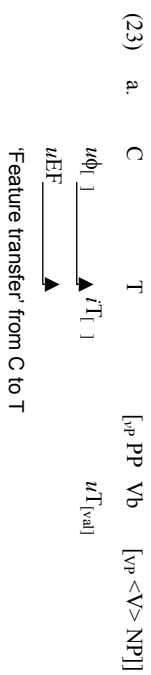
- ❖ This analysis would run counter to the assumption previously made, namely that inthetic sentences it is the verb's situation variable that is interpreted as a sentence topic, i.e., the verb (Vb) is the element satisfying the edge feature of C, which is passed on to T.
- ❖ If an Agree relation between T and V (Vb) alone were enough to qualify the verb's situation variable for functioning as a sentence topic, every sentence agreement relation between T and V (Vb) in any case.
- ❖ For this reason, the option mentioned below seems to be more appealing.

Option 2:

- ❖ Assumption: Allthetic sentences (in Polish) involve an overt verb movement to T (see also Junghanns 2003), which as such already satisfies the edge feature of T.
- ❖ To explain the word order in such sentences (i.e., the noninitial position of the verb), one would need then to assume that there is nevertheless yet another movement, creating the outer specifier of T by preposing the highest

accessible constituent of the vP-phase: the locative PP in the case of the existential sentences (see above). Alternatively, such a PP could be simply assumed to adjoin to TP.

- ❖ The proposed PP can be analyzed in terms of providing an overt restriction for the situation variable.



2.4.2 Option 2: C retains its EF

2.4.2.1 Variant (2-a): C chooses NP_{nom} to satisfy its EF

- Given that edge feature transferring to T is a more economical variant (see below), we would expect that if C retains its edge feature but is nevertheless a NOM (subject) NP that is chosen by C to satisfy its edge feature, the interpretation of the subject in such a case should be somehow marked, i.e., we expect it to deviate from the unmarked or default sentence topic interpretation.
- This is presumably what is going on in Greek and Romance languages.
 - Alexiadou and Anagnostopoulou (1998): argue that in null subject languages like Greek or Spanish preverbal subjects in SVO orders do not occupy the

canonical subject A-position but rather all preverbal subjects are Clitic Left Dislocated (CLLD) in an A'-position.

Sheehan (2007): "although, in many cases preverbal subjects are undoubtedly the result of CLLD, (with a null pronoun in spec IP), it cannot very easily be maintained that *all* instances of preverbal subjects are. [Sheehan's emphasis; J.B.] In fact in many cases, it seems far less problematic to assume that the subject occupies the canonical preverbal subject position" (ibid., Ch. 2, p. 94).

➤ Cf. also Belletti (1990) and Rosselló (2000) for the idea of two preverbal subject positions (a canonical one and a topicalized/left peripheral one) in Italian and Catalan, respectively.

2.4.2.2 Variant (2-b): C chooses any other accessible element to satisfy its EF

- In (24) the initial GEN NP takes on the role of the sentence topic. → One could use a sentence like (24) to tell something about John or about a certain doctor (notice that in the latter case the articleless NP *doktor* 'doctor^{GEN}' has a definite/thematic interpretation 'the doctor', i.e., it must be a doctor previously mentioned in the context; cf. (25)).

(24) Lekarza/Jana nie ma we wsi.
 doctor^{GEN.SGM}/John^{GEN} NEG HAV^{E3.SG.PRES} in village
 'The doctor/John is not in the village.'

(25) a. (Context: John's teacher talking to John's mother: 'I must tell you something about your son.')

Jana nie by/lo dzisiaj znowu na lekci.
 John^{GEN} NEG BE^{3.SGN.PAST} today again on lecture
 'John was not in the lecture today again.'

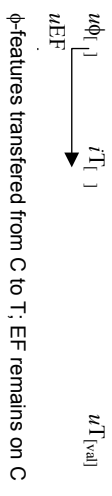
b. (Context: John had a small accident and went to see his doctor. Unfortunately)

Lekarza nie by/lo dzisiaj we wsi.
 doctor^{GEN.SGM} NEG BE^{3.SGN.PAST} today in village
 'The doctor was not in the village today.'
 (He had some important meeting in the town.)

- Assumption: In sentences like the ones in (24), which are neither canonical categorical sentences with a default subject NP as sentence topic nor canonical thetic sentences with the verb's situation argument as sentence topic, C there does not pass on its edge feature to T.
- In accordance with the assumptions made earlier, C can select its own candidate (goal) for internal merge, i.e., unlike in the cases discussed above, it is not confined to elements with which it simultaneously undergoes an Agree relation.
- This is why a GEN NP can be chosen by C to satisfy its edge feature; cf. (26) (all irrelevant details are omitted here for ease of exposition).¹⁰

¹⁰ Note that given an appropriate context, sentences like those in (16) could be interpreted as telling us something about a certain location. In this scenario, C would also choose the element satisfying its edge feature on its own (i.e., there would be no transfer of the edge feature from C to T), and the chosen element in the case at hand would be the locative PP, receiving the interpretation as the sentence topic.

(26) a. C T NP^{GEN} Vb [vp <V> <NP^{GEN}>]



b. NP^{GEN} C T <NP^{GEN}> Vb [vp <V> <NP^{GEN}>]

#EF iT_1 uPhi_1

EF of C satisfied by the proposed GEN NP

● PART THREE: FURTHER ISSUES

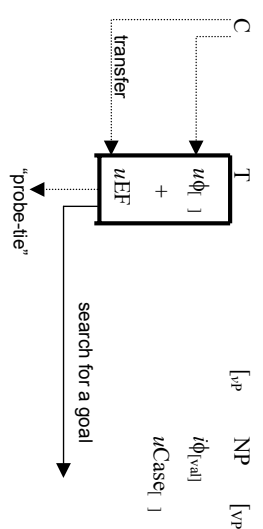
3.1 Economy of computation: The number of required search/probing operations

- If, as we have assumed, following a suggestion in Chomsky (2005), it is actually C and not T that has – in addition to phi-features (for subject agreement) – the EPP feature, referred to more generally as edge feature, (normally) for sentence topic interpretation), the question is why this feature is usually passed onto T.
- What I would like to suggest here is that this is so because this is the most economical option, and the reason for this is as follows: ↓

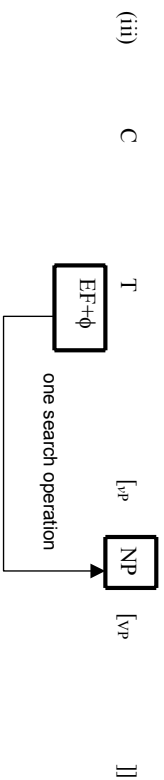
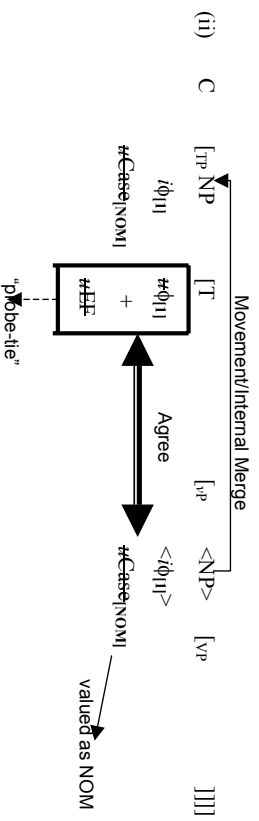
- If we compare these two options mentioned in § 2.3 (C passes on its EF vs. C keeps its EF), we will immediately notice one important difference between them, namely these two options differ in the number of the required search/probing operations in each case; cf. (27) vs. (28)¹¹

(27) a. **Option (1-a)**

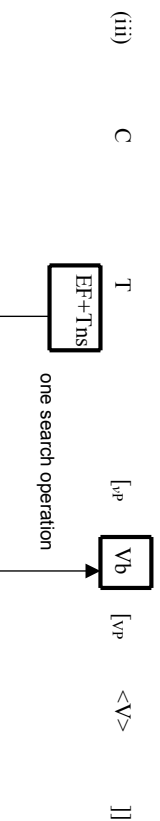
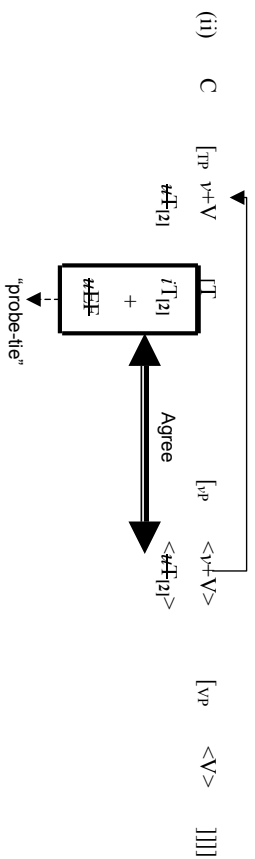
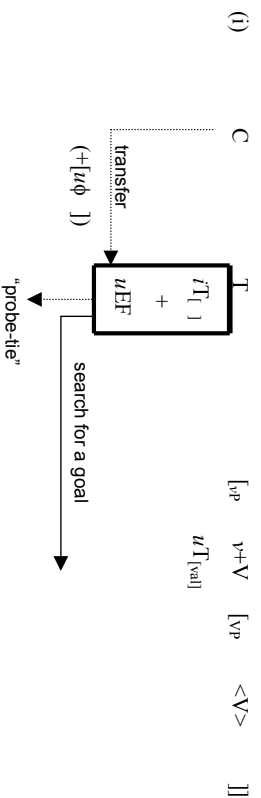
(i) C T [vp NP [vp]]



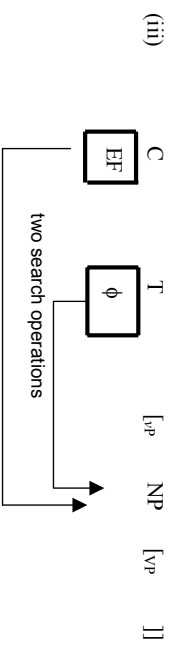
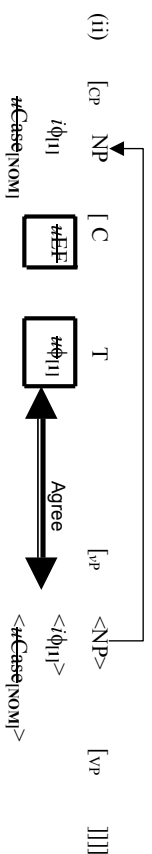
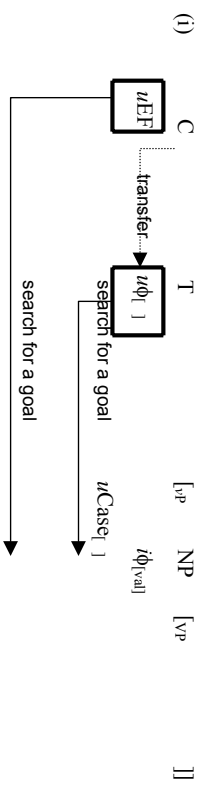
¹¹ In the diagrams below only those features and operations are presented that are relevant in a given case; the others are simply ignored and omitted in the presentation.



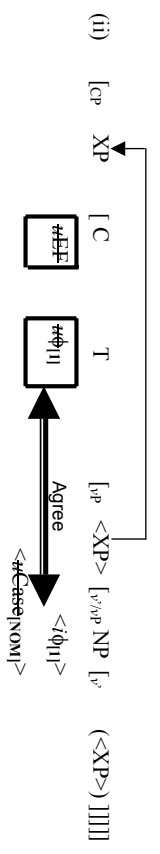
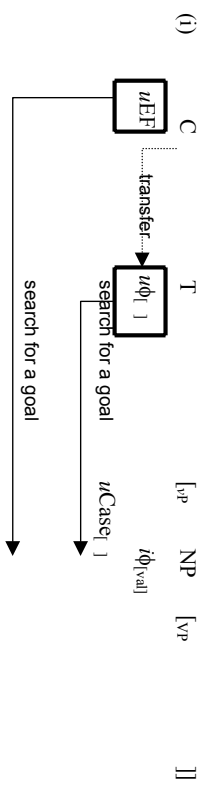
b. Option (1-b)



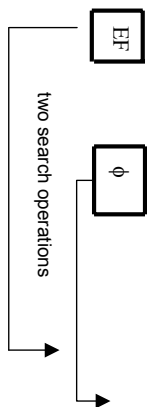
(28) a. Option (2-a)



b. Option (2-b)



(iii) C T [NP XP [v^{NP} NP]]



Conclusions:

- Both in Option (1-a) (cf. (27a)) and Option (1-b) (cf. (27b)) the edge feature is tied to phi-features (for subject agreement) or Tense features on T, respectively. These two probes (EF + phi-features or EF + Tense features) work in tandem so to speak, they build one complex probe. There is thus only one search/probing operation: the complex probe (the “probe-tie”) searches for a suitable goal; the element undergoing an Agree relation with T (in phi-features or Tense features, respectively) is at the same time the element that satisfies the EPP (edge feature). To put it differently, by transferring its edge feature to T, C delegates to T also the whole “search/probe for a suitable goal” job.
- In contrast, in both Option (2-a) (cf. (28)) and (2-b) (cf. (28b)) we have independent probes in C and T, each searching on its own for a suitable goal. In other words, in this case we have one more search/probing operation.¹²

3.2 Possible extensions

- All the cases considered so far were limited to a situation where the phase head C passes on the Agree features to its complement’s head T, either keeping the edge feature for itself or passing it on to its complement’s head as well.
- What would also be worth considering is the following situation: the phase head keeps both the edge feature and the Agree features. → Expectation: *agreeing topics*¹³
- This is what arguably happens in a subset of Bantu languages that show the so-called subject-object reversal (e.g., Kirundi, Kinyarwanda). → Morimoto (2004) argues that in examples like that in (29) the agreement in question is topic agreement and licenses the preverbal topical object.¹⁴

¹²

Note that there are not necessarily more movement operations in Option 2. According to the assumptions made so far, there is only one edge feature (EPP) on C. This means that in cases in which C does not pass on its edge feature to T, T undergoes only an in-situ Agree relation with a NOM subject NP. That is, there is (at least not for EPP reasons) no overt NP movement to [Spec, TP] in this case. Note that this latter assumption would mean that the subject actually stays lower in the structure (somewhere in vP).

¹³

Note that this idea would come close – at least in spirit – to the analysis by Baker (2003) (based, among others, on Kinande and other Bantu languages). He proposes that there are three relevant features, the EPP, agreement and (nominative) case, whereby agreement is central, and it works in tandem with the EPP or with case.

¹⁴

Morimoto (2004) strongly argues against the “subject analysis” of subject-object reversal. See Morimoto (2004) and the references cited there for details.

(29) Kinyarwanda (here quoted from Morimoto 2004)

a.	Umuhungu	a-ra-som-a	igitabo.	SVO
	1boy	1-AF-read-ASP	7book	
	‘The boy is reading the book.’			
b.	Igitabo	ki-som-a	umuhungu.	OVS
	7book	7-read-ASP	1boy	
	‘The boy (FOC) is reading the book (TOP).’			

● PART FOUR: CONCLUSIONS

- T does not have any EPP-feature on its own. → Rather, it might inherit this feature (understood here in terms of an “edge feature”) together with phi-features from C.
- Two situations have to be distinguished here:
 - **Option ❶:** An unmarked (more economical) option → C transfers its edge feature together with the phi-features to T. In such a case the inherited edge feature can be satisfied only by elements simultaneously undergoing an Agree relation with Tense, i.e., either by a NOM NP (undergoing an Agree relation with T in phi-features) or by Vb (=v+V) (undergoing an Agree relation with T in Tense features).
 - **Option ❷:** A (more) marked option → C there does not pass on its edge feature to T. In this case C can select its own candidate (goal) for internal merge, i.e., unlike in Option ❶, the edge feature can be satisfied by any element which is accessible to C.
- Whereas Option ❷ yields categorical sentences in which other elements than NOM NPs (e.g., objects, locative PPs etc.) play the role of sentence topic, Option ❶ yields the canonical categorical sentences with a NOM subject, or the canonical thematic sentences in which the situation variable is taken to function as sentence topic.

Selected literature

Alexiadou, A. and E. Anagnostopoulou (1998). Parameterizing AGR. Word Order, V-Movement, and EPP-Checking. *Natural Language and Linguistic Theory* 16/3: 491-539.

Babby, L. H. (1980). *Existential Sentences and Negation in Russian*. Ann Arbor, MI: Karoma.

Babyonyshev, M. (1996). *Structural Connections in Syntax and Processing: Studies in Russian and Japanese*. Ph.D. Dissertation, MIT, Cambridge, MA.

Babyonyshev, M. (2003). The Extended Projection Principle and the Genitive of Negation Construction. In: Brown, S. and A. Przepiórkowski (eds.): *Negation in Slavic*. Bloomington, IN: Slavica Publishers, 31-69.

Balyrn, J. F. (2004). Generalized Inversion. *Natural Language and Linguistic Theory* 22: 1-49.

Baker, M. (2003). Agreement, Dislocation, and Partial Configurationality. In: Carnie, A., H. Harley, and M. A. Willie (eds.): *Formal Approaches to Function in Grammar*. Amsterdam: John Benjamins, 107-132.

Barbosa, P. (1995). Null Subjects. Ph.D. Dissertation, MIT, Cambridge, MA.

Belletti, A. (1990). *Generalized Verb Movement: Aspects of Verb Syntax*. Torino: Rosenberg & Sellier.

Błaszczak, J. (2007). *Phase Syntax: The Polish Genitive of Negation*. Habilitation Thesis, University of Potsdam.

- Borschev, V. and B. Partee (2001). The Russian Genitive of Negation in Existential Sentences: The Role of Theme-Rheme Structure Reconsidered. Manuscript. [Published 2002 in: Hajičová, E. and P. Sgall (eds.): *Travaux de Cercle Linguistique de Prague (nouvelle série)* [Working Papers of the Prague Linguistic Circle (new series)], Vol. 4, Amsterdam: John Benjamins, 185-250.]
- Bošković, Ž. (2002). A-Movement and the EPP. *Syntax* 5/3: 167-218.
- Branigan, P. (1992). *Subjects and Complementizers*. Ph.D. Dissertation, MIT, Cambridge, MA.
- Bresnan, J. and J. M. Kanerva (1989). Locative Inversion in Chicheva: A Case Study of Factorization of Grammar. *Linguistic Inquiry* 20/1: 1-50.
- Chomsky, N. (1981). *Lectures on Government and Binding*. Dordrecht: Foris.
- Chomsky, N. (1982). *Some Concepts and Consequences of the Theory of Government and Binding*. Cambridge, MA: The MIT Press.
- Chomsky, N. (1995). *The Minimalist Program*. Cambridge, MA: The MIT Press.
- Chomsky, N. (1998). Minimalist Inquiries: The Framework. *MIT Occasional Papers in Linguistics* 15. [Published 2000 in: Martin, R., D. Michaels, and J. Uriagereka (eds.): *Step by Step*. Cambridge, MA: The MIT Press, 89-155.]
- Chomsky, N. (1999). Derivation by Phase. *MIT Occasional Papers in Linguistics* 18. [Published 2001 in Kenstowicz, M. (ed.): *Ken Hale: A Life in Language*. Cambridge, MA: The MIT Press, 1-52.]
- Chomsky, N. (2001). Beyond Explanatory Adequacy. *MIT Occasional Papers in Linguistics* 20. [Published 2004 in: Belletti, A. (ed.): *Structures and Beyond – The Cartography of Syntactic Structure*. Vol. 3. Oxford: Oxford University Press, 104-131.]
- Chomsky, N. (2005). On Phases. Manuscript. [To appear in: Freidin, R., C. P. Otero, and M.-L. Zubizarreta (eds.): *Foundational Issues in Linguistic Theory*. Cambridge, MA: The MIT Press.]
- Collins, C. (1997). *Local Economy*. Cambridge, MA: The MIT Press.
- Davidson, D. (1967). The Logical Form of Action Sentences. In: Rescher, N. (ed.): *The Logic of Decision and Action*. Pittsburgh: University of Pittsburgh Press, 81-95.
- Epstein, S. D. and T. D. Seely (2006). *Derivations in Minimalism*. Cambridge: CUP.
- Erteschik-Shir, N. (1997). *The Dynamics of Focus Structure*. Cambridge: Cambridge University Press.
- Givón, T. (1976). Topic, Pronoun and Grammatical Agreement. In: Li, C. (ed.): *Subject and Topic*. New-York: Academic Press, 149-211.
- Gundel, J. (1975). Left Dislocation and the Role of Topic-Comment Structures in Linguistic Theory. *OSU WPL* 18: 72-131.
- Haider, H. (1993). *Deutsche Syntax – generativ: Vorstudien zur Theorie einer projektiven Grammatik*. Tübingen: Gunter Narr Verlag.
- Harley, H. (1995). *Subjects, Events and Licensing*. Ph.D. Dissertation, MIT, Cambridge, MA.
- Holmberg, A. (2000). Scandinavian Stylistic Fronting: How any Category can Become an Expletive? *Linguistic Inquiry* 31: 445-483.
- Jungblatts, U. (20023). *Prinzipien der Informationsstrukturierung in slawischen Sprachen*. Habilitationsschrift, Universität Leipzig.
- Keenan, E. (1976). Towards a Universal Definition of Subject. In: Li, C. (ed.): *Subject and Topic*. New York: Academic Press, 247-302.
- Kiss, K. E. (2002). The EPP in a Topic-Prominent Language. In: Svenonius, P. (ed.): *Subjects, Expletives, and the EPP*. Oxford: Oxford University Press, 107-124.
- Kitagawa, Y. (1986). *Subjects in Japanese and English*. Ph.D. Dissertation, University of Massachusetts, Amherst.
- Koizumi, M. (1995). *Phrase Structure in Minimalist Syntax*. Ph. D. Dissertation, MIT, Cambridge, MA.
- Koopman, H. and D. Sportiche (1991). The Position of Subjects. *Lingua* 85: 211-258.
- Kratzer, A. (1994). The Event Argument and the Semantics of Voice. Manuscript, University of Massachusetts, Amherst.
- Kratzer, A. and E. Selkirk (2007). Phase Theory and Prosodic Spellout: The Case of Verbs. Paper presented at the University of Potsdam, January 11, 2007.
- Krifka, M. (2006). Basic Notions of Information Structure. In: Féry, C., G. Fanselow and M. Krifka (eds.): *Working Papers of the SFB652, Interdisciplinary Studies on Information Structure (ISIS)* 6. Potsdam: Universitätsverlag Potsdam, 13-56.
- Lambrecht, K. (1994). *Information Structure and Sentence Form. Topic, Focus, and the Mental Representation of Discourse Referents*. Cambridge: Cambridge University Press.
- Lasnik, H. (2001). A Note on the EPP. *Linguistic Inquiry* 32: 356-362.
- Lasnik, H. (2002). On the Extended Projection Principle. Manuscript, University of Maryland.
- Li, C. and Thompson, S. (1976). Subject and Topic: A New Typology of Language. In: Li, C. (ed.): *Subject and Topic*. New York: Academic Press, 457-489.
- Maienborn, C. (2001). On the Position and Interpretation of Locative Modifiers. *Natural Language Semantics* 9: 191-240.
- Marty, A. (1884). Über subjektlose Sätze und das Verhältnis der Grammatik zu Logik und Psychologie. *Vierteljahrsschrift für wissenschaftliche Philosophie*.
- Matušiansky, O. (2006). Head Movement in Linguistic Theory. *Linguistic Inquiry* 37/1: 69-109.
- McCloskey, J. (1996). Subjects and Subject Positions in Irish. In: Borsley, R. D. and I. Roberts (eds.): *The Syntax of the Celtic Languages: A Comparative Perspective*. Cambridge: Cambridge University Press, 241-283.
- McCloskey, J. (1997). Subjecthood and Subject Positions. In: Haegeman, Liliane (ed.): *Elements of Grammar*. Dordrecht: Kluwer, 197-235.
- Miyagawa, S. (2004). On the EPP. [Published 2005 in: McGinnis, M. and N. Richards (eds.): *Perspectives on Phases (MWP/49)*. Cambridge, MA: MIT, Department of Linguistics and Philosophy, 201-235.]
- Morimoto, Y. (2004). From Topic to Subject Marking: Implications for a Typology of Subject Marking. (Handout of the) Paper presented at the Workshop on Differential Subject Marking, University of Nijmegen, July 8-9, 2004. [Appeared in de Hoop, H. and P. de Swart (eds.) (2008): *Differential Subject Marking. [Studies in Natural Language and Linguistic Theory, Vol. 72.]* Berlin, Heidelberg, and New York: Springer.]
- Pesetsky, D. and E. Torrego (2004). The Syntax of Valuation and the Interpretability of Features. Manuscript. [To appear in: Karimi, S., V. Samian, and W. Wilkins (eds.) (2007): *Phasal and Clause Architecture: Syntactic Derivation and Interpretation*. Amsterdam: John Benjamins.]
- Platzack, C. (2000a). Multiple Interfaces. In: van der Zee, E. and U. Nikanne (eds.): *Cognitive Interfaces: Constraints on Linking Cognitive Information*. Oxford: Oxford University Press, 21-53.
- Platzack, C. (2000b). The Computational System as a Minimal Feature Driven Device and the Tripartite TP/VP-Hypothesis of the Universal Clause. Manuscript.
- Richards, M. (2007). On Feature Inheritance: An Argument from the Phase Impenetrability Condition. *Linguistic Inquiry* 38/3: 563-572.
- Rosenstein, I. (2002). EPP: A Syntactic Device in the Service of Semantics. *Studia Linguistica* 56/2: 145-190.
- Rossello, J. (2000). A Minimalist Approach to the Null Subject Parameter. *CaMLP* 8: 97-128.
- Rohstein, S. (1983). *The Syntactic Forms of Predication*. Ph.D. Dissertation, MIT, Cambridge, MA.
- Sasse, H.-J. (1987). The Thetic/Categorical Distinction Revisited. *Linguistics* 25: 511-580.
- Sheehan, M. L. (2007). The EPP and Null Subjects in Romance. Ph.D. Dissertation, Newcastle University.
- Svenonius, P. (2002) (ed.). *Subjects, Expletives, and the EPP*. Oxford: Oxford University Press.
- Toyoshima, T. (2001). Head-to-Spec-Movement. In: Alexandrova, G. M. and O. Arnoldova (eds.): *The Minimalist Parameter: Selected Papers from the Open Linguistics Forum, Ottawa, March 12-23, 1997*. Amsterdam: John Benjamins, 115-136.
- Williams, E. (1980). Predication. *Linguistic Inquiry* 11: 203-238.
- Wilkos, J. (2000). Nominative-to-Genitive Shift and the Negative Copula *nie ma*: Implications for Checking Theory. *Journal of Slavic Linguistics* 8 (1-2): 295-327.
- Zwart, J.-W. (2006). Uncharted Territory? Towards a Non-Cartographic Account of Germanic Syntax. Manuscript, University of Groningen. (Presented at CGSW 21.)
- Zybatov, G. and U. Jungblatts (1998). Topics im Russischen. [Sprache und Pragmatik 47]. Lund: Germanistisches Institut der Universität Lund.