

Wh-in-situ and Bounding in LF

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I. Introduction

Ia. Lack of Subjacency and CED effects in LF:

- (1) a. *What do you remember where we bought t? *wh - island*
b. LF Who remembers where we bought what?
- (2) a. *Who do you like books that criticize t?
b. LF Who likes books that criticize who? *wh + LF*
- (3) a. *Who do you think that pictures of t are on sale?
b. Who thinks that pictures of who are on sale? *wh; wh-island*
- (4) a. *Who did you get jealous because I spoke to t?
b. Who got jealous because I spoke to who? *wh; wh-island*
- (5) a. *What color hair did you meet [students with t]?
b. Who met [students with what color hair]? *wh; wh-island*
- (6) a. *Who did you see John and t?
b. ?Who saw John and who? *wh; wh-island*

Ib. ECP effects in LF:

- (7) a. Why did you buy what?
b. *What did you buy why?
- (8) a. Who bought what?
b. LF *What did who buy?
- (9) a. *Who left why?
b. *Why did who leave?
- (10) a. ?What did you wonder why I bought t?
b. *Why did you wonder what I bought t?
c. *Who did you wonder why t bought the book?
- (11) ni zui xihuan [piping shei de shu]?
you most like criticize who REL book
'Who do you like books that criticize t?'
- (12) ni zui xihuan [ta weishenme mai de shu]?
you most like he why buy REL book
'What is the reason x s.t. you like books that he bought for x?'
- (13) ni xiang-zhidao [shei weishenme bu lai]?
you wonder who why not come
Who is the x such that you are wonder why x did not come?
NOT: What is the reason x such that you are wondering who, for x, did not come?

not accounted for by pied piping
prediction to be good by pied piping
data

Ic. The problem: It is stipulated in Huang (1982) that whereas ECP applies at both S-Structure and LF, Subjacency and CED apply only in the Syntax but not in LF. Why should this asymmetry exist between SS and LF?

II. Pied-piping in LF and some problems

(cf. Pesetsky 1987, Nishigauchi 1986, Choe 1987, Longobardi 1988)

- (18) ni xihuan [shei xie de shu]? *wh-island separate LF because you can pied pipe while wh-island*
you like who write REL book
'*You like the book that who wrote?'
- (19) a. wo xihuan [Zhangsan xie de shu].
I like Zhangsan write REL book
'I like the book that Zhangsan wrote.'
b. Zhangsan xie de (shu).
'The book (or the one) that Zhangsan wrote.'
c. ??Zhangsan.
- (20) a. *Where did [people from t] buy what?
b. What did [people from where] buy t?
- (21) a. *I want to know who pictures of t please who.
b. I want to know who pictures of who please t.
- (22) a. *What did who buy?
b. *Who did what please?
- (23) *Who did you get angry because I spoke to t?
- (24) Who got angry because I spoke to who?
- (25) *Who got angry why?
- (26) a. *Questo e' successo mentre chi parlava alla stampa?
'This happened while who was speaking to the press?'
b. ??Questo e' successo mentre l'avvocato di chi parlava alla stampa?
'This happened while the lawyer of whom was speaking to the press?'
- (27) a. Gianni e' stato arrestato mentre andava a Milano con chi?
'Gianni was arrested while he was going to Milan with who?'
b. ??Gianni e' stato arrestato mentre andava con chi a Milano?
'?Gianni was arrested while he was going with whom to Milan?'
- (28) a. *Di chi parlava [l'avvocato t]?
'Of whom spoke the lawyer?'
b. Questo e' successo mentre parlava l'avvocato di chi?
'This happened while was speaking the lawyer of whom?'

- (35) a. I wonder who Bill spoke to.
 b. ?I wonder to whom Bill spoke.
 c. I wonder whose mother Bill spoke to.
 d. I wonder whose friend's mother Bill spoke to.
 e. *I wonder pictures of whom Bill saw.
 f. *I wonder Mary and whom Bill saw.
 g. *I wonder the books that who wrote Bill bought.
 h. I wonder which man Bill saw.

III. Toward an explanation of the SS/LF asymmetry

IIIa. The non-barrierhood of A'-phrases:

- (36) este es el autor [del que]; no sabemos [CP [que libros t_i] leer].
 'This is the author [by whom]; we know [CP[what books t_i] to read].
- (37) *esta es la autora [de la que]; [IP [varias traducciones t_i] han ganado premios internacionales].
 'This is the author by whom several translations have won international awards.'
- (38) [de que autora]; no sabes [CP [que traducciones t_i] han ganado premios internacionales].
 'By what author don't you know what translations have won international awards?'
- (39) *Who do you think that [IP[pictures of t] are on sale]?
- (40) ?Who do you wonder [CP [which pictures of t] [IP are on sale]]?
- (44) A'-phrases are not barriers.
- (45) Adjunction is possible only to a maximal projection that is a nonargument.
- (46) α dominates β iff every segment of α dominates β . (May 1985, Chomsky 1986)
- (47) Who_i do you wonder [CP [NP t_i [NPwhich pictures of t_i]] [IP are on sale]]?

IIIb. The scope of QR:

- (48) Pictures of everybody are on sale.
- (49) [IP [NP pictures of everybody]₂ [IP t₂ are on sale]].
- (50) [IP [NP Everybody]₃][IP [NP pictures of t₃]₂ [IP t₂ are on sale]]?

IIIc. Deriving the asymmetry:

- (51) a. Who did pictures of who please?
 b. [CP Who₂ did [IP [pictures of who₃]₄ [IP t₄ please t₂]]]?

- c. [CP Who₂ who₃ did [IP [pictures of t₃]₄ [IP t₄ please t₂]]]?
- (52) a. *Which table did you buy [books on t]?
 b. Who bought [books on which table]?
- (53) [CP Who₂ [IP [books [on [which table]₃]₄]₅ [IP t₂ bought t₅]]?
- (54) Who remembers [where [we bought what]]?
 a. adjoin *where we bought what* to matrix IP under QR
 b. adjoin *what* to *where we bought what*
 c. move *what* to COMP
- (55) Who likes books that criticize who?
 a. adjoin entire complex NP to IP
 b. adjoin relative clause
 c. adjoin *who*
 d. move *who* to COMP
- (56) Who got jealous because I spoke to who?
 a. adjoin *because*-clause
 b. adjoin *who*
 c. wh-move *who* (to COMP)
- (58) a. *What did who buy?
 b. What did which man buy?
 (a) adjoin *which man* as a QNP
 (b) adjoin *which* as a (restrictive) QP ranging over determiner meanings
 (c) wh-move *which*
- (59) a. *What did you buy why?
 b. What did you buy for what reason?
- (60) Summarizing:
 a. SS/LF asymmetry comes from
 (i) the independent existence of QR in LF but not in Syntax
 (ii) the non-barrierhood of A'-phrases
 b. Subjacency and CED also apply in LF, though vacuously.
 c. The problem (1c) disappears.

IV. Consequences

IVa. LF ECP effects: a new problem:

- (60) *Who did what please t?
- (61) *Who remembers what we bought why?
- (62) [CP [what₃ who₂]₂ did [IP t₃ [IP t₃ please t₂]]]?
- (63) *ni xihuan [[Lisi weishenme mai de] shu]?
 you like Lisi why buy REL book
 *You like [books [that Lisi bought why]]?

[E book that L bought book]
 ZP

- (64) ni xiang-zhidao [shei weishenme bu lai]?
 you wonder who why not come
 'Who₂ do you wonder [why₃ [t₂ will not come t₃]]?'
 Unavailable reading: 'Why₃ do you wonder [who will not come t₃]?'
 (65) *Why₂ did you wonder [what I bought t₂]?
 (66) *How₂ did you read [the book that John wrote t₂]?
 (67) [CP why₂ did you [VP t'₂ [VP wonder [CP what t'₂ I bought t₂]]]]

IVb. The (non)-barrierhood of A'-phrases:

- (68) A'-phrases are not barriers for movement (though they are still barriers of government).
 (69) ... A ... [γ ... B ... [γ ... C ...]]
 (70) α governs β iff α m-commands β and for every γ, γ a barrier, if γ does not exclude β then γ does not exclude α. (In (69), B governs C, but A does not govern B.)
 (71) Chinese: You wonder [who why won't come]?
 [CP why₂ [IP [CP t'₂ [CP who t₂ will not come]]₃ [IP you wonder t₃]]]
 (40) ?Who₂ do you wonder [[which pictures of t₂][are on sale]]?
 (72) *[On which table]₂ do you wonder [[which books t₂] [I will buy]]?

IVc. Other consequences

- (73) How₂ do you think [t'₂ [John fixed the car t₂]]?
 (74) Fix the car, I wonder whether he will t.
 (75) Fix the car, I wonder whether he *(did) t.
 (74) *[CP What₂ [C eat₃ [IP you will [VP t₃ t₂]]]]?
 (75) ?This is the book which I wonder who wrote.
 (76) ?This is the book that John made the claim that he wrote.
 (77) *Which table do you wonder which books on t John will buy?

V. Conclusion