Mandarin even, all and the Trigger of Focus Movement

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I. Overview

• Provide syntax for Mandarin even/all constructions.
• Movement driven by “maximality” feature, not focus or prosody.
• A-bar “focus movement” is operator-driven.

II. Focus and Focus Movement

(1) ‘even’, Semantic Focus [], Scalar Meaning (Rooth 1985, Rullmann 1997)

I even introduced [John]ₘ to Mary.                  (stress)

Entails: I introduced John to Mary.
Presupposes: ∀x (x ≠ John) : it is more likely I introduce x to Mary than introduce John to Mary.

(2) Focus Ambiguity

I even introduced John to Mary.                    (stress)

a. I even introduced John to [Mary]ₘ.              (not to mention introducing him to others)
b. I even [introduced John to Mary]ₘ.             (not to mention doing other things)

• **Type I Focus Movement** (Horvath 2006): Clause internal prosody-motivated scrambling.
  - What moves has no relevant feature, can be out of stress position, PF prefers one syntax over another.
  - Spanish (Zubizarreta 1998), German (Büring 2001), Japanese (Ishihara 2001), ...

• **Type II Focus Movement** (Horvath 2006): A-bar movement of focused phrase to focus position.
  - Long distance, island sensitive, licenses parasitic gaps.
  - Hungarian (Brody 1995; É. Kiss 1998), Basque (Ortiz de Urbina 1995), Korean (Choe 1995), ...
  - Covert focus movement in English? (Krifka 2006)

III. Mandarin ‘even’

• Mandarin = SVO

(3) ‘even’ = lián + dōu

    tā lián [dp fūmǔ] dōu bù dāsuàn jiàn .
    she LIAN    parents DOU not plan see
    ‘She doesn’t even plan to see [her parents]r.’

• dōu (required) — adverbial, = ‘all’.
• lián (optional) — attaches (roughly) to semantic focus, regardless of category.
(4) subject > [ lián + XP ] > dōu > VP ('even' default order)

(5) [ lián + XP ] > subject > dōu > VP ('even' topical focus order)

(6) 'even' Default Order
   tā lián [DP píngguǒ] dōu bù chī ___.
   she LIAN apple DOU not eat
   'She doesn’t even eat [apples].'

(7) 'even' Topical Focus Order
   lián [DP píngguǒ] tā dōu bù chī ___.
   LIAN apple she DOU not eat
   'Even apples, she doesn’t eat.'

(8) lián-phrase A-bar moves to spec-dōu (and further under topicality)

(9) Movement Mandatory
   a. tā lián běijīng dōu qù guò.
      he LIAN Beijing DOU go ASP
      'He’s even been to [Beijing].'
   b. * tā dōu qù guò lián běijīng.
      he DOU go ASP LIAN Beijing
      'He’s even been to [Beijing].'
   c. * tā (lián) dōu qù guò běijīng.
      he LIAN DOU go ASP Beijing
      'He’s even been to [Beijing].'

(10) Unbounded
    lián lǘ ròu [CP wǒ dōu néng xiǎngxiàng [CP zhāngsān huì chī ___]].
    LIAN donkey meat I DOU can imagine Zhangsan would eat
    'I can even imagine that Zhangsan would eat [donkey].'

(11) Island Sensitive
    a. * lián [DP Lǚ Xùn] wǒ dōu bù xiāng kàn [DP (tā) xiě de shū].
       LIAN Lu Xun I DOU not want read he write DE book
    b. lián [DP Lǚ Xùn xiě de shū] wǒ dōu bù xiāng kàn ___.
       LIAN Lu Xun write DE book I DOU not want read
       'I don’t even want to read the books [Lu Xun] writes.'
(12) Locating lián (Descriptive Generalization)
    lián attaches to smallest constituent that both:
    a. contains the semantic focus
    b. is able to move

• lián “marks” moving element, is not a focus marker (contra Wu 1999).

IV. What Drives Focus Movement?

• Focus features? (Bródy 1995: Hungarian)

• Mandarin focus movement not driven by focus or stress (underlined).

(13) ‘even’ — Movement, Stress, Focus
    tā lián píngguǒ dōu chī wán le.  
    He LIAN apple DOU eat finish ASP
    'He even finished [the apples].'

(14) ‘all’ — Movement without Stress & Focus
    tā píngguǒ dōu chī wán le.  
    He apple DOU eat finish ASP
    'He finished all the apples.'

(15) ‘only’ — Stress & Focus without Movement
    tā zhǐ chī wán le píngguǒ.  
    He only eat finish ASP apple
    'He only finished [the apples].'

• Movement facts with even/all nearly identical.
• Plural or Wh- indeterminate quantified by ‘all’ raises to dōu.

(16) Movement of Quantified Phrase Mandatory
    tāmén dōu kàn guò nèi sān běn shū.  
    they DOU read ASP that three CL book
    a. ‘They’ve all read those three books.’
    b. ≠ ‘They’ve read all of those three books.’

(17) Movement of Wh- Indeterminate Pronouns
    zhāngsān shénme dōu xǐhuan __.  
    Zhangsan what dou like
    'Zhangsan likes anything.'

(18) Unbounded
    wǒ shéi dōu bù xiǎng ràng lǐsì dézuì  
    I who DOU not want have Lisi offend
    'I don’t want Lisi to offend anyone.'
No Definite Reading Without Movement (or demonstrative)

a. wǒ kàn le [DP sān běn shū].
   I read ASP three CL book
   ‘I read three books.’
   ≠ ‘I read the three books.’

b. wǒ [DP sān běn shū] dōu kàn le ___.
   I three CL book D OU read ASP
   ‘I read (all of) the three books.’

- Null “maximality” operator turns indefinites to definite when dōu is present.
- lián is an overt focus operator with [Max] feature.

- dōu probes for [Max] feature on operator phrase (which may not contain focus).

[Max] marked operators:
- lián (optionally null) produces scalar meaning from argument with semantic focus value.
- ØMAX attaches to phrase quantified by ‘all’, gives definite reading.

Horvath 2006
- Hungarian moves focus of (i) only (ii) exhaustive answers to Wh- question.
- Movement driven by Exhaustive Identification operator on focus.

Hungarian “Focus Movement” (Horvath, 2006)

- Wh- movement relates interrogative C₀ with Q operator above wh- phrase.
- Q operator is overt in Tlingit.

- EI-Op and Q can attach higher than focus element — no need for pied-piping.
V. Partial Movement and Copying

- Sub-focus movement challenges [Max] driven analysis.

(22) Partial Movement, VP/DP Focus Ambiguity

tā lián tóu fa dōu bù shū ___.
he LIAN hair DOU not comb

a. ‘He doesn’t even [comb his hair]f.’ (not to mention doing other things)
b. ‘He doesn’t even comb [his hair]f.’ (not to mention combing other things)

(23) Focus Copying

tā lián chī dōu bù chī.
she LIAN eat DOU not eat
‘She doesn’t even [eat]f.’


(24) Mandarin Spellout

a. Tense/Aspect features must be realized on verbal material.
b. spec-dōu must be pronounced.
c. Prefer no redundancy.
d. All else being equal, pronounce the highest copy.

(25) Spellout for Transitive [VP]f

a. tā lián [vp jiàn fūmǔ ] dōu bù [ jiàn fūmǔ ]. (front DP)
b. ? tā lián [vp jiàn fūmǔ ] dōu bù [ jiàn fūmǔ ]. (? double V)
c. * tā lián [vp jiàn fūmǔ ] dōu bù [ jiàn fūmǔ ]. (* front VP)
   she LIAN see parents DOU not see parents
   ‘She doesn’t even [see her parents]f.’

(26) Spellout for Intransitive [VP]f

a. tā lián [vp chī ] dōu bù [ chī ]. (double VP)
b. * tā lián [vp chī ] dōu bù [ chī ]. (* front VP)
   she LIAN eat DOU not eat
   ‘She doesn’t even [eat]f.’

VI. Remaining Issues

- ‘even’ = non-focus quantifier + scalar focus operator.
  - Hungarian ‘even’ = még ‘yet’ + is ‘also’.

(27) English Two-Part ‘even’ (even + still)

a. Even [natural]f toothpastes still have ingredients that you really don’t want in your body.
b. Actually, even [non-smokers]f still have a real risk of developing smoking-related illness.
• How do lián and dōu combine compositionally to mean ‘even’?

- Suppose dōu took nuclear scope (= predicate) as first argument, and restrictor (= lián-phrase) as second.
- **Problem**: How would lián get access to the predicate to produce scalar meaning?

(28) Problematic Denotations

a. $[[dōu]] = \lambda P_{<e,t}. \lambda Q_{<e,t}. \forall x [Q(x) \rightarrow P(x)]$

b. $[[lián XP]] = [[XP]]^f$ and is defined iff $[[XP]]^o$ is least likely of $[[XP]]^f$ to satisfy some salient property.

(29) lián Triggers Movement with yě ‘also’

a. tā yě chī wán le píngguǒ.
   he YE eat finish apple
   ‘He also finished [the apples].’

b. tā lián píngguǒ yě chī wán le.
   he LIAN apple YE eat finish apple
   ‘He even finished [the apples].’

(30) Broad Focus with No Movement

a. (*lián) dōu xià xuě le !
   LIAN DOU fall snow ASP
   ‘[It’s (even) snowing !]’

b. lián xuě dōu xià le !
   LIAN snow DOU fall ASP
   ‘Even [snow], fell !’
   $\neq$ ‘[It’s (even) snowing !]’

VII. Conclusions

Mandarin
-- **even/all** — A-bar copy-and-delete movement, sensitive to PF constraints.
-- Movement not driven by focus or prosody.
-- Movement triggered by a common core of maximality, independent of focus.

Cross-Linguistically
-- A-bar “focus movement” driven by features on (covert) focus operator.
-- **even** construction = non-focus quantifier + scalar focus operator.
Selected References

Arregi, Karlos (2001). “Focus and Word Order in Basque”. Ms. MIT.

VIII. Appendix (Further Data)

(31) Bare Pronouns Can’t Surface in spec-đōu (prosodic conflict?)

a. zhāngsān tāmen dōu xǐhuan.
   ‘Zhangsan likes all of them.’
   (pronoun in spec-đōu)
   i. ?? ‘Zhangsan likes all of them.’
   ii. ‘Zhangsan, they all like.’
   (pronoun in subject position)

b. zhāngsān lián tāmen dōu xǐhuan.
   ‘Zhangsan even likes [them].’

(32) Topicalization Removes VP/DP Focus Ambiguity

a. zhāngsān jǐntiān lián tóufa dōu méi shū.
   ‘Zhangsan didn’t even brush [his hair] today.’
   i. ‘Zhangsan didn’t even brush [his hair] today.’
   ii. ‘Zhangsan didn’t even brush [his hair] today.’

b. lián tóufa zhāngsān jǐntiān dōu méi shū.
   ‘Zhangsan even likes [them].’

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