

SUMMER READING GROUP ON THE MINIMALIST PROGRAM

The Path to PF

Phonological features

- What is the role of the phonological component?
The phonological component takes syntactic objects constructed by the computational operations C_{HL} and converts them to representations at the PH interface. (*MI* 117)
- No level constructed by the phonological component can yield more than very limited semantic interpretation. Phonological rules typically render semantically significant units unrecognizable: they eliminate ‘trace’ so that chains cannot be reconstructed, blur or remove boundaries between units and change their phonetic content, delete semantic features (which would cause PF crash), etc. Displacement rules interspersed in the phonological component should have little semantic effect. (*DP* 11)
- There are radical violations of the Interpretability and Inclusiveness Conditions in the phonological component. (*MI* 117)
 - ☞ The discrepancy between the phonological properties of LIs (‘morphophonemes’, ‘phonological units’, etc.) and the narrow phonetics instantiations of combinations of such elements. Phonological features of LIs do not even appear at the level of PF, that the ‘input’ and ‘output’ of the phonological component are in different ‘vocabularies’.
[The **Interpretability Condition**: LIs have no features other than those interpreted at the interface, properties of sound and meaning. (*MI* 113)]
 - ☞ Operations in the phonological component introduce new elements as prosodic structure and narrow phonetics.
[The **Inclusiveness Condition**: No new features are introduced by C_{HL} . (*MI* 113) Inclusiveness holds of narrow syntax, and each feature is interpreted at the level LF or associated with phonetic features by the phonological component. (*MI* 118)]
- There are **true phonological features** that are visible only to the phonological component and form a separate subsystem of FL, with its own special properties. (*MI* 118)
- Features of lexical items that are not interpretable at the interface require

justification: most (maybe all) phonological features; these must be deleted or converted to interface-interpretable form by the phonological component. (*DP 2*)

- The phonological properties, e.g. [\pm continuant], are motivated only at the interface, but these ‘abstract’ features are accessible throughout the derivation, which ultimately eliminates them in favor of narrow phonetic features interpretable at the interface. (*DP 3*)

Spell-Out

- Spell-Out delivers the structure already formed to the phonological component. It ‘strips away’ the true phonological features, so that the derivation can converge at LF; it will crash if later operations introduce LIs with phonological features. (*MI 118-119*).
- Phonological features are introduced after Spell-Out by phonological operations applying to LIs lacking them. (*MI 119*)
- Spell-Out is associated with agreement. Deleted features are literally erased, but only after they are sent to the phonological component along with the rest of the structure Σ : possibly at the phase level. (*MI 131*)
- Spell-Out applies cyclically in the course of the narrow syntactic derivation. (*MI 131*)
- There is a single cycle; all operations are cyclic. Within narrow syntax, operations that have or lack phonetic effects are interspersed. There is no distinct LF component within narrow syntax, and we can dispense with troublesome questions about its apparently cyclic character. (*MI 131-132*)
- The phonological cycle is not a third independent cycle, but proceeds essentially in parallel. (*DP 9*)
- Spell-Out is cyclic, at the phase level. (*DP 9*)
- Features deleted within the cyclic computation remain until the phase level, at which point the whole phase is ‘handed over’ to the phonological component. (*DP 9*)
- The ‘overt’ part of the narrow-syntactic computation eliminates uninterpretable features, but they have to remain until the stage of Spell-Out of the full syntactic object, because of their phonetic reflexes. (*DP 9*)
- The phonological component can ‘forget’ earlier stages of derivation: PIC. The phonological component spells out elements that undergo no further displacement, with no need for further specification. (*DP 9-10*)

Operations and PF

Procrastinate vs. Earliness Principle

- The principle **Procrastinate** is no longer formulable. The concept of strength (e.g. strong vs. weak) appears to have no place. (*MI 132*)
- **Agree** alone can precede overt operations, contrary to the assumptions made in *MP* and related work. Crucial cases are long-distance agreement. (*MI 132*) Purely ‘covert’ Agree is just part of the single narrow-syntactic cycle. (*DP 12*)
- Properties of the probe/selector α must be satisfied before new elements of the lexical subarray are accessed to drive further operations. (*MI 132*)
- **Maximize matching effects**: Perform computations as quickly as possible (the earliness principle). If local (P, G) match and are active, their uninterpretable features must be eliminated at once, as fully as possible. If probe P requires Move, then the operation must be carried out as quickly as possible. (*DP 12*)

‘Surface’ semantic effects

- ‘Surface’ properties: topic-comment, presupposition, focus, specificity, new/old information. Agentive force, and others that are often considered more discourse-oriented and appear to involve the ‘edge’ of constructions: specific to human language. (*MI 121*)
- Surface semantic effects are restricted to narrow syntax. (*DP 11*)
- The **interpretive complex** INT: new information, specificity/definiteness, focus, etc. (*DP 26*)
- The EPP position of v^*P is assigned INT. (*DP 27*)
- v^* is assigned an EPP-feature only if that has an effect on outcome. (*DP 28*)
- (1) 我語言學喜歡。
- (2) ... [v^*P OB [SUBJ v^* [v_P V t_{OB}]]]
- At the phonological border of v^*P , XP is assigned INT’. (*DP 27*)
- Phonological border** of HP: a position not c-commanded by phonological material within HP. (*DP 27*)
- (3) HP = [SPEC [H COMP]]
- ‘COMP’ is the phonological border (but not the edge) if SPEC and H are traces.

TH/EX

- **TH/EX rule** (Thematization/Extraction rule): English bars surface structures of the form [V-DO], where the construction is unaccusative/passive. DO is extracted to the edge of the construction. (*DP 16*)

- TH/EX is semantically neutral. (DP 21)
- TH/EX is an operation of the phonological component. (DP 16)
- It is an idiosyncratic rule of English. (DP 19)
- TH/EX applies at the level of the verbal phrase: vP (v a light verb marking unaccusative/passive), a weak phase only. (DP 18)
- (4) *There came several angry men into the room.
- (5) *There were placed a large book on the table.
- (6) There were placed on the table several (large) packages.
- In transitive constructions, something most escape the vP. (DP 16)
- (7) There entered the room a strange man. (transitive expletive construction)
- The English constructions reach LF in the same form as in similar languages, as we would expect if LF-external systems of interpretation are essentially language-independent and prefer the LF interface to be uniform as possible across languages. (DP 16)
- ‘Stylistic’ operations might fall within the phonological component. (MI fn44)

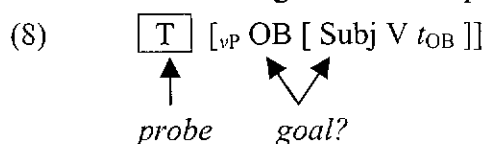
Traces

- Traces are inaccessible to Move. (DP 18)
- EC disallows Pied-Piping. Pied-Piping requires phonological content. (DP 19)
- It is a principle of UG, if valid. (DP 19)
- How about pro and PRO?
- Pied-Piping does not apply to X⁰s. No XP consists solely of several merged lexical ECs. (DP 19)

Object shift

- Terms of the minimal domain of H are equidistant from probe P. (DP 21)
- The *minimal domain* of a head H is the set of terms immediately contained in projections of H. (MI 123)

- Terms of the edge of HP are equidistant from probe P. (DP 21)



- The phonological edge of HP is accessible to probe P. (DP 22)

The phonological edge of a category is an edge element with no phonological material c-commanding it within the category. (DP 22)

- XP prevents Match of probe P and SPEC, under MLC, only if XP has phonological content. (DP 22)



- ‘Equidistance’ can be dispensed with. (*DP 22*)
 - ☞ Spell-Out is at the next higher strong phase ZP. (Interpretation/evaluation for PH₁ is at PH₂. (*DP 10*))
 - ☞ MLC is evaluated at PH₂.
 - Do inactive nominals induce intervention effects?
 - If yes, there could be two possible solutions (to rule in object shift languages).
 - SOLUTION 1: There could be a [±OS] parameter: [+OS] languages allow association of T and *in-situ* subject; [-OS] languages allow such association at the phonological edge. The parameter might be related to ‘richness’ of T, a richer T allowing a deeper search of the category including the goal. (*DP 24*)
 - SOLUTION 2: There could be a dislocation rule DISL that raises OS to a higher position, possibly a phonological rule similar to English TH/EX. (*DP 24*)
 - However, these possibilities of having such a parameter seem to be refuted by Chinese.
- (10) 我語言學喜歡。
- (11) [T [_{v*P} OB [SUBJ v* [_{vP} V t_{OB}]]]]

Head movement

- Is head adjunction part of the phonological component? (*MI fn 146*)
- V-raising is comparable to TH/EX and DISL: not part of the narrow-syntactic computation but rather an operation of the phonological component. (*DP 30*)
- Verbs are interpreted the same way whether they remain *in-situ* or raise to T or C. Semantic effects of head-raising in the core inflectional system are slight or nonexistent. (*DP 30*)
- A substantial core of head-raising processes, excluding incorporation in the sense of Baker (1988), may fall within the phonological component. (*DP 30*) Head-raising is not part of narrow syntax. (*DP 31*)
- Overt V-to-T raising, T-to-C raising, and N-to-D raising are phonological properties, conditioned by the phonetically affixal character of the inflectional categories. (*DP 31*)
- An LF-interpretive process brings together D-N and C-T-V to form word-like LF ‘supercategories’ in all languages. (*DP 31*)
- Head raising differs from core rules of the narrow syntax. (*DP 31*)
 - (i) an adjunction rule;
 - (ii) countercyclic;
 - (iii) c-commanding relation between the head and its trace;
 - (iv) different locality conditions (HMC)
- Head raising creates no chains. Cf. inability to identify XP-chains in aphasia (but

not X^0 chains). (*DP* 31)

- Some questions regarding head movement:

Q 1: Does head movement really have no semantic effects? (An empirical question, and a theory internal question: Why do we have pre-Spell-Out operations?)

Q 2: Is c-command applicable to PF? (Cf. X^0 creating no chains.) Can the LCA be still maintained? Is lowering possible (Lasnik 1999)?

Q 3: How do pre-Spell-Out and post-Spell-Out operations differ? Could morphology play a role to determine the derivation (Tang 1998)?

Q 4: Can head movement be treated as a kind of XP movement, i.e. raising X^0 to the Spec position (Fukui and Takano 1998)?

Q 5: Should some head movement be derived from XP remnant movement (Kayne 1998, Mahajan 2000)?

Q 6: How to explain language variation and the imperfections (e.g. dislocation) under the new approach?

References

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