

Scrambling the EGG
Handout 2: The Feature People
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What are **Feature People** and why do they exist?

“there are pinky purple Bleeper People living on the moon” (Mick Inkpen, 1994)

What kind of Feature People are there?

- The **Sigma Feature People** (Grewendorf & Sabel 1999, Kawamura 2004)
- The **non-Sigma Feature People** (Miyagawa 1997, 200, Saito 2003, JFB 2003, 2007)

1. The Sigma Feature People (Grewendorf & Sabel 1999, Kawamura 2004)

What these accounts are reacting to:

A. the claim that (local) Scrambling has both A and A'-properties:

(Webelhuth 1989, Mahajan 1990, Saito 1992)

- | | |
|---|----------------------------------|
| → Acquired anaphor/variable binding (A) ← | -- Parasitic gap licensing (A') |
| -- Non-reconstruction (A) | → Reconstruction (A') ← |
| -- Weak Crossover avoidance (A) | -- Weak Crossover violation (A') |

- 1) a. * [*Otagai_i-no sensei*]-ga karera_i-o hihansita]] (koto) (JP)
 each other-Gen teacher-Nom they-Acc criticized fact
 'Each other_i's teachers criticized them.' [out because no c-command to start with]
- b. [**Karera_i-o** [[*otagai_i-no sensei*]-ga ____i hihansita]] (koto)
 they-Acceach other-Gen teacher-Nom criticized fact
 'Them_i, each other_i's teachers criticized' [fine after scrambling of *them*]

• In (1)b, the scrambled object binds into the subject (an A property)

- 2) a. [_{IP} karera_i-ga [_{VP} *otagai_i-o hihansita*]] (Japanese)
 they_{NOM} each other_{ACC} criticized
 “They criticized each other.” [binding fine: (*them* binds *each other*)]
- b. [_{IP} ***otagai_i-o*** [_{IP} karera_i-ga [_{VP} ____i hihansita]] (Japanese)
 each other_{ACC} they_{NOM} criticized
 “Each other, they criticized.” [still fine, *despite* Scrambling]

• In (2)b, the bound object “reconstructs” to allow successful binding (an A' property)

B. the claim that LD Scrambling has only A' properties (violates Weak Crossover, doesn't create new binding options, always reconstructs)

- 3) a. * [[*otagai_i-no sensei*]-ga [[Hanako-ga **karera_i-o** hihansita] to] itta]
 [each other's teacher]_{NOM} [[Hanako_{NOM} them_{ACC} criticized] C⁰] said
 *“Each other_i's teachers said that Hanoko criticized them” [out, no c-command]
- b. * [**Karera_i-o** [[*otagai_i-no sensei*]-ga [[Hanako-ga ____i hihansita] to] itta]]
 [them_{ACC} [[each other's teacher]_{NOM} [[Hanako_{NOM} criticized] C⁰] said
 * “Them_i, each other_i's teachers said that Hanoko criticized.” [no improvement after LDS]

C. the fact that LDS scrambling = OK in Japanese (see handout 1) **but bad in German**

- 4) *dass [[**dieses Buch**] [Hans dem Studenten gesagt hat [dass [Maria ____i besitzt]]]]
 that [this book]_{ACC} Hans the student_{DAT} said has that Maria ___ owns
 “that Hans told the student that Mary owns this book”

5) Grewendorf and Sabel 1999's main claims and contributions:

- a. Local Scrambling in German has **only** A'-properties (contra Webelhuth)
- b. Local Scrambling in Japanese has **only** A-properties (contra Saito)
- c. German has no LDS; Japanese does
- d. (a-c) result from a single parametric difference
- e. Scrambling is *feature-driven* (the Scrambling feature is called "sigma" [Σ])
- f. Anaphor binding is *derivational*

6) G&S's single parametric difference: *the presence or absence of multiple subject positions*

- 7) a. *weil [der Lehrer von **sich**₁] zweifellos **den Studenten**₁ in guter
because the teacher of self doubtless the student-Acc in good
Erinnerung behalten haben
memory kept have
*'The teachers of himself have undoubtedly kept the student in good memory.'
- b. *weil **den Studenten**_i [der Lehrer von **sich**_i] zweifellos
because the student-Acc the teacher of self doubtless
in guter Erinnerung behalten haben
in good memory kept have
*'the student, the teachers of himself have undoubtedly kept in good memory.'

• What about the *acquired binding properties* shown by Webelhuth and Mahajan?

- 8) weil die **Gäste** der Student [ohne ___ anzuschauen]
since [the guests]-Acc [the student]-Nom without to look at
[**einander** t vorgestellt hat]
each other-Dat introduced has (G&S ex. 40)
"since the student has introduced the guests to each other without look at (them)."

• 2 things matter about (8): (i) that the binding is OK (ii) that it isn't a WCO violation

• G&S account for the A-binding in a lower scrambled A-position (VP-adjoined) followed by A'-movement at the clause level, allowing the PG.

• Problem: If all Japanese local Scrambling = A-mvt, why is (9)b OK (similar to (2))?

- 9) a. Karera_i-ga [[otagai_i-no sensei]-o hihansita
they_{NOM} each other_{GEN} teachers_{ACC} criticized
"They criticized each other's teachers"
- b. [[**Otagai**_i-no sensei]-o karera_i-ga hihansita
each other_{GEN} teachers_{ACC} they_{NOM} criticized
"Each other's teachers they criticized "

- 10) **Derivational Binding:** a. Principle A can be fulfilled *at any point of the derivation*
(G&S pp. 13-15) b. A pronoun can be interpreted as a bound variable if it is A-bound by an operator at *any point* in the derivation

- 11) a. [Pictures of **himself**] please **John**. b. *[Pictures of **himself**] knocked **John** unconscious

• (11)a satisfies Principle A *before* A-movement (Belletti & Rizzi 1988), similarly to (12):

- 12) [**Each other's** pictures]_i seem to **the men** to be *t*₁ the most beautiful

→ how do G&S account for the core German vs Japanese differences? ←

- 13) a. **The Multiple Spec Parameter:** The Japanese agreement system allows “multiple Agr Specifiers” (G&S p. 21)
- b. **The Scrambling Generalization** (G&S p. 3)
A scrambling language allows A-scrambling as well as scrambling out of finite clauses iff multiple Agr-specifiers are licensed in the language.
- c. **The adjunction prohibition:** Adjoined elements are frozen. If A'-Scrambling is adjunction, LD-A-Scrambling is impossible.... “Adjunction is a ‘dead end’ for every kind of movement” (G&S, p. 4)
- d. Scrambling is a “feature-mediated process driven by a scrambling feature [Σ] that is optionally realized with Agr heads”

NB: being a [Σ]-person is not necessary for the main components of G&S

The WCO problem. If we maintain that German local scrambling is A'-movement only, why aren't (8) and other scrambling over coreferent pronouns Weak Crossover violations?

G&S argue that clear cut cases of German A'-movement also do not cause WCO violations:

- 14) a. **Wen** [liebt [seine Mutter t t]] (WH-mvt)
who-Acc loves his mother
“Who does his mother love?” (bad in English)
- b. **Jeden Studenten_i** [liebt [seine_i Mutter t t]] (TOP)
[each student]-Acc loves his mother-Nom
“Every student his mother loves.” (bad in English)

- They conclude that WCO does not work as an A vs. A'-diagnostic. Therefore (8) and does not show German scrambling is A-movement. (see G&S p. 17 for references)

- Kawamura (2004) (also a [Σ] Person), argues that all movement must be feature-driven, and that Scrambling must have its own [Σ] feature or objects could never scramble over subjects.

The non-Sigma Feature People

- Miyagawa (1997, 2000) (on Japanese scrambling)

- 15) a. A-Scrambling is driven by the EPP
b. Languages that have V⁰-to-T⁰ and morphological case marking allow EPP-driven scrambling of the object (even over subjects)

- JFB (2004) (on Russian OVS (and other inversion) constructions)

- 16) **Soldata** ranilo pulej O-V-S
soldier-Acc wounded [-agr] bullet-Instr
"A soldier was wounded by a bullet."

Locative Inversion (LI):

- 17) **V** **klasse** pojavilsja noven'kij (Babyonyshev (1996)) PP-V-S
in class appeared new
"A new boy entered the class."

PP Inversion (PPI)

- 18) **U menja** est' vopros. PP-V-S
 at me is question-Nom
 "I have a question."

Dative experiencers

- 19) **Saše** nravjatsja deti DatExp-V-S
 Sasha-Dat likes-pl children-Nom
 "Sasha likes children."

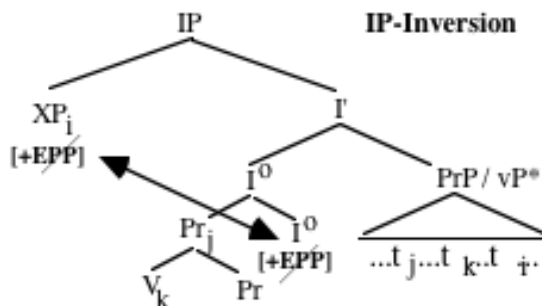
"Bad health" verbs (Preslar 1998)

- 20) **Menja** tošnit ot ryby O-V-PP
 me-Acc nauseates from fish
 "I feel sick from the fish."

OVS:

- 21) **Étu knigu** čitaet Ivan O-V-S
 [this book]-Acc reads Ivan
 "Ivan is reading this book."

22) Schematic View of IP Inversion: (Bailyn 2004, following Miyagawa 2001)



b. Characteristics of IP-Inversion:

- non-Nominative XP in SpecIP
- V precedes subject
- differs from (standard) Topicalization (IP-adjunction)

• **Principle A** (Huang 1993, Belletti & Rizzi 1988)

i. dative experiencers

- 23) a. ???Svoja_i rabota ponadobilas' Maše_i
 [self's work]-Nom need Masha-Dat
 "Masha needed her work."

- b. **Maše_i** ponadobilas' svoja_i rabota
 Masha-Dat needs [self's work]-Nom
 "Masha needed her work."

ii. possessive-PP inversion

- 24) a. ???[Svoji dom] byl u Petrovyx_i
 [self's house]-Nom was at the Petrovs
 "The Petrovs had their own house."

- b. **U Petrovyx_i** byl [svoj_i dom]
 at the Petrovs was [self's house]-Nom
 "The Petrovs had their own house."

iii. locative inversion

- 25) a. *[Svoj_i staryj mer] vernulsja v razrušennyj rodnoj gorod_i
 self's old Mayor returned to destroyed native city
 b. ??**V razrušennyj rodnoj gorod_i** vernulsja [svoj_i staryj mer]
 to destroyed native city arrived self's old Mayor
 "To (his) destroyed native city_i returned its_i old Mayor"

• **Weak Crossover**

- 26) a. *Ee_i sobaka ljubit každuju devočku_i
 [her dog]-NOM loves [every girl]-ACC
 "Her_i dog loves every girl_i."
 b. [**Každuju devočku**]_k ljubit ee sobaka t_k
 [every girl]_i-ACC loves [her_i dog]-NOM
 "Every girl is loved by her dog."

ii. dative experiencers

- 27) a. ??[Ee sobaka] nužna [každoj devočke]_i
 her dog-NOM needs every girl-DAT
 "Her_i dog is needed by every girl_i."
 b. [Každoj **devočke**]_i nraivitsja [ee sobaka]
 every girl-DAT likes her dog-NOM
 "Every girl_i needs her_i dog."

- 28) a. The EPP is a strong [D] feature (cf Miyagawa's EPP feature)
 b. Russian IP-inversion is accompanied by V-movement to check a T feature

The A vs A' Question: Why does IP-Inversion show A-properties and LDS (adjunction) not?

The answer (generalized):

It's a side effect of **the derivational nature** of the feature-driving movement system

The derivational feature movement system (Kitahara 1997, Epstein et al 1998, Saito 2003, JFB 2003)

- 29) Linguistic expressions *and their interpretations* are built up derivationally
 (Kitahara 1997, 2000, Epstein et al 1998, Saito 2001)
- i. Assume Copy Theory of Movement
 - ii. Assume XP arguments have (at least) the following features:

[P]	(PF-relevant)
[D], [OP]	(LF-relevant) (D=phi-features; OP = P-features in Chomsky 2000)
 - iii. Assume "Feature-Splitting"
 - iv. WH-movement and Long-Distance Scrambling are driven by [OP] feature
 - v. Inversion (local scrambling) is driven by D-feature ("EPP" as in Miyagawa)

- 30) Derivational Binding Theory: (Epstein et al 1998, Kitahara 1997, G&S 1999, Saito 2001)

Principle A: Satisfied if an anaphor is bound by a coindexed [+D] antecedent *at any time in the derivation*

31) Derivational Interpretation (Kitahara's version)

"NPs are interpreted and enter into binding relations at the positions where their uninterpretable case features are checked and deleted" (Kitahara 2000, quoted in Saito 2003)

- Problem: Does not allow for obliques or PPs to satisfy the EPP (contra GenInv facts above)

32) Derivational Interpretation (Saito's 2001 version)

Let us assume that deletion applies to the features P, O and D so that *each of them is retained only at one position*. The P-feature must be retained at the head of the chain. For the rest, suppose *that a feature can only appear in a position where it is selected*.

33) Derivational Interpretation (JFB's version)

NPs are interpreted and enter into binding relations *at the highest point in the derivation where their D features are active (selected)* (JFB 2003)

34) Derivational schema of scrambling behavior: ([D] feature crucial for binding relations)

- a. EPP-driven scrambling: (local, A) $[_{IP} \mathbf{XP}_i [_{D}, [P] [_{I'} \dots \mathbf{t}_i [_{\emptyset}, [P] \dots]]]]$
- b. Discourse-driven Scrambling: (long, A') $[_{IP} \mathbf{XP}_i [_{P}, [OP] [_{IP} \dots \mathbf{t}_i [_{D}, [P], [OP] \dots]]]]$

CONCLUSIONS:

- i. The EPP (possibly driven by a D feature) is a (universal) primitive requiring overtiness in the IP zone. *The EPP is not a requirement about subjects.*
- ii. Inversion is movement to satisfy the EPP. "A-scrambling" is (non-canonical) satisfaction of the EPP (possible only if accompanied by V-raising) (Miyagawa 2001, 2003, Bailyn 2004)
- iii. In a derivational framework, the [D] feature of the EPP accounts for the A-properties of Inversion, by providing the position in the chain from which binding occurs.
- iv. "A'-scrambling" is discourse-driven movement. Reconstruction facts fall out from the derivational approach: the D feature relevant for binding is inactive at the high position
- v. Reconstruction properties of scrambling types can be derived.

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