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THE NATURE OF WEAK ISLANDS
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1. Introduction

(1)   Strong island: for example, relative clause (e.g., Chomsky 1977, Ross 1967)
   a.   * What$_i$ do [$_{TP}$ you know [$_{DP}$ the author who [$_{TP}$ wrote t$_i$]]]?
   b.   * Why$_i$ do [$_{TP}$ you know [$_{DP}$ the man who [$_{TP}$ quit his job t$_i$]]]?

Weak island
(2)   Wh-island (Chomsky 1977)
   a.   What$_i$ do you wonder [whether to fix t$_i$]?   ARGUMENT *WH* EXTRACTION
   b. *Why$_i$ do you wonder [whether to fix the car t$_i$]?   ADJUNCT *WH* EXTRACTION

(3)   Negative island (Ross 1983)
   a.   Who$_i$ do**n't** you think that John talked to t$_i$?   ARGUMENT *WH* EXTRACTION
   b.   *Why$_i$ do**n't** you think that John talked to Mary t$_i$?   ADJUNCT *WH* EXTRACTION

(4)   Empty Category Principle (Chomsky 1981), Relativized Minimality (Rizzi 1990),
      Conditions on Extraction Domain (Huang 1982)

2. Rizzi (1990, 1992)

Weak Island
(5)   A.   Relativized Minimality

      B.   Differentiating between argument and adjunct extraction (Rizzi 1992; cf. also Cinque
            1990, Rizzi 1990): **referentiality**
            X can carry a referential index only if it bears an argumental Theta role on some level
            of representation.
             (i) if X, a chain, bears a referential index, the head of the chain only needs to bind the
                tail;
            (ii) if not, the head must govern the tail.

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(6) **Problem**
    Weak island violations show up in certain cases even with argument wh-phrases.

(7) Two inter-related questions:
     (i) exactly what is being violated with weak islands (Rizzi's RM)?
     (ii) exactly what is responsible for the (non-)referential nature of chains?

(8) Proposal for (i): Quantifier-Induced Barriers (Beck 1995, 1996a, 1996b)
    Proposal for (ii):   Nature of chains and "referentiality" (e.g., Beck 1995, Cresti 1995, Lahiri
                          2002)

3. *How many X* and Quantifier-Induced Barrier

(9)   How many people do you think I should talk to?
       (i)   For what n: there are n-many people x, such that you think I should talk to x.
                                                                                 (outer reading)
       (ii)   For what n: you think it should be the case that there be n-many people that I talk
              to?   (inner reading)
                                                                (Cresti 1995; cf. also Lahiri 2002)

A description
(10) (At least for some wh-chains), if it is interpreted as presuppositional, all parts of the wh-
      phrase are interpreted high in the structure, while if it is interpreted as non-
      presuppositional, some relevant part of the wh-phrase is interpreted low in the structure.

(11) The inner reading (non-presuppositional) disappears in weak islands (Beck 1995, Cresti
      1995): **an instance of a weak island effect with an argument *wh***
      a.   How many people do you wonder whether I should talk to? (wh-island)
           (i)   For what n: there are n-many people x, such that you wonder whether I should
                  talk to x.
           (ii) * For what n: you wonder whether it should be the case that there be n-many
                  people that I talk to?
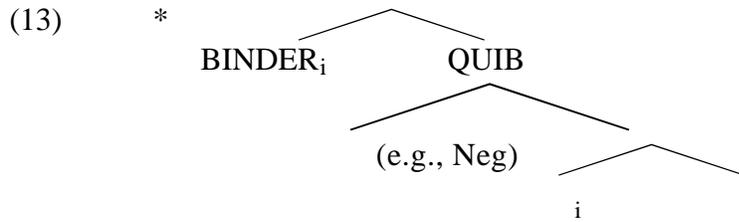   b.   Wieviele   Hunde hat   Karl   nicht   gefüttert? (negative island)
           how many   dogs   has   Karl   not   fed
           (i)   For which n: there are n dogs that Karl didn't feed.
           (ii) * For which n: it is not the case that Karl fed n dogs.

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(12) **Quantifier Induced Barrier** (QUIB) (Beck 1996a, Beck and Kim 1997)
The first node that dominates a quantifier, its restriction, and its nuclear scope is a
Quantifier Induced Barrier.

(13)   *

       BINDER$_i$ QUIB

              (e.g., Neg)

                           i

QUIBs apply only to LF movement (Beck)
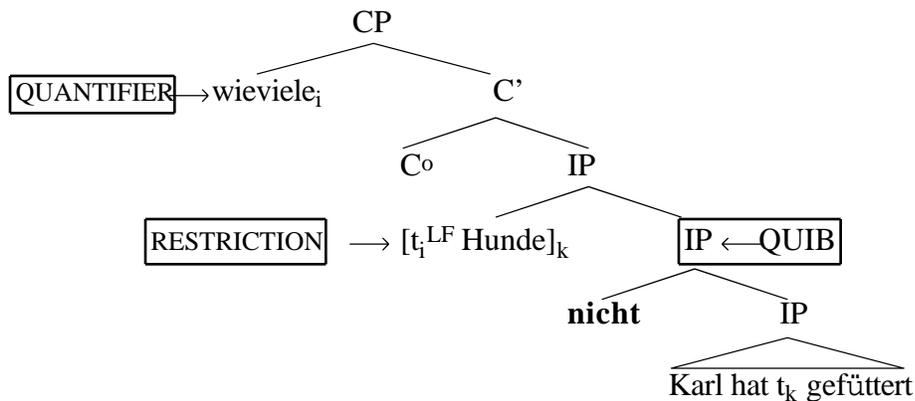(14) * Was   glaubt   niemand,   *wen*   Karl gesehen hat?
     what   believes   nobody   whom   Karl seen   has
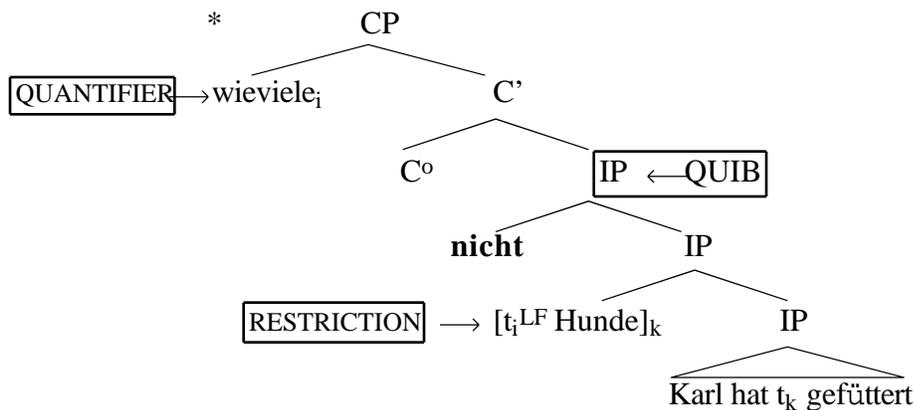   'Who does nobody believe that Karl saw?'

No problem if there is no QUIB
(15)   Was   glaubt   Hans,   *wen*   Karl gesehen   hat?
     what   believes   Hans   whom Karl seen   has
     'Who does Hans believe that Karl saw?'

(16) While I will adopt Beck's approach virtually intact, one assumption I will abandon is the
idea that only LF movement is subject to QUIBs.

(17) *how many x* (from Beck and Kim 1996): outer reading (presuppositional)

                        CP

QUANTIFIER →wieviele$_i$ C'

                    C^o IP

     RESTRICTION   ⟶ $[t_i^{LF}$ Hunde$]_k$ IP ←QUIB

                               nicht   IP

                                   Karl hat t_k gefüttert

(18) *how many x* (from Beck and Kim 1996): inner reading (non-presuppositional)

```
                    *              CP
                            _____|_____
        QUANTIFIER→wieviele_i                C'
                                        _____|_____
                                       C°           IP ←QUIB
                                          _____|_____
                                       nicht                  IP
                                                        _____|_____
                         RESTRICTION ⟶ [t_i^{LF} Hunde]_k          IP
                                                                _____|_____
                                                              Karl hat t_k gefüttert
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Cresti (1995): no portion of a wh-phrase moved out of a wh- island may be interpreted inside the island (cf. Frampton 1990). **Another instance of a weak island effect with an argument *wh*.**

(19)   How many people do you wonder whether I should talk to? (wh-island)

  (i)   For what n: there are n-many people x, such that you wonder whether I should talk to x.

  (ii) * For what n: you wonder whether it should be the case that there be n-many people that I talk to?

(20) a.   presuppositional
          for what n, ... n-many people x....[wh-island .... *x....*]
     b.   non-presuppositional
          **for what n, ... [wh-island ... n-many people ...]*

(21) What is the exact nature of the barrier effect induced by the wh-island? Following Beck (1996a) and Beck and Kim (1997), I will assume that any quantificational element potentially induces a Quantifier-Induced Barrier.

Suppose that in a wh-island, this is induced by the question morpheme Q that heads the CP of the island.

(22) Q, which heads the CP in questions, induces a QUIB; hence the CP, which is a QUIB, cannot intervene in a wh-chain in which some portion of the wh-phrase occurs below this CP.

(23) Q is an existential quantifier (Karttunen's 1973; cf. Hagstrom 1998)

4. The Apparent Argument/Adjunct Distinction

QUIBs in Japanese (Hoji 1985),Takahashi 1990, Tanaka 1999).
(24)　* Taroo-*sika*　　nani-o　　kawa-nakat-ta　　no?
　　　　Taro-only　　what-Acc　buy-Neg-Past　　Q
　　　　'What did only Taro buy?'

Scrambling can save a potential QUIB violation (Beck 1996a, Beck and Kim 1996).
(25)　Nani-o$_i$　　　Taroo-sika t$_i$　kawa-nakat-ta　　no?
　　　what-Acc$_i$　Taro-only　t$_i$　　buy-Neg-Past　　Q

(26)a.* Amuto　　mwues-ul　ilk-ci-an-ass-ni?
　　　　anyone　what-Acc　read-CI-not-do-past-Q
　　　　'Who did no one read?'
　　b.　mwues-ul$_i$　　amuto　　　t$_i$　ilk-ci-an-ass-ni?
　　　　what-Acc$_i$　　anyone　　t$_i$　read-CI-not-do-past-Q

Not limited to wh-in-situ languages: German (Beck 1996a)
(27)　*Was　glaubt　　niemand, *wen*　　　Karl　gesehen　　hat?
　　　　what　believes　nobody　　whom　　Karl　seen　　　has
　　　　'Who does nobody believe that Karl saw?'

French: Chang (1997) notes that the wh-in-situ option is subject to the QUIB.
(28) a. *? Jean　　ne　　　mange pas　　quoi?
　　　　　Jean　Neg　　eat　　Negwhat
　　　　　'What didn't Jean eat?'
　　b.　Que　ne　　mange-t-il pas?
　　　　what　Neg　　eat-he　　Neg

How does the wh-phrase take scope?
(29) a. * Taroo-*sika* nani-o　　　kawa-nakat-ta no?
　　　　　Taro-only　what-Acc　buy-Neg-Past　　Q
　　　　　'What did only Taro buy?'
　　b.　Taroo-ga　　nani-o　　kawa-nakat-ta　　no?
　　　　Taro-Nom　what-Acc　buy-neg-Past　　Q
　　　　'What didn't Taro buy?'

Huang (1982)
(30)   * what x, x a thing$_i$, QUIB ... x$_i$ ...

On this approach only LF movement is subject to the QUIB
(31)   Nani-o$_i$ Taroo-sika t$_i$ kawa-nakat-ta   no?
       what-Acc$_i$ Taro-only t$_i$ buy-Neg-Past   Q

Overt movement:
(32)   [$_{CP}$ OP$_i$ ....[t$_i$ *nani*] ...]   (Watanabe (1992)

(33)   [$_{CP}$.......[t$_i$ *nani*] ... Q$_i$]   (Hagstrom 1998)

(34)   Intervention effect (universal characterization) (Pesetsky 2000, p. 67)
       A semantic restriction on a quantifier (including *wh*) may not be separated from that
       quantifier by a scope-bearing element.

(35)   * OP$_i$/Q$_i$ ... QUIB ... [t$_i$ *nani*]   ....   .

4.   QUIBs in Japanese

QUIBs in Japanese
(36)   QUIBs with *-ka*
       a.   NPI *sika-nai* 'only' (Takahashi 1990)
            *Taroo-si*ka*   nani-o   kawa-nakat-ta   no?
             Taro-only   what-Acc buy-Neg-Past   Q
             'What did only Taro buy?'
       b.   Existential quantifier (Hoji 1985)
            ??Dare*ka*-ga   nani-o   katta   no?
              someone-Nomwhat-Acc bought Q
              'Someone bought what?'
       c.   Disjunction *-ka* (Hoji 1985)
            ?* [John-*ka*   Mary]-ga   nani-o   katta   no?
               [John-or   Mary]-Nom   what-Acc bought Q
             'John or Mary bought what?'

(37)   QUIBs with universal *-mo*
      a. <u>Universal quantifier (Hoji 1985)</u>
         ?*Dare-mo-ga   nani-o   katta   no?
           everyone-Nom   what-Accbought   Q
           'Everyone bought what?'
     b. <u>"Almost every" (Miyagawa 1998)</u>
         *Hotondo   dare-mo-ga   nani-o   katta   no?
          almost   everyone-Nom what-Acc   bought   Q
          'Almost everyone bought what?'

(38) a.   <u>NPI *sika-nai* 'only'</u>
        Nani-o$_i$ Taroo-si*ka*   t$_i$ kawa-nakat-ta   no?
        what-Acc$_i$ Taro-only   t$_i$ buy-Neg-Past   Q
        'What did only Taro buy?'
    b.   <u>Existential quantifier</u>
        Nani-o$_i$ dare*ka*-ga   t$_i$ katta   no?
        hat-Acc$_i$ someone-Nom   t$_i$ bought Q
        'What, someone bought?'
    c.   <u>Disjunction *-ka* (Hoji 1985)</u>
        Nani-o$_i$ [John-*ka* Mary]-ga   t$_i$ katta   no?
        what-Acc$_i$ [John-or Mary]-Nom   t$_i$ bought   Q
        'What, John or Mary bought?'
    d.   <u>Universal quantifier</u>
        Nani-o$_i$ dare-mo-ga   t$_i$ katta   no?
        what-Acc$_i$ everyone-Nom   t$_i$ bought Q
        'What, everyone bought?'
    e.   <u>"Almost every"</u>
        Nani-o$_i$ hotondo dare-mo-ga   t$_i$ katta   no?
        what-Acc$_i$ almost   everyone-Nom   t$_i$ bought   Q
        'What, almost everyone bought?'

5. QUIBs and Adjunct Wh-phrase *Naze* 'why'

(39) a. Why doesn't Mary come home?
      b. *Why$_i$ don't you think [Mary will come home t$_i$]?

(40) ? Naze$_i$ Hanako-ga   [t$_i$ Taroo-ga sigoto-o   yameta to] omotteiru no?
      why$_i$ Hanako-Nom [t$_i$ Taro-Nom job-Acc   quit   C] think   Q
      'Why does Hanako think that Taro quit his job?'

(41) *naze* extraction long-distance across QUIB

    a. <u>NPI *sika-nai* 'only'</u>

        *Naze$_i$ Hanako-sika [t$_i$ Taroo-ga   sigoto-o   yametato] omottei-nai   no?

        why$_i$ Hanako-only [t$_i$ Taro-Nom job-Acc   quit   C] think-Neg-Past   Q

        'Why does only Hanako think that Taro quit his job?'

    b. <u>existential quantifier</u>

      ?? Naze$_i$ dareka-ga   [t$_i$ Taroo-ga sigoto-o   yameta   to] itta   no?

        why$_i$ someone-Nom [t$_i$ Taro-Nomjob-Acc   quit   C] said   Q

        'Why did someone say that Taro quit his job?'

    c. <u>disjunctive *-ka*</u>

        * Naze$_i$ [John-ka Mary]-ga   [t$_i$ Taroo-ga   sigoto-oyameta to] itta no?

        why$_i$ [John-or Mary]-Nom   [t$_i$ Taro-Nom   job-Accquit   C] said Q

        'Why did John or Mary say that Taro quit his job?'

    d. <u>universal quantifier</u>

        ?* Naze$_i$ daremo-ga   [t$_i$ Taroo-ga   sigoto-o yameta to]   itta   no?

        why$_i$ everyone-Nom [t$_i$ Taro-Nom job-Acc quit   C]   said   Q

        'Why did everyone say that Taro quit his job?'

    e   <u>"almost" and universal quantifier</u>

        * Naze$_i$ hotonto daremo-ga   [t$_i$ Taroo-ga sigoto-o yameta to]itta   no?

        why$_i$ almost   everyone-Nom [t$_i$ Taro-Nom job-Acc quit   C] said   Q

        'Why did almost everyone say that Taro quit his job?'

(42) ??Dare*ka*-ga   nani-o   katta   no?

      someone-Nom what-Acc bought   Q

      'Someone bought what?'

Argument wh-phrase: can undergo scrambling across a QUIB

(43) Nani-o$_i$ Hanako-sika   [Taroo-ga t$_i$ katta   to] omottei-nai   no?

   what$_i$ Hanako-only [Taro-Nom t$_i$ bought   C] think-Neg-Past   Q

   'What does only Hanako think that Taro bought?'

(44) *minna* 'all'

    a. *Minna* -ga   nani-o   katta   no?   (cf. Hoji 1986)

        all-Nom   what-Acc   bought   Q

        'What did all buy?'

    b. ? Naze$_i$ minna-ga   [t$_i$ Taroo-ga   sigoto-o   yameta   to] omotteiru no?

        why$_i$ all-Nom   [t$_i$ Taro-Nom job-Acc   quit   C] think   Q

        'Why do all think that Taro quit his job?'

6. *Why/Naze*

(45) a. Wh-island
  E: *Why$_i$ do you wonder [whether to fix the car t$_i$]?
 b. Negative/NPI island
  E: *Why$_i$ do**n't** you think that John talked to Mary t$_i$?
  J: *Naze$_i$ Hanako-sika [t$_i$ Taroo-ga sigoto-o yameta to] omottei-nai no?
   why$_i$ Hanako-only [t$_i$ Taro-Nom job-Acc quit C] think-Neg-Past Q
   'Why does only Hanako think that Taro quit his job?'

(46) Intervention effect (universal characterization) (Pesetsky 2000, p. 67)
  A semantic restriction on a quantifier (including *wh*) may not be separated from that
  quantifier by a scope-bearing element.

(47) what reason x, [John left [because of x]] (Beck 1996a)

(48) *why* is a sentential adverb (Bromberger 1992, Rizzi 1990)

Make it parallel with argument *wh*
(49) a. OP$_i$ ... [t$_i$ *nani*]: what x...[x a thing]... (cf. Watanabe 1992)
  b. what x$_i$ ... [because of **[x a reason]**]

Surprising asymmetry between argument and *why* relative to QUIBs (Miyagawa 1998)
(50) a. * Hanako-sika dare-ni erab-are-nakat-ta   no?
   Hanako-only who-by choose-Pass-Neg-Past Q
   'Who was chosen only by Hanako?'
  b. Hanako-sika *naze* erab-are-nakat-ta   no?
   Hanako-only why choose-Past-Neg-Past Q
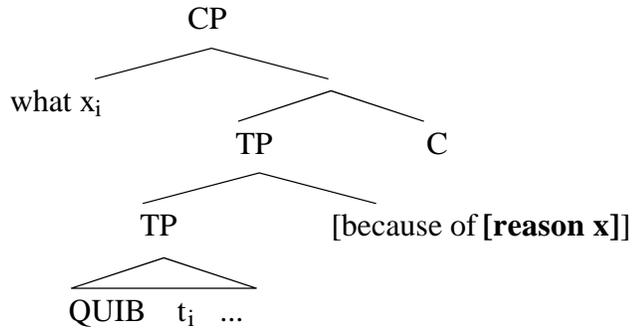   'Why was only Hanako chosen?'

The same point has been observed in Korean (Cho 1998, Ko 2002).
(51) Amuto way ku chayk-ul ilk-ci-an-ass-ni?   (Ko 2002)
  anyone why the book-acc read-CI-Neg-Past-Q
  'Why did no one read the book?'

(52)

```
                      CP
          _____/  _____
       what x_i              _____/  _____
                           TP                   C
                     _____/  \_____
                   TP           [because of [reason x]]
              ___/  \___
           QUIB    t_i  ...
```

(53) Why didn't you come?

(54) *Why_i don't you think [Mary will come home t_i]?

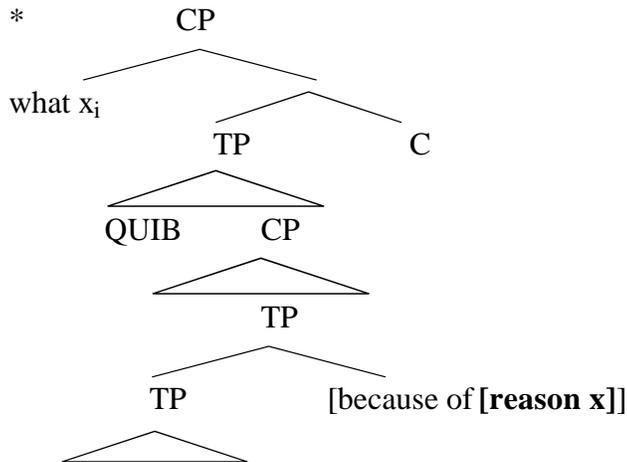The same is observed for Japanese (Miyagawa 1998) and Korean (Ko 2002)

(55) (a) Japanese
       * Hanako-sika [Taroo-ga   naze   kono-hon-o   katta   ka] sira-nai   no?
         Hanako-only [Taro-Nom why   this-book-Acc bought Q]   know-Neg   Q
         'Why does only Hanako know that Taro bought this book?'

   (b) Korean
       * Amwuto[John-i   way   saimha-ass-ta-ko]   malha-ci-an-ass-ni?
         anyone [John-Nom   why   resign-Past-Dec-C]   say-CI-Neg-Past-Q
         'Why didn't anyone say that John resigned?'

(56)   *   CP
```
              _____/  _____
          what x_i        ____/  \____
                        TP              C
                   ___/  \___
                QUIB      CP
                      ___/  \___
                            TP
                       ____/  \____
                     TP           [because of [reason x]]
                 ___/  \___
```

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6.1 Two additional arguments

indeterminate + mo/ka

(57) Universal paradigm with -mo

wh/indeterminate expression	*-mo* universal
dare 'who'	*dare-mo* 'everyone'
nani 'what'	*nani-mo* 'everything'
doko where'	*doko-mo* 'everywhere'
itu 'when'	*itu-mo* 'whenever'
naze 'why'	**naze-mo*

(58) Existential paradigm with *-ka*

wh/indeterminate expression	*-ka* existential
dare 'who'	*dare-ka* 'someone'
nani 'what'	*nani-ka* 'something'
doko where'	*doko-la* 'somewhere'
itu 'when'	*itu-ka* 'sometime'
naze 'why'	*naze-ka* 'for some reason'a)

(59) *Gakusei-ga   daremo   kita.
    student-Nom   everyone   came
    'Every student came.'

(60) Gakusei-ga   dareka   kita.
     student-Nom   someone   came
    'Some student came.'

(61) a.   Taroo-ga   naze-ka   waratta.
          Taroo-Nom   some.reason   laughed
     b.   There exists a reason x, [Taro laughed [because of x]]

(62) *   Taroo-ga   siranai-riyuu-de   naze-ka   waratta.
          Taro-Nomunknown-reason-bysome.reason   laughed
          'For some unknown reason, Taro laughed.'

Anti-superiority

Saito (1982, 1985)

(63) a.　Taroo-wa　　nani-o　　naze　　　katta　no?
　　　　　Taro-Top　　what-Acc　why　　　bought　Q
　　　　　'Why did Taro buy what?'
　　b.　??Taroo-wa　　naze　　nani-o　　katta　　no?
　　　　　Taro-Top　　why　　what-Acc　bought　　Q

Bolinger (1978).

(64) a.　It's nice to have all those times scheduled, but when are you doing what?
　　　　(#But what are you doing when?)
　　b.　It's nice to have all those activities ahead of you, but what are you doing when?
　　　　(#But when are you doing what?)

(65) D-linking and pair-list (Comorovski 1996, Hornstein 1994).

(66)　*Naze* is non-presuppositional because its restriction is interpreted low in the structure
　　　relative to the quantifier.

(67) Why did you buy what?

(68)　... $naze_i$ ... $nani_j$ ... t_i ... t_j ...

7. Pair-list interpretation

(69) a.　Who bought everything?*PL
　　b.　What did everyone buy t?　　PL

The Japanese counterpart may be in two forms, given below.

(70) a.　?* Daremo-ga　　　nani-o　　katta　　　no?
　　　　　everyone-Nom　what-Acc　　bought　　Q
　　　　　'What did everyone buy?'
　　b.　Nani-o_i　　daremo-ga　　　　　t_i　　katta　　　no?
　　　　　what-Acc_i　everyone-Nom　　　t_i　　bought　　　Q
　　　　　'What did everyone buy?'
　　　　　*PL (Hoji 1986)

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(71) Daremo-ga   *sorezore*   nani-o   katta no?
      everyone-Nom   each   what-AccboughtQ
      'What did everyone each buy?' (Pair-list possible) (Hoji 1986)

May (1985, 1988) (for focus movement, cf. Culicover and Rochemont 1993)
(72) a.   Who loves every girl?   (no pair-list)
     b.   Who loves each girl?   (pair-list)

(73) [$_{CP}$ [daremo-ga   sorezore]$_i$ [$_{CP}$ C-*wh*$_i$ [$_{IP}$ .... t$_i$ RESTRICTION...]]]
     [$_{CP}$ [everyone-Nom   each]$_i$ [$_{CP}$ C-*wh*$_i$ [$_{IP}$ .... t$_i$ RESTRICTION...]]]

(74)   Dareka-ga   daremo-o   syootaisita.
          someone-Nom   everyone-Acc invited
          'Someone invited everyone.'
          some > every, *every >some

(75)   Dareka-ga   daremo-o   *sorezore* syootaisita.   (cf. Hoji 1985)
          someone-Nom   everyone-Acc each   invited
          'Someone invited everyone each.'
          some > every, everyone each >some

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