

Phase Featuring-driven EPP-features and EPP-feature-driven Subjacency

1. Locality of Movement

Since Chomsky (1973): movement applies in a successive-cyclic fashion.

Movement takes place in small steps – is local:

(1) $[XP_1 [t_1 \dots [t_1 \dots [t_1 \dots t_1 \dots]]]]$

Phases are reminiscent of Subjacency and Barriers (see, e.g., Boeckx and Grohmann (2004)).

The notion of cycle: in Subjacency model S, NP; in Barrier model added VP, in Phase model: vP for VP (DP).

In phase model (Chomsky 2000, 2001a, b), the barrierhood determined by PIC.

(2) PIC (Chomsky 2001a, 14, (11)):

The domain of H is not accessible to operations at ZP; only H and its edge are accessible to such operations.

(ZP is the next strong phase)

If an XP does not go through the edge → not movable

So, cyclic movement always targets the edge of a phase and it can be successive.

2. Intermediate Features

2.1. Movement obeys Last Resort.

(3) Last Resort (Chomsky 1995, 253):

“... Move is driven by feature checking ...”

(4) $[XP_1 F [t_1 F \dots [t_1 F \dots [t_1 F \dots t_1 \dots]]]]$

Problems with the indirect feature-driven movement: intermediate features are stipulative, “pseudo-features” Heck & Müller (2000), “spurious” (McCloskey 2002)

2.2. Two options

2.2.1. Intermediate features are not necessary:

Heck and Müller’s OT proposal (2000): Last Resort can be violated.

Problem: All Cs have the same morphology (McCloskey 2002, 211 (77)).

(5) Cathain a deirir a dhíolfir mé
 when aL you-say aL you-will-pay me
 ‘When do you say that you will pay me?’

(6) [CP When₁ [C aL ... [CP t₁ [C aL... t₁]]]]

2.2.2. Intermediate features are present

Chomsky’s P-feature, EPP, OCC (2000, 2001a, b).

Problems with Chomsky’s EPP-feature (2001a)

1. There are two types of the EPP-feature.

- a. The first one is present in the lexical array (subarray) and can be checked by external merge (the EPP on T checked by an expletive).
- b. The second one can be added after exhausting a subarray and is checked by movement (the peripheral EPP on v).

2. The peripheral EPP violates the Inclusiveness Condition (Chomsky 2001a, 2):

(7) “...Inclusiveness Condition, which bars introduction of new elements (features) in the course of computation...”

3. Its presence (it is optional) is driven by its consequence (effect on outcome)

4. The movement driven by the EPP-feature is not based on Agree (movement: Agree + pied-piping + merge (Chomsky 2001a)).

5. It violates locality principles, see, e.g., scrambling (object shift) in Czech:

(8) Pavel₁ bude [TP na ruku₂ líbat [VP zítra [VP t₁ Marii t₂]]].

Pavel_{NOM} will onto hand_{ACC} kiss tomorrow Marii_{ACC}

‘Pavel will kiss Marie onto her hand tomorrow.’

(9) Pavel₁ pošle [TP dopisy₃ [VP odpoledne [VP t₁ dětem₂ t₃]]].

Pavel_{NOM} sends letters_{ACC} in the afternoon children_{DAT}

‘Pavel will send children letters in the afternoon.’

The EPP-feature must know which element it shall attract. The scrambled element must carry a feature that is not present on the intervening elements.

3. The proposal

The presence of intermediate features is determined by the following principle. This principle can overcome all of the above problems.

3.1. Phase Featuring

(10) Phase Featuring

If a matching feature F does not have its probe feature F with the EPP-property in its current phase subarray (workspace), add an F_{EPP} -feature onto the phase head.

Simply: every goal has to have a probe in the phase

The “matching feature F” defined through (11):

(11) Feature Balance (modified Müller 2004)

For every probe feature F, there must be a matching feature F in the lexical array.

It holds for both types of features inherent (Lex) and non-inherent (LA).

It holds for agree, overt and covert movement, (10) only for overt movement

3.2. Relation between features

Probe and goal features

1. one-to-one relation
2. one-to-many relation
3. many-to-one relation

EPP-feature

Is it a subfeature?

4. Analysis

4.1. In Irish successive-cyclic movement is visible at PF: complementizer aL (default go).

McCloskey (2002, 211 (77)):

(12) Cathain a deir a dhíolfir mé
when aL you-say aL you-will-pay me
‘When do you say that you will pay me?’

XP_3 [$_{CP1}$ aL ... [$_{CP2}$ aL ... t_3 ...]]

LA: 1 wh-F on C_1 , 1 wh-F on Temp, an EPP on C_1

SA: wh_{EPP} on v_1 , v_2 and C_1

4.2. What about v?

Overt long-distance focus movement in Passamaquoddy

According to Bruening (2001a), agreement on the verbs argues for successive-cyclic movement via vP phase.

Bruening (2001a, 227 (585)):

(13) **Nihtol** **tehpu** skat kesiciy-ahq-**il** [$_{CP}$ kisapem-ac-**il**].
that.Obv only Neg IC.know.TA-3ConjNeg-PartObv rely.on-3Conj-PartObv
‘She only doesn’t know about HIM whether she can rely on him.’

LA: 1 foc-F on Foc, 1 foc-F on DP, an EPP on Foc

SA: foc_{EPP} on v₁, v₂ and C₁

Intermediate features are present on both phase edges (vP, CP). Successive-cyclic movement passes through both the edge of vP and the edge of CP.

Question: Who knows a language with markers on both heads? What about DP?

4.3. Scrambling in Czech

scrambling gives Specificity presupposed set partitive, epistemic, generic

Multiple scrambling, no superiority:

- (14) a. [_{ΔP} Marii₁ bude [_{TP} líbat [_{vP} zítra [_{vP} Pavel t₁ na ruku]]]].
Marii_{ACC} will kiss tomorrow Pavel_{NOM} onto hand_{ACC}
- b. [_{ΔP} Na ruku₃ Marii₁ bude [_{TP} Pavel₂ líbat [_{vP} zítra [_{vP} t₂ t₁ t₃]]]].
onto hand_{ACC} Marii_{ACC} will Pavel_{NOM} kiss tomorrow
- c. [_{ΔP} Marii₁ na ruku₃ bude [_{TP} Pavel₂ líbat [_{vP} zítra [_{vP} t₂ t₁ t₃]]]].
Marii_{ACC} onto hand_{ACC} will Pavel_{NOM} kiss tomorrow
- d. [_{ΔP} Na ruku₃ bude [_{TP} Marii₁ Pavel₂ líbat [_{vP} zítra [_{vP} t₂ t₁ t₃]]]].
onto hand_{ACC} will Marii_{ACC} Pavel_{NOM} kiss tomorrow
- e. [_{ΔP} Na ruku₃ bude [_{TP} Pavel₂ Marii₁ líbat [_{vP} zítra [_{vP} t₂ t₁ t₃]]]].
onto hand_{ACC} will Pavel_{NOM} Marii_{ACC} kiss tomorrow
'Pavel will kiss Marie onto her hand tomorrow.'

If one-to-one relation

LA: 1-to-1 relation gives the desired non-superiority (distinct features: Spec₁ on Δ, Spec₂ on Δ, Spec₃ on T, : Spec₁ on DP₁, Spec₂ on DP₂, Spec₃ on DP₃ ...) What about the EPP on probe heads? Only 1 or subfeatures? It makes no difference here.

SA: Spec_{1EPP}, Spec_{2EPP} on v...(Hinterhölzl 2004). It gives overt movement. (If Nissenbaum 2000, then before Spellout)

If one-to-many

1. Bošković's attract all-features (1998): trouble with superiority on T if there is a locality principle (MLC, Shortest) and only one F_{EPP}-feature on v. You would have to totally dispense with Extension Condition.

Richards's PMC (1997) the same trouble.

2. But if many F_{EPP} -features on v in any order, no problem with superiority on T . (It could be a parameter for order preservation.)

3. Bošković's proposal (1998) that the moving elements are strong. (It is not an attract model and problem with the relation between EPP-features and strength of moving elements.) The second step to ΔP must be something like Lasnik's SEI (1999).

4.4. Superiority in English questions

(15) Who bought what?

Given PIC, *what* is moved covertly. For covert-movement evidence, see Bruening (2001b), Pesetsky (2000).

(16) *Who what bought? - just one EPP

LA: 2 wh-features on C and 2 on DPs. What about the EPP? It cannot be a subfeature of a wh-feature because then possible:

(17) *What who bought? (do insertion?)

Or the wh_{EPP} is not more specific than the wh-feature and violates superiority.

Question: what is on v in SA?

4.5. Multiple wh-movement in Czech

(18) a. $Koho_2$ bude [ΔP kdo_1 líbat [$_{VP}$ $zítra$ [$_{VP}$ t_1 t_2 na ruku]]]?
Who_{ACC} will who_{NOM} kiss tomorrow onto hand_{ACC}

b. Kdo_1 bude [ΔP $koho_2$ líbat [$_{VP}$ $zítra$ [$_{VP}$ t_1 t_2 na ruku]]]?
Who_{NOM} will who_{ACC} kiss tomorrow onto hand_{ACC}
'Who will kiss who onto his hand tomorrow?'

c. Kdo_1 bude [ΔP $koho_2$ kdy_3 líbat [$_{VP}$ t_3 [$_{VP}$ t_1 t_2 na ruku]]]?
Who_{NOM} will who_{ACC} when kiss onto hand_{ACC}
'Who will kiss who onto his hand when?'

LA: 2/3 foc-features on Δ (Foc), the EPP for all, 2/3 wh-features on C but only 1 EPP

SA: 2/3 wh_{EPP} -features on v and also foc_{EPP} -features?

Then the EPP on C attracts the closest, consequently no superiority.

4.6. Covert movement

If it exists, then it must be triggered as well.

Bruening (2001b) uses Chomsky's P-feature for QR. It works according to Richards's Shortest (1997): scope preservation.

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