

FROM *MI-DBP* TO *BEA**

Sze-Wing Tang

The Hong Kong Polytechnic University

1 Introduction: asking deeper *why*-questions

In generative grammar, linguists face two problems: *descriptive adequacy* and *explanatory adequacy*. The former is to find a way to account for the phenomena of particular languages while the latter is to explain how knowledge of the facts arises in our mind. In his (2001b) paper (hereafter abbreviated as *BEA*), Chomsky tries to seek a level of explanation deeper than explanatory adequacy, asking not only *what* the properties of language are, but *why* they are that way. *BEA* can be regarded as the further development of the Minimalist Program outlined in Chomsky 2000 (=MI) and 2001a (=DBP).

According to *BEA*, the initial conditions on language acquisition fall into the following three categories: (i) unexplained elements of S_0 , (ii) interface condition IC,¹ and (iii) general properties. Principled explanation, going beyond explanatory adequacy, keeps to ‘IC’ and ‘general properties’. The so-called ‘unexplained elements of S_0 ’ must be empty.

Some significant claims of *BEA* are briefly summarized in section 2. Questions and comments are addressed in section 3.

2 Some significant claims in *BEA*

2.1 The architecture

2.1.1 Duality of SEM: SEM includes theta-theoretic properties (argument structure) and everything else (e.g. scopal and discourse-related properties).²

2.1.2 No ‘LF’: There are no LF properties and no interpretation of LF, strictly speaking. The computation maps lexical array LA to <PHON, SEM> piece-by-piece cyclically.³

2.1.3 Word order: IC imposes order at PHON, which is fixed once and for all for L.

* This squib can be regarded as a short report of the summer reading group on the Minimalist Program (Chomsky 2001b) held on August 18, 2001 at The Hong Kong Polytechnic University. Questions and comments in section 3 reflect the major concerns of the participants. Needless to say, I am solely responsible for any errors and misunderstandings in this squib.

¹ IC = bare output conditions BOC (*MP*), legibility conditions (*MI*, *DBP*).

² SEM is the derivation accessed by conceptual-intentional systems C-I.

³ PHON is the derivation accessed by sensorimotor systems SM.

2.2 Structural relationships

- 2.2.1 M-command: There is no m-command.
- 2.2.2 Head-head relation: Apparent SPEC-H relations are in reality head-head relations involving minimal search (local c-command).
- 2.2.3 S-selection: S-selection is eliminated.
- 2.2.4 Paired-merge: In $\langle \alpha, \beta \rangle$, α (adjunct) is spelled out where β is.

2.3 Operations

- 2.3.1 TRANSFER hands derivation of narrow syntax D_{NS} over to the phonological component Φ and to the semantic component Σ .
- 2.3.2 Uninterpretable features: They are without value [uF]. Valuation of [uF] is part of TRANSFER.
- 2.3.3 No feature movement: There is no feature movement (contra *MP*, *MI*).
- 2.3.4 Merge: Both ‘external Merge’ (=Merge) and ‘internal Merge’ (=Move) are free (contra *MP*, *MI*, and *DbP*).
- 2.3.5 SIMPL: It is an optional operation that converts $\langle \alpha, \beta \rangle$ to $\{\alpha, \beta\}$, which is part of TRANSFER.

3 Questions and comments

3.1 ‘General properties’

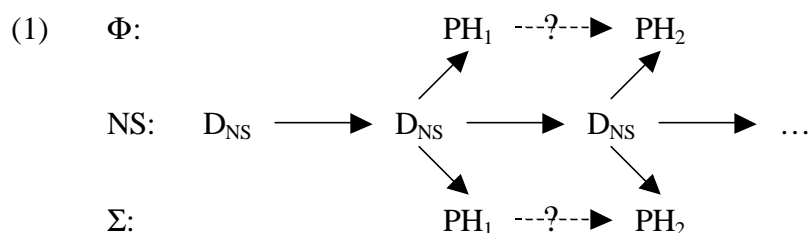
It is claimed in *BEA* that principled explanation should keep to ‘IC’ and ‘general properties’. What are the general properties? They are ‘general properties of computational efficiency and the like’ (p.3), assuming that ‘the organic systems are computational systems that incorporate ..principles of efficient computation’ (p.1). In addition to IC and general principles, there should be no longer any language-specific properties.

Chomsky (2000:141 fn16) mentions that there may be ‘filters, ranked constraints, and other devices that are part of the computational system itself’. In the *BEA* framework, those devices should be derived from the general properties. For example, locality conditions, which do not seem to be related to any IC, should be part of the general properties.

3.2 Derivation by phase

Following *MI* and *DbP*, *BEA* assumes that derivations proceed phase by phase. The three components, namely narrow syntax NS, the phonological component Φ , and the semantic component Σ , proceed cyclically in parallel. The architecture of the language faculty would be something like (1). ‘ D_{NS} ’ and ‘PH’ stand for the derivation

in NS and the phase sent to the two components, respectively.⁴



If our understanding of this model is correct, is there any derivational relationship between phases in Φ and Σ , e.g. between PH_1 and PH_2 in (1)? How should we interpret ‘parallelism’ in the cyclic derivation? Will it be the case that a later phase (e.g. PH_2) is added to an earlier phase (e.g. PH_1) or the former simply overrides the latter? How the derivation works in Φ and Σ has not been spelt out in *BEA*.

3.3 OCC and successive-cyclic movement

To ensure that internal Merge (movement) is successive-cyclic, passing through an ‘escape hatch’, i.e. the edge, *BEA* assumes that the head H is assigned the OCC feature,⁵ triggering movement to the edge. For example, the partial derivation of *Who did you see?* can be represented in (2). To make sure that *who* undergoes successive-cyclic movement to the edge of CP via the edge of vP , v is assigned OCC.

- (2)
- | | | |
|----|--|-----|
| a. | [see who] | ⇒ |
| b. | [v [see who]] | ⇒ |
| c. | [you [v [see who]]] | ⇒ |
| d. | [who [you [v [see who]]]] | ... |

Notice that at the stage where *who* moves to the edge of vP in (2d), such a step does not yield any new interpretations as the edge of vP provides an escape hatch for *who* only. In other words, OCC of v does not have any function of providing new interpretations, but it only contributes to an outcome at SEM indirectly. Although the step from (2c) to (2d) violates no locality conditions, the option of assigning OCC to v seems to have some ‘look-ahead’ property, which may not be a desirable move in the Minimalist Program.

⁴ The operation that hands D_{NS} over to Φ and Σ is called TRANSFER. Spell-Out S-O is part of TRANSFER from D_{NS} to Φ .

⁵ OCC: α is an occurrence of some β .

3.4 Internal Merge

The most controversial claim in *BEA* is perhaps about the status of internal Merge (=movement). It is claimed that displacement comes ‘free’ (p.17). Internal Merge is not an ‘imperfection’ of language; its absence would be an imperfection (p.8). To motivate and account for displacement is even a ‘mistake’ (p.8 fn29)!

A theory-internal question: On the one hand, internal Merge is assumed to be free. On the other hand, internal Merge is driven by OCC (p.11) and constrained by semantic conditions (p.9). Can we have internal Merge without OCC/contributing to semantics? If yes, OCC becomes redundant and all languages should permit ‘scrambling’; if no, internal Merge is not free at all.

An empirical question: If both external and internal Merge are free, how to derive the Merge over Move MOM effects addressed in *MP*, *MI*, and *DbP*?

3.5 SEM(H)

BEA claims that there are no s-selectional features or theta-grids distinct from the semantic properties of the head SEM(H) (p.10). What are the contents of SEM(H)? Are theta-grids incorporated into SEM(H)? The discussion in *BEA* does not seem to give a very clear answer.

References

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