

Structure & Derivation of Split Focalization

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1-The Puzzle:

- (1a) Who bought beer? (1b) [John] bought beer.
- (2a) Who bought what? (2b) [John] bought [beer]...

Question: What is the nature and discourse function of the elements in the brackets? What is the grammatical encoding of the information-packaging of these constructions?

2-A Previous Proposal; Büring (2003):

Propositional Semantics of Questions (cf. Hamblin (1973), Karttunen (1977)):

Single Wh Questions

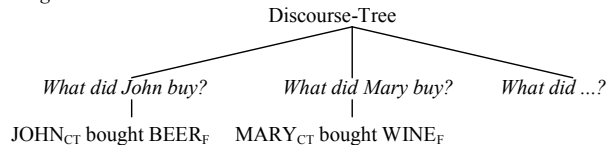
- (3a) Who got the flu?
- (3b) [[Who got the flu]] = { [[Kepa got the flu]], [[Eider got the flu]], [[Adam got the flu]], [[Ibon got the flu]], ... }
- (3c) Kepa got the flu.

Multiple Wh Questions

- (4a) Who cooked what?
- (4b) [[Who cooked what]] = { [[Adam cooked cod]], [[Adam cooked rice]], [[Adam cooked eggplants]]... }, { [[Julen cooked rice]], [[Julen cooked pasta]], [[Julen cooked tuna]]... } ... }
- (4c) Adam cooked eggplants and Julen cooked pasta.

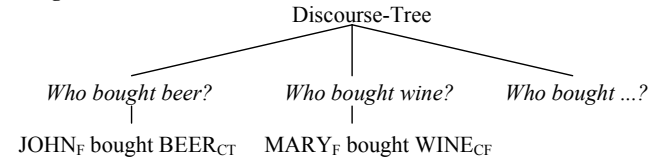
Büring's Proposal: Two elements: A 'contrastive topic' (CT) and a 'focus' (F):

(5a) Who bought what?



(5a') [[Who bought what?]]^{ct} = { {x bought y | y ∈ D_e} | x ∈ D_e }

(5b) Who bought what?



(5b') [[Who bought what?]]^{ct} = { {x bought y | x ∈ D_e} | y ∈ D_e }

► Both elements have the same semantic import: rising alternative values (cf. Rooth (1985)).

3-An Alternative Proposal:

3.1-A Derivational Approach to the F-Structure (Irurtzun (2003b)):

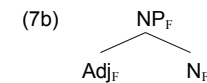
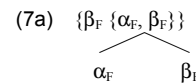
3.1.1-[+F] feature as an (optional) Formal Feature.

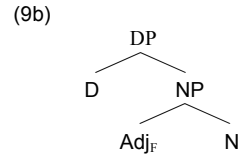
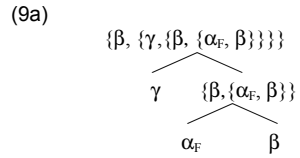
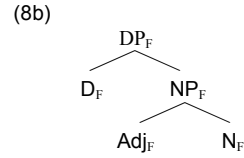
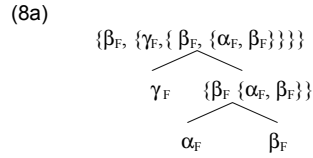
- Lexical: Focus particles, Wh-words...
- Optional: Rest of the Lexical Items.

3.1.2-[+F] is assigned to (multiple) tokens of the numeration:

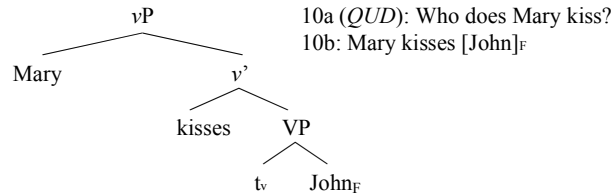
- (6a) *Question Under Discussion:* What did John buy?
 John bought [potatoes]_F
 Lexical Array (simplified): { {John}, {buy}, {potatoes}_F }
- (6b) *Question Under Discussion:* What did John do?
 John [bought potatoes]_F
 Lexical Array (simplified): { {John}, {buy}_F, {potatoes}_F }
- (6c) *Question Under Discussion:* What happened?
 [John bought potatoes]_F
 Lexical Array (simplified): { {John}_F, {buy}_F, {potatoes}_F }

3.1.3-F-Structure is derived by Merge & Bare Phrase Structure (cf. Chomsky (1994)):

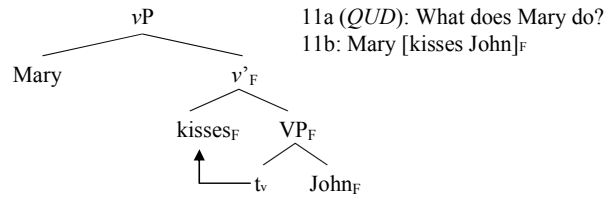




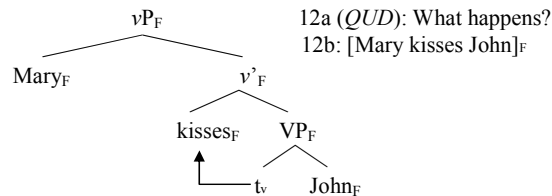
(10): Lexical Array: {{Mary}, {John_F}, {kiss}, {v}}



(11): Lexical Array: {{Mary}, {John_F}, {kiss_F}, {v_F}}



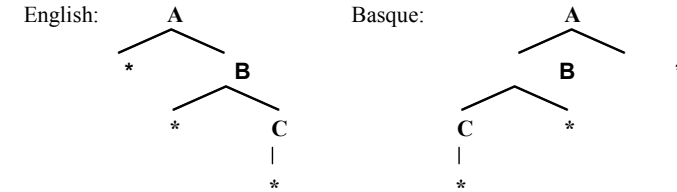
(12): Lexical Array: {{Mary_F}, {John_F}, {kiss_F}, {v_F}}



3.2-PF Interface: Focus-sensitive operations (NSR & P-Phrasing)

▮ Nuclear Stress Rule (Cinque (1993)):

- (a) Interpret boundaries of syntactic constituents as metrical boundaries.
- (b) Locate the heads of line *N* constituents on line *N*+1.
- (c) Each rule applies to a maximal string containing no internal boundaries.
- (d) An asterisk on line *N* must correspond to an asterisk on line *N*+1.



(13a) Jesus preached to the people of Judéa.

(13b)

.	.	.	.	*	Line 7	
(.	.	.	*)	Line 6	
((.	.	*)	Line 5	
(*	((.	*)	Line 4	
((*)	(*)	(*)	Line 3

[Jesus] [preached [to the [people[of Judea]]]]

▮ Focus Focus Set (Reinhart (1995)): “The focus of IP is a(ny) constituent containing the main stress of IP, as determined by the stress-rule”.

(14) John boiled WATER.

- (14a) *What did John boil?*
- (14b) *What did John do?*
- (14c) *What happened?*

(15) Focus Set for 14: {Obj, VP, TP}

- (15a) English: [S [V [Ó]_(F)]_(F)]_(F)
- (15b) Basque: [S [[Ó]_(F) V]_(F)]_(F)

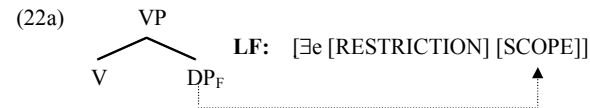
PROPOSAL: Nuclear Stress Rule: Assign Nuclear Stress to the element with most grid marks (the most embedded element) *within the focal structure*.

- (16) John boiled [WATER]_F
- (17) John [boiled WATER]_F
- (18) [John boiled WATER]_F
- (19) [JOHN]_F boiled water
- (20) John [BOILED]_F water

► Marked ‘stress-shift’ (the ‘Schmerling’ examples):

- (21a) What happened?
- (21b) [Truman DIED!]_F
- (21c) [JOHNSON died!]_F
- (21c) *[JOHNSON suddenly died!]_F

3.3-LF Interface: Focus as the scope of a restricted quantification over events (cf. Herburger (2000), Irurtzun (2005a, 2005b))

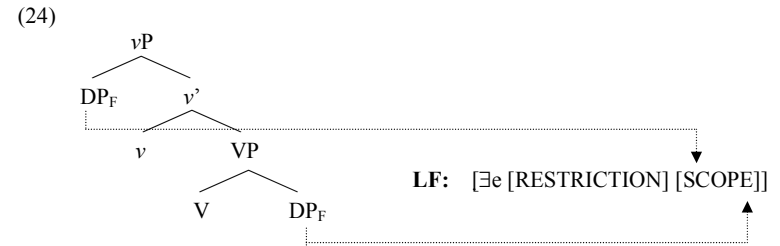
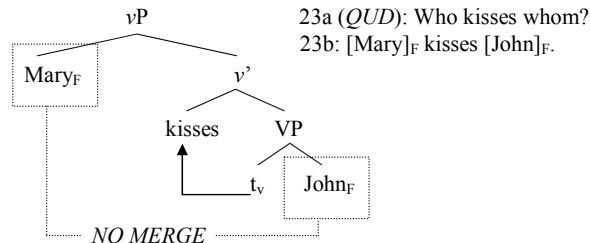


- (22b) Mary bought [BEER]_F.
- (22c) What did Mary buy?
- (22d) [∃e [Agent(e, mary) & Buy(e) & Past(e)] Theme(e, beer)]

NOTE 1: For a syntactic object to be marked [+F] in the NUMERATION doesn't mean that that object will be the *actual* focus of the sentence, but just that it will take part in the construction of the focus structure.

4-Split Focus Structures

(23): Lexical Array: {{Mary}_F, {John}_F, {kiss}, {v}}



4.1-Intonational properties

Nuclear Stress Assignment: Both elements that stand for a Wh-phrase in the question bear a pitch accent (cf. Bolinger (1958), Jackendoff (1972), Liberman & Pierrehumbert (1984) and Büring (2003)) for English, Büring (1999) for German, Godjevac (2000) for Serbo-Croatian and Aske (1997), Elordieta (2001) and specially Irurtzun (2003a) for Basque among many others).

(25) English (cf. Jackendoff (1972)):
 QUD: Who ate what?

FRED ate the **BEANS**
 B A

(26) Serbo-Croatian (cf. Godjevac (2000)):
 QUD: Who gave a lemon to whom?

(27a)

%L L*+H H- %H L*+H L-
 | | | | | | |
 JE LE NA je MA RI JI dala.
 ‘[JELENA] gave it [to MARY].’

(27b)

%L L*+H H- %H L*+H L-
 | | | | | | |
 JE LE NA je dala ravan MA RI JI.
 ‘[JELENA] gave the flat one to [to MARY].’

Proposal:

- (i) In answers to multiple-Wh questions both elements that stand for a Wh-phrase bear a pitch accent.
- (ii) The differences between both elements are phrasal, and there is a striking regularity across languages in that the tunes associated to ‘contrastive topics’ end in a high tone.

(iii) As seen in Serbo-Croatian, the so-called ‘foci’ of the answers to multiple-Wh questions are not the same elements as foci that answer single-Wh questions.

4.2-Semantic properties

▢ Partial Answers (cf., Kuno & Robinson (1972), Bošković (2002), Büring (2003)):

- | | |
|--|---|
| (28a) Who broke what? | (28b) John broke the door... (pair list) |
| (29a) Zeinek erosi du zer?
which buy AUX what
“Who bought what?” | (29b) Jonek atea hautsi du... (pair list)
Jon door break AUX
“John broke the door...” |

▢ Two types of multiple Wh Questions (cf. Bolinger (1978), Wachowicz (1974, 1975)):

(30) *Matching Questions*: Who came when?

▶ Demand a *pair list* answer:

- (30a) *Who killed Robert Kennedy when?
(30b) *Who is keeping the silver dollar in which bank?

vs.

- (31a) Who saw Robert Kennedy when?
(31b) Who killed which Kennedy?
(31c) Who kept the silver dollar in which bank?

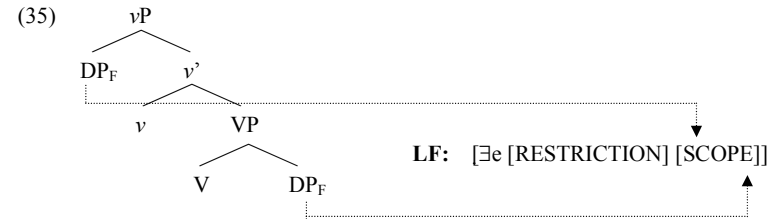
(32) *Conjoined Questions*: Who came *and* when?

▶ Demand the independent identification of two variables.

(33) Who killed Robert Kennedy, and when did he do it?

▢ LF for matching questions (cf. Chomsky (1973), Higginbotham & May (1981) and Gutiérrez-Rexach (1999)): Operator absorption & quantification over *pairs of variables*:

- (34a) Who ate what?
LF: [WH x, WHY: person(x) & eatable thing(y)] x ate y
- (34b) John ate pizza.
(34c) [∃e [Eating(e) & Past(e)]] [Agent(e, John) & Theme(e, pizza)]



▢ NOTE 2: Again, for a syntactic object to be marked [+F] in the syntax doesn't mean that that object will be the *actual* focus of the sentence but just that it will take part in the construction of the focus.

▢ Conclusion: There will be just one focus per sentence (be it a single or a pair). This is derivative of the LF representation as a restricted existential quantification over events.

Multiple Foci? (cf. Rooth (1985), Krifka (1991), Wold (1998)):

- (36) John only introduced BILL to SUE.
(37) Even JOHN drank only WATER.

▶ *Echoic foci*.

4.3-Some morphosyntactic properties:

4.3.1-Focal particles & displacements

Manding (Bamba & Liberman (1999)):

- (38) *Músà-lè yé kú sán Búlámá-lè má...
Musa-FOC AUX yam buy Ibrahim-FOC from
'MUSA bought yam(s) from IBRAHIM...'

Tuki (Bilola, 1995):

- (39a) Mbara a- dingam ane (*odzu)
Mbara SM loves who
'Who does Mbara love?'

- (39b) Ane odzu Mbara a- dingam
who FM Mbara SM loves
'Who does Mbara love?'

- (40a) Mbara a- ma-sesa Puta ee ane odzu a- ma-fenda ate twi
Mbara SM p2 ask Puta that who FOC SM p2 repair what how
'Mbara asked Puta who fixed what how'

(40b) *Mbara a- ma-sesa Puta ee ane ate twi odzu a- ma-fenda
 Mbara SM p2 ask Puta that who what how FOC SM p2 repair
 'Mbara asked Puta who fixed what how'

4.3.2-'Contrast' particles of Japanese and Korean

▢ Typological variation (Bošković (2002)):

Scenario: *John is in a store and in the distance sees somebody buying a piece of clothing, but does not see who it is and does not see what the person is buying.*

(41) ENG: #Who bought what?

(42) JAP: Dare-ga nani-o katta no?
 who-nom what-acc bought Q
 'Who bought what?'

Japanese answers¹:

(43a) Takako-wa wain-o kaimashita... (pair list)
 Takako-WA wine-ACC bought
 'Takako bought wine...'

(43b) Takako-ga wain-o kaimashita (single pair)
 Takako-GA wine-ACC bought
 'Takako bought wine...'

Korean answers²:

(44a) Yenghui-nun wain-ul sassta.... (pair list)
 Yenghui-NUN wine-ACC bought
 'Yenghui bought wine...'

(44b) Yenghui-ga wain-ul sassta. (single pair)
 Yenghui-GA wine-ACC bought
 'Yenghui bought wine'

► -WA/-NUN particles as marking 'contrast' (cf. Kuno (1973), Portner & Yabushita (1998), Munakata (2002), Kuroda (2003), Maruyama (2003)).

¹ Toshiko Oda, Takako Iseda, Tsuyoshi Sawada, Hiroto Hoshi, Sige-Yuki Kuroda (p.c.)

² Duk-ho An, Bosook Kang, Bum-Sik Park (p.c.)

4-Conclusions

- (i) Multiple items can enter marked [+F] the derivation.
- (ii) The focal structure is composed by merge and interpreted at LF via a mapping into the scope of a restricted quantification over events.
- (iii) Syntactically split focus structures are answers to multiple wh questions.
- (iv) The actual focus of split constructions is a pair.
- (v) The 'unicity of focus' is derivative of the LF representation for focus.

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