

## Long-Distance Dependency in Japanese Relativization: Resumptivity and Operator Movement\*

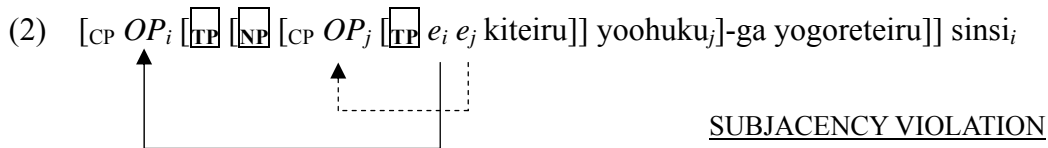
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### 1. Long-distance dependencies in Japanese relativization

• **No CNPC effects**

- (1) a. [[[  $e_i$   $e_j$  kiteiru] yoohuku<sub>j</sub> ]-ga yogoreteiru]  $sinsi_i$   
wearing suit-NOM dirty gentleman  
'(lit.) a gentleman who the suit that (he) is wearing is dirty'  
— Kuno (1973: 239)
- b. [[[  $e_i$   $e_j$  kawaiatte ita] inu<sub>j</sub> ]-ga sinda simatta]  $kodomo_i$   
loving was dog-NOM dying ended-up child  
'(lit.) the child who the dog (he/she) was fond of died'  
— Kornfilt et al. (1980: 189-190)
- c. [[[  $e_i$   $e_j$  kaita] hon<sub>j</sub> ]-ga syoten-ni deteiru]  $gakusya_i$   
wrote book-NOM bookstore-at appear scholar  
'(lit.) the scholar who the book (he/she) wrote is on bookstores'  
— Inoue (1976: 222)

Relativization in Japanese can take place beyond clause-boundaries, despite the fact that operator movement from the gap position in the relative clause would violate the Subjacency Condition.



• **No reconstruction/connectivity effects in 'Long-distance' relativization**

(3) **Anaphor licensing**

\*Katie-wa [[[Paul]<sub>j</sub>]-ga  $e_i$  kaita] to iu] giron]-ga wakiokotteiru] [**kare-zisin<sub>j</sub>**-no  
-TOP -NOM drew that debate-NOM come out himself-GEN  
 $e_i$ ]-o taisoo hosigatta.  
picture-ACC very wanted

'(lit.) Katie really wanted himself<sub>j</sub>'s picture<sub>i</sub> that the claim/debate that Paul<sub>j</sub> drew  $e_i$  has come out.  
— Kitao (2017: 42)

\* This work is supported by JSPS Grants-in-Aid for Scientific Research, Grant Number 18K00553.

(4) **Idiom chunk interpretation**

\*Raibaru-wa [[[[[John-ga mizukara  $e_i$  **hotta**] to iu] uwasa]-ga tatteiru]  
Rival-TOP -NOM himself dug that rumor-NOM be spread  
**boketu<sub>i</sub>]-o** totemo yorokonda.  
grave-ACC very happy

Idiom: <i>boketu-o horu</i> ‘bring about a ruin’
NP V

→ This interpretation is not possible.

‘(lit.) The rival is very happy about the grave<sub>i</sub> that the rumor that John himself dug  $e_i$  has been spreading out.

(The ruin that has a rumor that John himself brought about made his rival happy.)

— *op. cit.*, p. 42

Reconstruction/connectivity effects such as anaphor licensing and the interpretation of idiom chunks across clause boundaries are not possible in <b>long-distance relativization</b> .
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(5) The immunity of the CNPC → Movement is NOT involved in Japanese relative clauses (Kuno 1973, Murasugi 1991, 2000a, b, Ochi 1997, etc.).

[NP [TP [NP [TP  $pro_i$   $pro_j$  kiteiru] yoohuku<sub>j</sub>]-ga yogoreteiru] sin<sub>i</sub>]

● **Problem set**

**Short-distance relativization in Japanese shows clear movement properties of relative heads.**

- i. **Reconstruction/connectivity effects (anaphor licensing & idiom chunk interpretation)**
- ii. **Weak crossover effects (WCO)**
- iii. **The availability of parasitic gaps**
- iv. **The impossibility of left-branch extraction**

2. **Short-distance relativization in Japanese**

2.1 **Reconstruction/connectivity effects**

(6) **Anaphor licensing**

a. Katie-wa [[**Paul<sub>i</sub>**-ga  $e_j$  egaita] **kare-zisin<sub>i</sub>**-no  $e_j$ ]-o taisoo hosigatta.  
Katie-TOP Paul-NOM drew himself-GEN picture-ACC very wanted

‘(lit.) Katie wanted himself<sub>i</sub>’s picture that Paul<sub>i</sub> drew very much.’

— Kitao (2011: 318)

- b. Mary-wa [[**John<sub>i</sub>**-ga  $e_j$  taipu-sita] **kare-zisin<sub>i</sub>**-no ronbun<sub>j</sub>]-o mottekita.  
 Mary-TOP John-NOM typed himself-GEN paper-ACC brought  
 ‘(lit.) Mary brought himself’s paper that John typed.’

— Ishii (1991: 29)

(7) **Idiom chunk interpretation**

- a. Raibaru-wa [[John-ga mizukara  $e_i$  **hotta**] **boketu<sub>i</sub>**-o totemo yorokonda.  
 rival-TOP John-NOM himself dug grave-ACC very happy

Idiom: boketu-o horu ‘bring about a ruin’ → This interpretation is possible.  
 NP V

‘(lit.) The rival was very happy about the grave that John himself dug.’

(The ruin John himself brought about made his rival happy.)

— Kitao (2011: 319)

- b. [[Karera-ga magariarinimo  $e_i$  **tuketa**] **kettyaku<sub>i</sub>**]-wa amari yorokobarenakatta.  
 they-NOM somehow came to settle-TOP not so pleasing

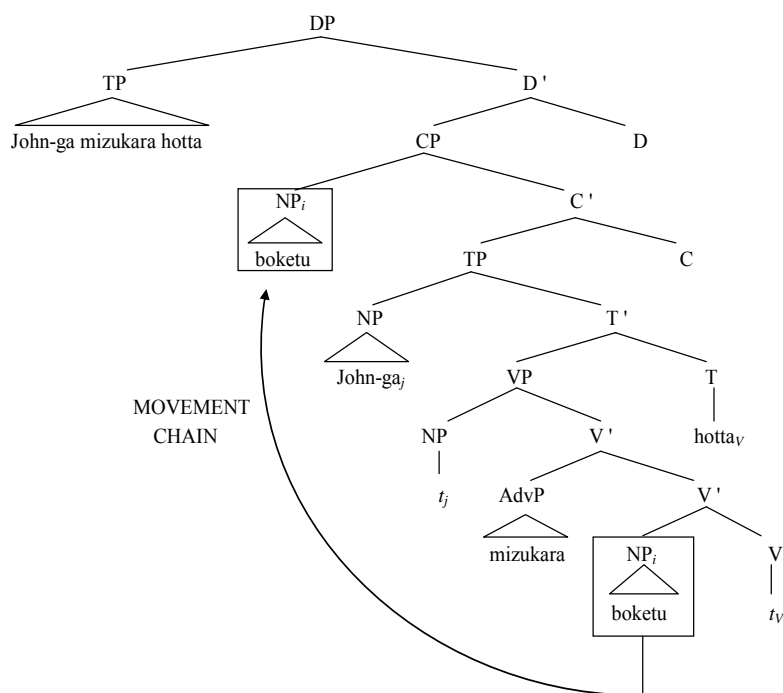
Idiom: kettaku-o tuku ‘come to conclusion’ → This interpretation is possible.  
 NP V

‘(lit.) The settlement that they somehow came to was not so pleasing.’

(The conclusion that they reached was not so pleasing.)

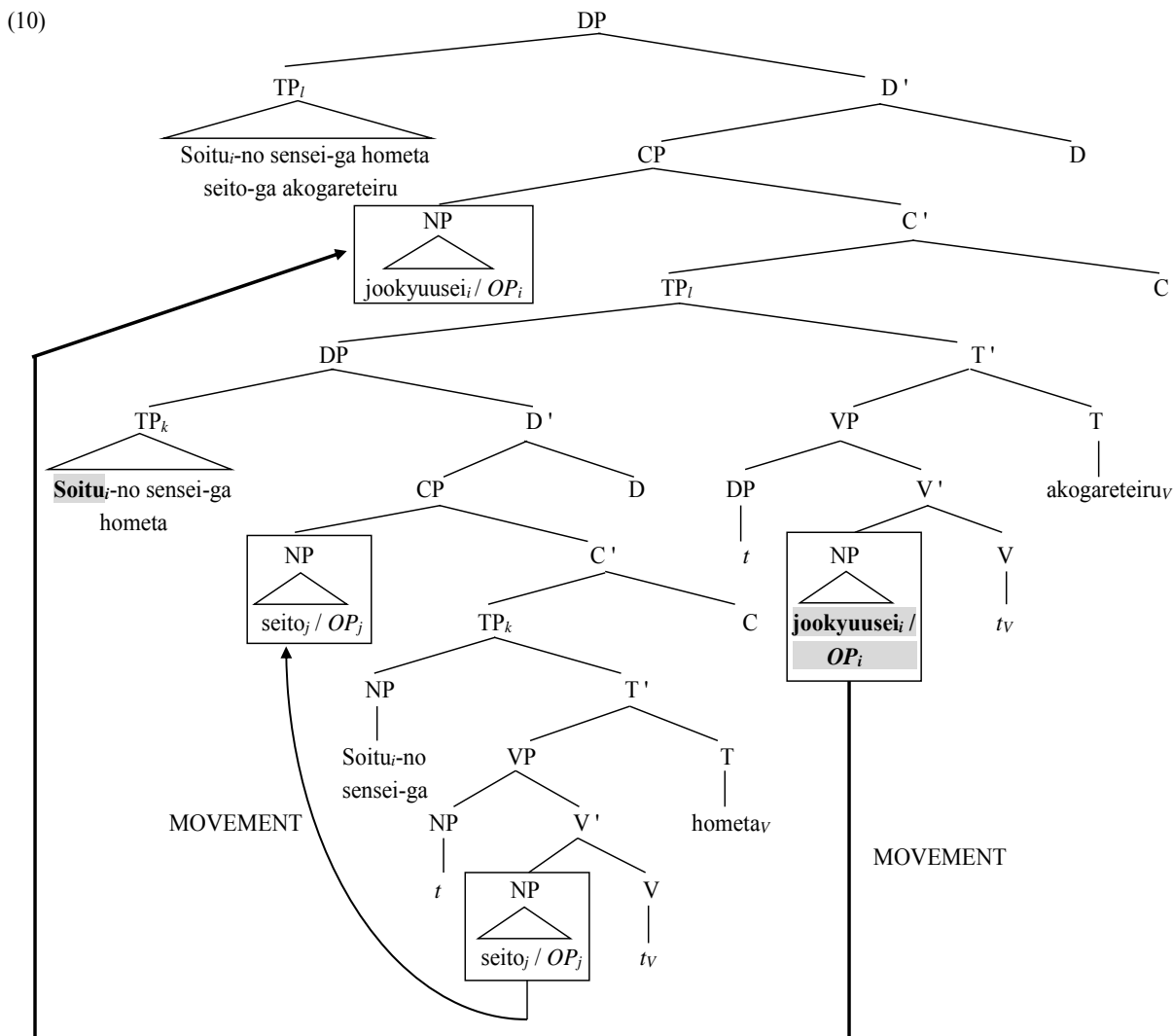
— Inoue (1976: 214)

(8)



## 2.2 Weak Crossover Effects (WCO effects)<sup>1</sup>

- (9) ?\* [[**Soitu<sub>i</sub>**-no sensei-ga **e<sub>j</sub>** hometa] seito<sub>j</sub>-ga **e<sub>i</sub>** akogareteiru] **jookyuusei<sub>i</sub>**  
 he-GEN teacher-NOM praised student-NOM admire senior student  
 ‘(lit.) the senior student<sub>i</sub> who(m) the student<sub>j</sub> who(m) his<sub>i</sub> teacher praised **e<sub>j</sub>** admires **e<sub>i</sub>**’  
 — Kitao (2017: 33)



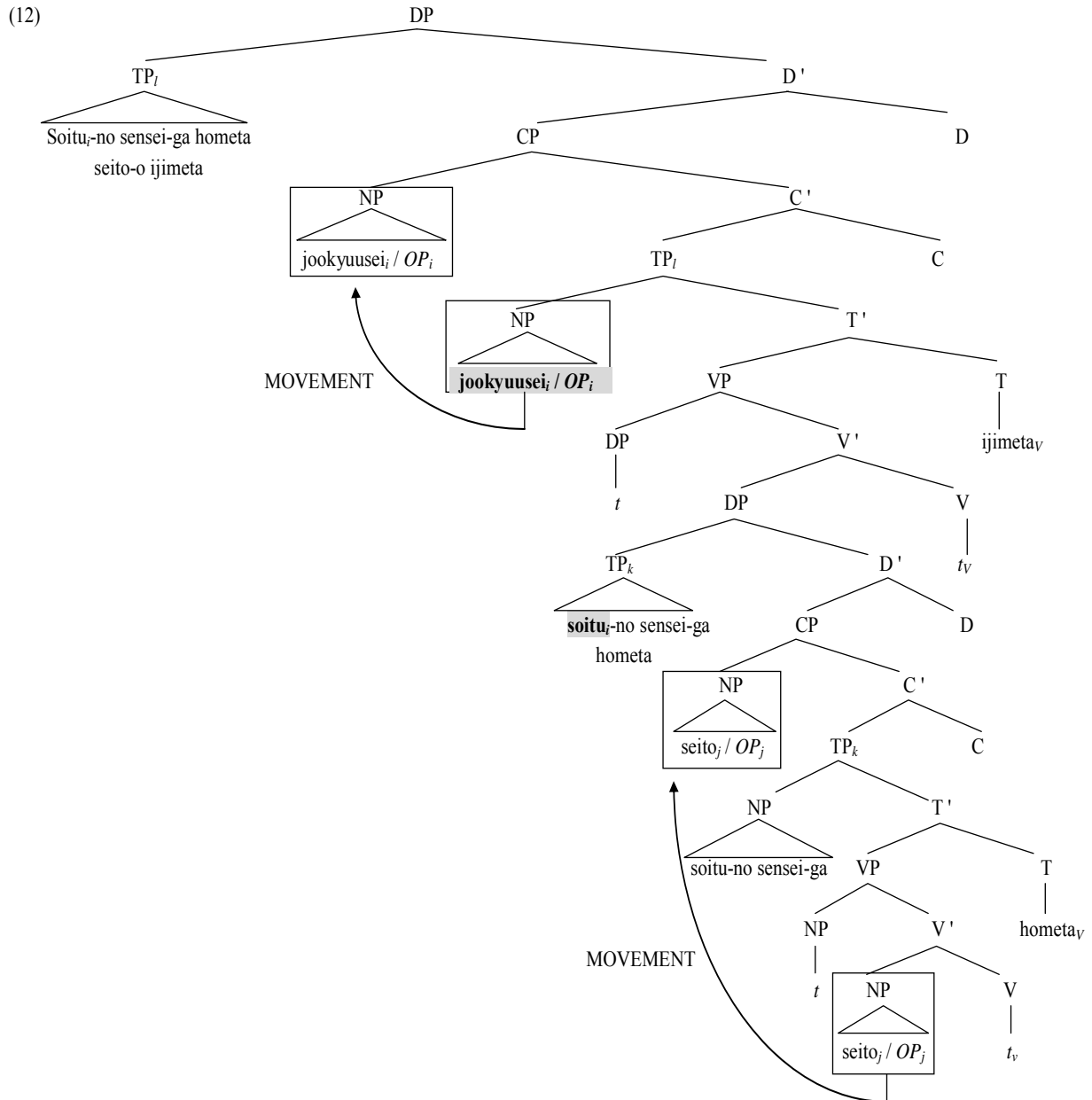
<sup>1</sup> The presence of WCO effects in Japanese relative clauses was firstly proposed by Ishii (1991). The following is the examples given in Ishii (1991):

- (i) a. ?\*[[ Soitu<sub>i</sub>-ga e<sub>j</sub> hihansita] onna<sub>j</sub>-ga e<sub>i</sub> nagutta] otoko<sub>i</sub>  
 he-NOM criticized woman-ACC hit man  
 ‘the man<sub>i</sub> who<sub>i</sub> the woman he<sub>i</sub> criticized hit t<sub>i</sub>’  
 b. [ e<sub>i</sub> [ soitu<sub>i</sub>-ga e<sub>j</sub> hihansita] onna<sub>j</sub>-o nagutta] otoko<sub>i</sub>  
 he-NOM criticized woman-ACC hit man  
 ‘the man<sub>i</sub> who<sub>i</sub> t<sub>i</sub> hit the woman he<sub>i</sub> criticized’

— Ishii (1991: 41)

- (11) [ $e_i$  [**Soitu**<sub>*i*</sub>-no sensei-ga  $e_j$  hometa] seito<sub>*j*</sub>-o ijimeta] **jookyuusei**<sub>*i*</sub>  
 he-GEN teacher-NOM praised student-NOM bullied senior student  
 ‘(lit.) the senior student<sub>*i*</sub> who  $e_i$  bullied the student<sub>*j*</sub> who(m) his<sub>*i*</sub> teacher praised  $e_j$ ’

— *op. cit.*, p. 33



Reconstruction/connectivity effects such as anaphor licensing and the interpretation of idiom chunks and WCO strongly suggest the premise that syntactic movement is involved in **short-distance relativization in Japanese**.

## 2.3 Parasitic Gaps

### 2.3.1 The Properties of Parasitic Gaps

- A parasitic gap is a gap that is dependent on the existence of another gap, which is a trace of *wh*-type movement, namely a variable.

- (13) a. **Which articles<sub>i</sub>** did John file  $t_i$  without reading  $e_i$ ? — Chomsky (1982: 38)  
b. **Which colleague<sub>i</sub>** did John slander  $t_i$  because he despised  $e_i$ ? — Engdahl (1983: 11)  
c. **Which boy<sub>i</sub>** did Mary's talking to  $e_i$  bother  $t_i$  most? — *op. cit.*, p. 5

- (14) a. \*John filed a bunch of articles<sub>i</sub> without reading  $e_i$ .  
b. \*Mary's talking to  $e_i$  bothered John<sub>i</sub> a lot. — *op. cit.*, p. 12

→ Traces of displacement do not exist in (14a, b), and hence no syntactic objects license the gap.

- A resumptive pronoun occurring in the gap position of a displaced element does not license a gap in the adjunct in English.

- (15) a. \*Which articles did John file **them<sub>i</sub>** without reading  $e_i$ ?  
b. \*Which colleague did John slander **her<sub>i</sub>** because he despised  $e_i$ ?  
c. \*Which boy<sub>i</sub> did Mary's talking to  $e_i$  bother **him<sub>i</sub>** most?

- Parasitic gaps are not licensed by A-movement like DP-movement.

- (16) a. \*John<sub>i</sub> was killed  $t_i$  by a tree falling on  $e_i$ .  
b. \*Mary<sub>i</sub> seemed  $t_i$  to disapprove of John's talking to  $e_i$ . — *op. cit.*, p. 13

- (17) **A parasitic gap is licensed by a variable that does not c-command it.**  
— Chomsky (1982: 40)

- (18) a. \*Who<sub>i</sub>  $t_i$  met you before you recognized  $e_i$ ? — Chomsky (1986: 54)  
b. \*Who<sub>i</sub>  $t_i$  resigned before we could fire  $e_i$ ? — Lasnik and Uriagereka (1988: 75)  
c. \*Which boy<sub>i</sub>  $t_i$  expected me to talk to  $e_i$ ? — Engdahl (1985: 5)

### 2.3.2 Parasitic Gaps in Japanese Relative Clauses

- Parasitic gaps can occur in Japanese headed relative clauses

(19) a. [[[Titi<sub>j</sub>-ga **e<sub>i</sub>** kau-mae-ni] *pro<sub>j</sub>* **t<sub>i</sub>** sisyoku-sita] **udon<sub>i</sub>**]-wa Sanuki-san  
 Father-NOM buy-before sampled noodle-TOP Sanuki-origin  
 desu.  
 is

‘(lit.) The noodle<sub>i</sub> [that Father<sub>j</sub> sampled *t<sub>i</sub>* [before (he<sub>j</sub>) bought *e<sub>i</sub>*]] is of *Sanuki* origin.’

b. [[[Musuko-ga **e<sub>i</sub>** yoma-nai-node] hahaoya-ga huruhon’ya-ni **t<sub>i</sub>**  
 son-NOM read-NOT-because mother-NOM used bookstore-to  
 utta] **hon<sub>i</sub>**]-wa zituwa kityoo-na mono datta.  
 sold book-TOP in fact invaluable thing was

‘(lit.) The book<sub>i</sub> [[that Mother sold *t<sub>i</sub>* to a used bookstore [because (her) son didn’t read *e<sub>i</sub>*]] was in fact an invaluable one.’

— Kitao (2016: 100-101)

(20) a. [[udon<sub>i</sub>/OP<sub>i</sub> [Titi<sub>j</sub>-ga *e<sub>i</sub>* kau-mae-ni] *pro<sub>j</sub>* *t<sub>i</sub>* sisyoku-sita] ...



b. [[hon<sub>i</sub>/OP<sub>i</sub> [Musuko-ga *e<sub>i</sub>* yoma-nai-node] hahaoya-ga huruhon’ya-ni *t<sub>i</sub>* utta] ...



- (21a, b): There are no variables to license the gap, and the examples are deemed ungrammatical.

→ **e** is parasitic.

(21) a. ?? [[[Titi<sub>j</sub>-ga **e<sub>i</sub>** kau-mae-ni] *pro<sub>j</sub>* **udon<sub>i</sub>-o** *t<sub>k</sub>* sisyoku-sita]  
 Father-NOM buy-before noodle-ACC sampled  
 depaato<sub>k</sub>]-wa itumo konde-imasu.  
 department store-TOP always be crowded

‘(lit.) The department store [that Father sampled **noodle<sub>i</sub>** [before (he) bought *e<sub>i</sub>*]] is always crowded.’

b.?? [[[Musuko-ga **e<sub>i</sub>** yoma-nai-node] hahaoya-ga **hon<sub>i</sub>-o** *t<sub>j</sub>* utta]  
 son-NOM read-NOT-because mother-NOM book-ACC sold  
 huruhon’ya<sub>j</sub>]-wa kono mati-no sinise desu.  
 used bookstore-TOP this town-GEN long-established shop is

‘(lit.) The used bookstore<sub>j</sub> [that Mother sold **a book/books<sub>i</sub>** to [because (her) son didn’t read *e<sub>i</sub>*]] is a long-established shop.’

— *op. cit.*, pp. 101-102

- (22a, b): The  $e_i$  gap in the adjunct cannot be replaced by an overt pronoun. →  $e_i$  is parasitic.

(22) a. \*[[[Titi<sub>j</sub>-ga          **sore<sub>j</sub>-o** kau-mae-ni] *pro<sub>j</sub> t<sub>i</sub>* sisyoku-sita] udon<sub>i</sub>]-wa  
Father-NOM    it-ACC    buy-before                                  sampled          noodle-TOP  
*Sanuki-san    desu.*

Sanuki-origin is

‘(lit.) The noodle<sub>i</sub> [that Father<sub>j</sub> sampled  $t_i$  [before (he<sub>j</sub>) bought **it<sub>i</sub>]] is of *Sanuki* origin.’**

b. \*[[[Musuko-ga    **sore<sub>j</sub>-o**    yoma-nai-node]          hahaoya-ga          huruhon'ya-ni           $t_i$   
son-NOM            it-ACC    read-NOT-because          mother-NOM          used bookstore-to  
utta]    hon<sub>i</sub>]-wa    zituwa    kityoo-na    mono    datta.  
sold    book-TOP    in fact    invaluable    thing    was

‘(lit.) The book<sub>i</sub> [that Mother sold  $t_i$  to a used bookstore [because (her) son didn’t read **it<sub>i</sub>]] was in fact an invaluable one.’**

— *op. cit.*, p.102

The availability of parasitic gaps in Japanese relative clauses shows that **the relative head undergoes A'-movement.**

## 2.4 Left Branch Extraction

### 2.4.1 Left Branch Extraction of *wh*-elements

#### (23) The Left Branch Condition (LBC)

No NP which is the leftmost constituent of a larger NP can be reordered out of this NP by a transformational rule. — Ross (1967: 207)

#### Examples in English

- (24) a. \*Whose<sub>i</sub> did you steal [ $t_i$  money]?  
b. \*Who<sub>i</sub> did you steal [ $t_i$ 's money]?  
c. \*How many<sub>i</sub> did you buy [ $t_i$  sausages]? — McCawley (1998: 526)

(25) a. Whose money did you steal?

b. How many sausages did you buy? — *op. cit.*, p. 526

#### Examples in German

(26) \*Wessen<sub>i</sub> hast du [<sub>NP</sub>  $t_i$  [<sub>N'</sub> Papiere          über Benjamin]] gelesen?  
whose    have you                                  papers-ACC about Benjamin read

(27) [<sub>NP</sub> Wessen Papiere          über Benjamin]<sub>i</sub> hast du  $t_i$  gelesen?  
whose papers-ACC          about Benjamin    have you          read

— Müller (1995: 45)



- The LBC is not a universal constraint of movement. Latin and most Slavic languages do not show LBC effects.

(28) Latin

Cuiam<sub>i</sub> amat Cicero [<sub>t<sub>i</sub></sub> puellam]?  
whose loves Cicero girl  
'Whose girl does Cicero love?'

— Uriagereka (1988: 113)

(29) Russian

a. Čju<sub>i</sub> ty čitaješ [<sub>t<sub>i</sub></sub> knigu]?  
whose you are reading book  
'Whose book are you reading?'

b. Skol,ko<sub>i</sub> emu bylo [<sub>t<sub>i</sub></sub> let]?  
how many to-him was years  
'How many years old was he?'

— Ross (1967: 237)

(30) Serbo-Croatian

a. Čijeg<sub>i</sub> si vidio [<sub>t<sub>i</sub></sub> oca]?  
whose are seen father  
'Whose father did you see?'

b. Koliko<sub>i</sub> je zaradila [<sub>t<sub>i</sub></sub> novca]?  
how-much is earned money  
'How much money did she earn?'

— Bošković (2005: 2)

- **The LBC-type extraction is not allowed in Japanese.**

(31) \*Dare<sub>i</sub>-no Taroo-ga [<sub>t<sub>i</sub></sub> tegami]-o suteta no?  
who-GEN Taro-NOM letter-ACC discarded Q  
'(lit.) Whose<sub>i</sub>, Taro discarded [<sub>t<sub>i</sub></sub> letter]?'  
— Takahashi and Funakoshi (2013: 237)

(32) \*Hanako-no<sub>i</sub> John-ga [<sub>t<sub>i</sub></sub> kaban]-o kakusita.  
Hanako-GEN John-NOM bag hid  
'(lit.) Hanako's<sub>i</sub> John hid [<sub>t<sub>i</sub></sub> bag].'  
— Kato (2007: 41)

**It is deduced that relativization in Japanese also shows the LBC effects.**

## 2.4.2 Left Branch Extraction in Relativization

- English *wh*-extraction obeys the LBC.

→ **It is deduced that relativization in English also shows the LBC effects.**

- (33) a. \*the [man]<sub>i</sub> [<sub>CP</sub> whose<sub>i</sub> [<sub>TP</sub> I introduced [<sub>t<sub>i</sub></sub> mother] to you]]  
 b. \*the [book]<sub>i</sub> [<sub>CP</sub> whose<sub>i</sub> [<sub>TP</sub> I told you about [<sub>t<sub>i</sub></sub> cover]]]

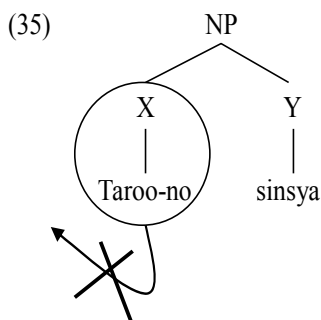
— Sportiche et al. (2014: 407)

- Japanese headed relatives also show the LBC effects.**

- (34) a. \*[John-ga [<sub>e<sub>i</sub></sub> sinsya]-o zessansiteiru] **Taroo<sub>i</sub>**  
 John-NOM new car-ACC praise Taro  
 ‘(lit.) Taro<sub>i</sub> whose<sub>i</sub> John praises e<sub>i</sub>’s new car’

- b. \*[John-ga [<sub>e<sub>i</sub></sub> sinsya]-o zessansiteita] **Taroo<sub>i</sub>**-wa moo betuno  
 John-NOM new car-ACC praised Taro-TOP already different  
 atarasii kuruma-no koonyuu-o kentoo-si-hajimete-iru.  
 new car purchase-ACC has started thinking of  
 ‘(lit.) Taro<sub>i</sub> whose<sub>i</sub> John praised e<sub>i</sub>’s new car has already started thinking of a purchase of a new different car.’

— Kitao (in press)



LBC-TYPE EXTRACTION

- (36) Under the no-movement theory (*pro*-based theory)  
 [John-ga [<sub>pro<sub>i</sub></sub> sinsya]-o zessansiteiru] Taroo<sub>i</sub>

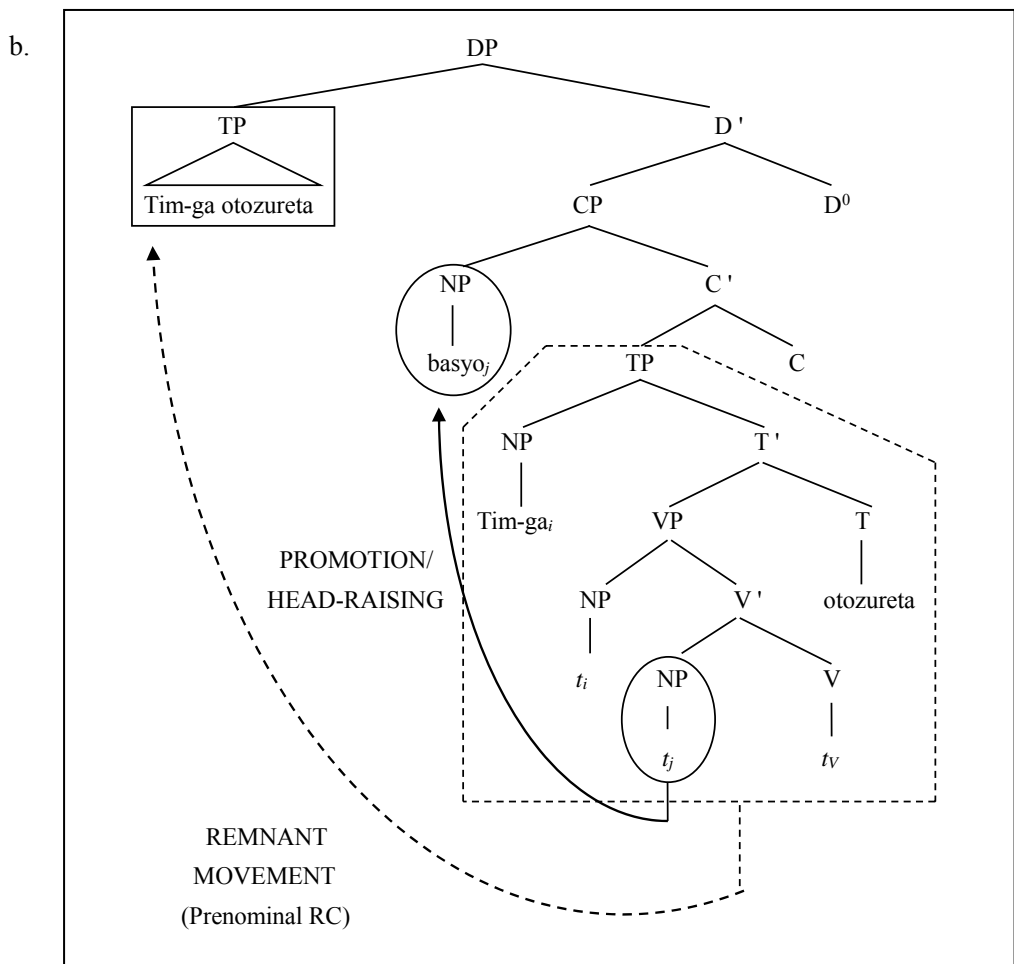
**The LBC extraction suggests the presence of syntactic movement in relativization in Japanese.**

3. Solution: Conflict between ‘Short-distance’ Relativization and ‘Long-distance’ Relativization

● ‘Short-distance’ relativization: Promotion/Head-raising  
 ‘Long-distance’ relativization: Matching (Operator mvt.) + (Null) Resumption

● ‘Short-distance’ relativization shows Reconstruction/Connectivity effects.  
 → Presence of Head-raising/promotion<sup>2</sup>

(37) a. [Tim-ga otozureta] basyo  
 Tim-NOM visited place  
 ‘the place that John visited’



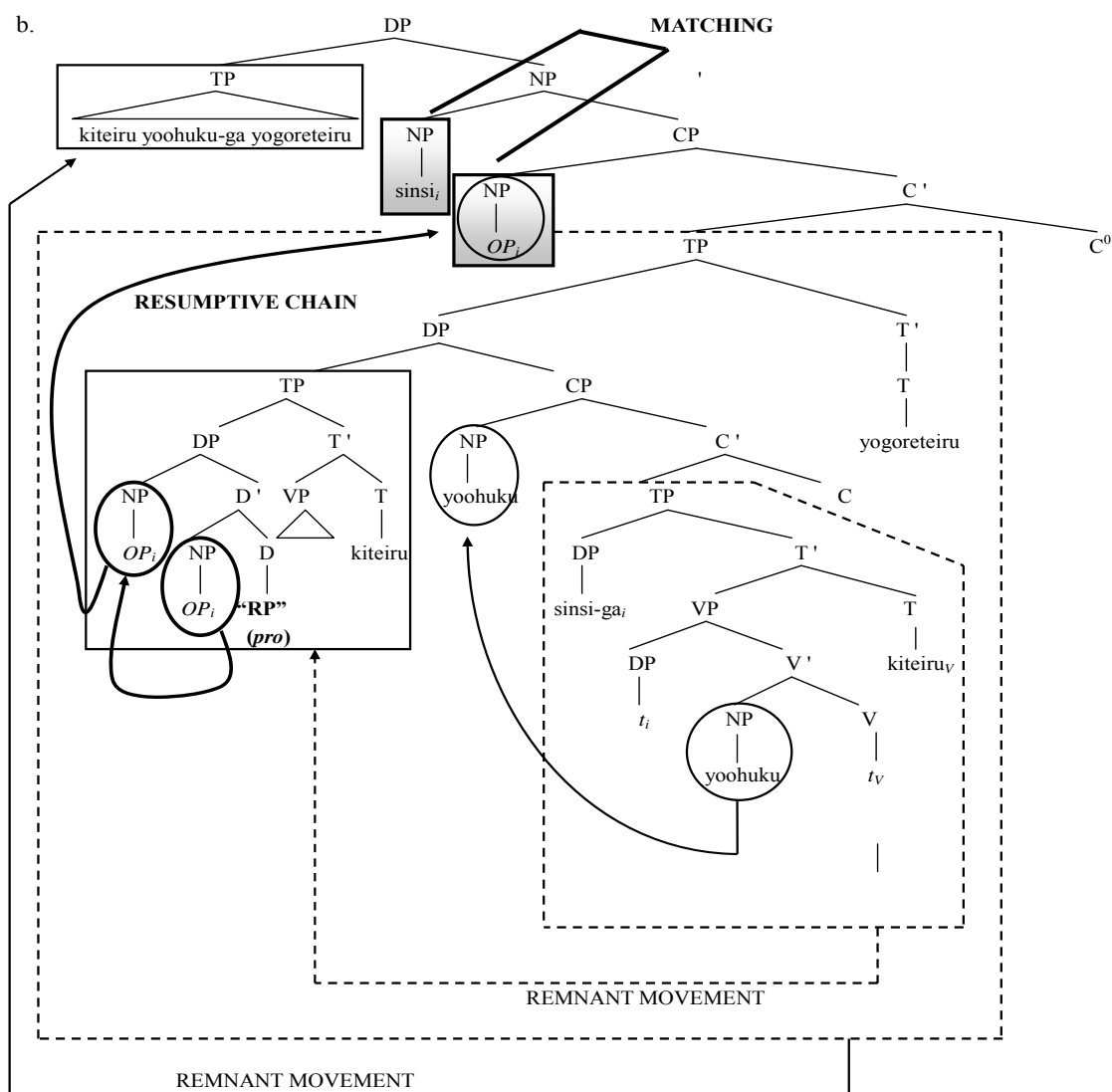
<sup>2</sup> Brame (1968), Stockwell et al. (1973), Schachter (1973), Vernaud (1974), Áfarli (1994), Kayne (1994), Bianchi (1999, 2000), Bhatt (2002), de Vries (2002), Aoun and Li (2003), Cecchetto (2006), Donati and Cecchetto (2011), Cecchetto and Donati (2015), etc.

● ‘Long-distance’ relativization shows No reconstruction/Connectivity effects.

→ **Lack of Head-raising/promotion**

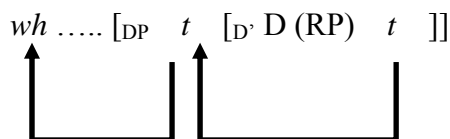
→ **Matching<sup>3</sup> (Operator movement) + Resumption**

(38) a. [[[  $e_i$   $e_j$  kiteiru] yoohuku<sub>j</sub>]-ga yogoreteiru]  $sinsi_i$  (= 1a)  
 wearing suit-NOM dirty gentleman  
 ‘(lit.) a gentleman who the suit that (he) is wearing is dirty’



<sup>3</sup> Sauerland (1998, 2000, 2003), Fox (2002), Aoun and Li (2003), Cecchetto (2006), Hulse and Sauerland (2006), Cecchetto and Donati (2015), etc.

(39) The Resumptive-stranding Model (Boeckx 2003, Kitao 2011)



*stranding (subextraction)*

(40) [Irish]

a. \*An fear a phóg mé an bhean a phós \_ \_  
the man aL kissed I the woman aL married  
'the man that I kissed the woman that married'

b. An fear a bpóg mé an bhean a phós \_ é  
the man aN kissed I the woman aL married him  
'the man that I kissed the woman that married (him).'

— Sells (1984: 200-201)

→ The presence or absence of AGREEMENT plays a crucial role in extractability. When agreeing complementizers appear, the chain becomes sensitive to islands; but when non-agreeing complementizers appear, the chain becomes island-insensitive.

(41) \* [<sub>TP</sub> John<sub>i</sub> seems [<sub>TP</sub> t'<sub>i</sub> is [<sub>t<sub>i</sub></sub> clever]]]

(CH (John)) = {T<sub>seem</sub>\*, T<sub>is</sub>\*, Adj<sub>clever</sub>}

— Boeckx (2003: 13)

(42) The Principle of Unambiguous Chain (PUC)

Chains are unambiguous if they contain at most one strong occurrence (one EPP-checking site).  
— *op. cit.*, p. 13

(43) Boeckx's (2003) Resumptive-stranding Model

- a. Movement is potentially unbounded. This is led by the Principle of Unambiguous Chain (PUC). The PUC dictates that chains are unambiguous if they contain at most one strong occurrence (one EPP-checking site).
- b. On First Merge, resumptive pronouns form a constituent DP with their antecedent in resumptive relative clauses. Then the *wh*-complement of D is extracted from DP and a resumptive pronoun is stranded (subextraction).
- c. The emergence of islands is tied to the presence of AGREEMENT. Those chains that have agreeing complementizers are sensitive to islands, while those chains which have non-agreeing complementizers are island-insensitive.

- **This stranded resumptive pronoun gets island violations invalidated, making it possible to extract the operator of the relative head across a CNPC island.**  
(cf. Shlonsky 1992, Abe 2014, etc.)

Evidence

- **Lack of reconstruction/connectivity effects**

**(Anaphor licensing)**

- (44) \*Katie-wa [[[Paul]<sub>j</sub>-ga e<sub>i</sub> kaita] to iu] giron]-ga wakiokotteiru] [kare-zisin]<sub>j</sub>-no  
 -TOP -NOM drew that debate-NOM come out himself-GEN  
 e<sub>i</sub>]-o taisoo hosigatta. (= 3)  
 picture-ACC very wanted

‘(lit.) Katie really wanted [the picture of himself<sub>j</sub>]<sub>i</sub> that the claim/debate that Paul<sub>j</sub> drew e<sub>i</sub> has come out.  
 — Kitao (2017: 42)

- The example (45), where anaphor does not occur in the relative head, is deemed grammatical, even though the gap of the relative head is in the complex NP.

- (45) Katie<sub>i</sub>-wa [[[kanojo<sub>i</sub>-no senzo-ga e<sub>j</sub> kaita] to iu] giron]-ga wakiokotteiru]  
 -TOP she-GEN ancestor-NOM drew that debate-NOM come out  
 [Einstein-no e<sub>i</sub>]-o taisoo hosigatta.  
 Einstein-GEN picture-ACC very wanted

‘(lit.) Katie<sub>i</sub> really wanted the picture of Einstein<sub>j</sub> that the claim/debate that her<sub>i</sub> ancestor drew e<sub>j</sub> has come out.  
 — *op. cit.*, p. 43

**(Idiom chunk)**

- (46) \*Raibaru-wa [[[[[John-ga mizukara e<sub>i</sub> hotta] to iu] uwasa]-ga tatteiru]  
 Rival-TOP -NOM himself dug that rumor-NOM be spread  
 boketu<sub>i</sub>]-o totemo yorokonda. (= 4)  
 grave-ACC very happy

Idiom: *boketu-o horu* ‘bring about a ruin’  
 NP V → This interpretation is not possible.

‘(lit.) The rival is very happy about the grave<sub>i</sub> that the rumor that John himself dug e<sub>i</sub> has been spreading out.

(The ruin that has a rumor that John himself brought about made his rival happy.)

— *op. cit.*, p. 42

- When the relative head NP is not an idiom chunk that needs to be linked to the verb in the relative clause, the sentence is deemed grammatical, as represented in (47).

- (47) ? Raibaru-wa [ [ [ [ [John-ga mizukara  $e_i$  okasita] to iu] uwasa]-ga tatteiru]  
 Rival-TOP -NOM himself made that rumor-NOM be spread  
 sippai<sub>i</sub>]-o totemo yorokonda.  
 mistake-ACC very happy  
 '(lit.) The rival is very happy about the mistake<sub>i</sub> that the rumor that John himself made  $e_i$  has  
 been spreading out. — *op. cit.*, p. 43

MATCHING, a semantic operation as in (48), relates the external relative head and the operator. An empty/null operator movement in the relative clause creates semantically an open  $\lambda$ -predicate. Since the relative head is not directly moved to the external head position under the matching analysis, relativization does not show reconstruction/connectivity effects. (Sauerland 1998, 2000, 2003, Hulsey and Sauerland 2006, etc.)

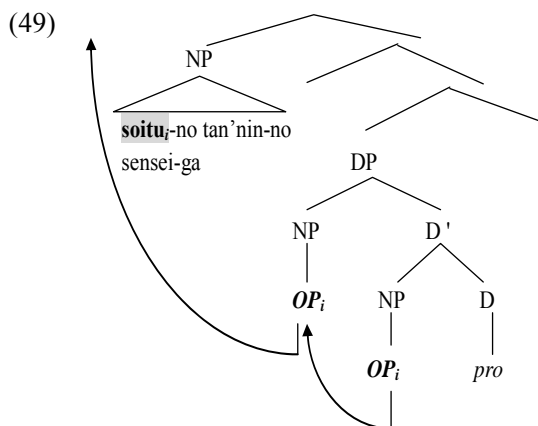
- (48) the picture of Einstein  $\lambda_x$  her ancestor drew  $t_x$

● WCO

- (48) ?? [ [ [ [ [Soitu<sub>i</sub>-no/kare<sub>i</sub>-no tan'nin-no sensei-ga  $e_i$  sagasiteita] to iu] sirase]-o  
 he-GEN homeroom teacher-NOM look for that notice-ACC  
 uketa] seito<sub>i</sub>]-wa sugu syokuin-situ-e hasitta.  
 received student-TOP immediately teachers' room-to dashed  
 '(lit.) the student<sub>i</sub> who(m) received the notice that his teacher was looking for  $e_i$  dashed to the  
 teachers' room.'

**'Long-distance' relativization also shows WCO effects.**

→ The resumptive-stranding model as in (38b) involves null operator movement, and hence this 'crossover' effects can be explained.



• Example (50), which does not involve a bound pronoun in the subject of the relative clause, is acceptable (contra 48).

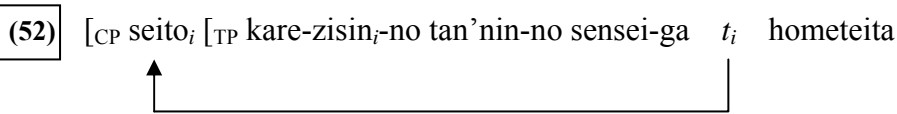
- (50) [[[[[Suugaku-no sensei-ga  $e_i$  sagasiteita] to iu] sirase]-o uketa]  
 math teacher-NOM look for that notice-ACC received  
**seito<sub>i</sub>**]-wa sugu syokuin-situ-e hasitta.  
 student-TOP immediately teachers' room-to dashed  
 '(lit.) the student<sub>i</sub> who(m) received the notice that the math teacher was looking for  $e_i$  dashed to the teachers' room.'

#### 4. Possible Questions and Their Solutions: The Unavailability of A-scrambling in Relativization in Japanese

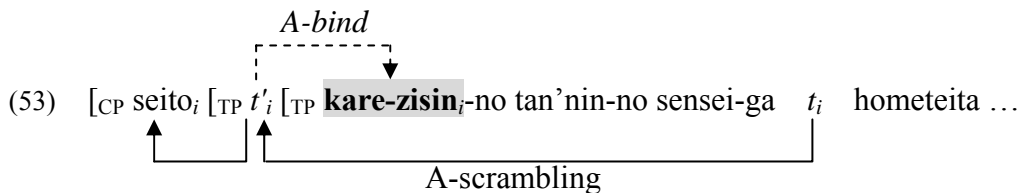
● 'Short-distance' relativization involves promotion/head-raising, namely phrasal movement of a relative head.  
 → However, data reveal that A-scrambling does not occur in the movement of the relative head.

#### (Anaphor Licensing)

- (51) \* [[**Kare-zisin<sub>i</sub>**-no tan'nin-no sensei-ga  $e_i$  hometeita] **seito<sub>i</sub>**]-wa  
 himself-GEN homeroom teacher-NOM praised-ASP student-TOP  
 zenkoku sakibun konkuuru-de syoo-o totta.  
 national composition contest-in award-ACC got  
 '(lit.) The student<sub>i</sub> that himself<sub>i</sub>'s homeroom teacher praised got a prize in the national composition contest.'  
 — Kitao (2011: 329)



#### A-scrambling




→ The ungrammaticality of (51) indicates that this derivation is NOT possible.

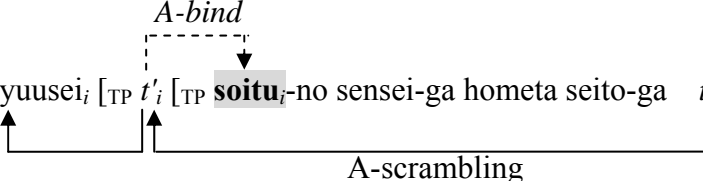


**(WCO)**

- (54) ?\* [[**Soitu**<sub>*i*</sub>-no sensei-ga ***e<sub>j</sub>*** hometa] seito<sub>*j*</sub>-ga *e<sub>i</sub>* akogareteiru] **jookyuusei**<sub>*i*</sub> (= 9)  
 he-GEN teacher-NOM praised student-NOM admire senior student  
 ‘(lit.) the senior student<sub>*i*</sub> who(m) the student<sub>*j*</sub> who(m) his<sub>*i*</sub> teacher praised *e<sub>j</sub>* admires *e<sub>i</sub>*’  
 — Kitao (2017: 33)

- (55) [CP jookyuusei<sub>*i*</sub> [TP **soitu**<sub>*i*</sub>-no sensei-ga hometa seito-ga *t<sub>i</sub>* akogareteiru...  


A-scrambling

- (56) [CP jookyuusei<sub>*i*</sub> [TP *t<sub>i</sub>*' [TP **soitu**<sub>*i*</sub>-no sensei-ga hometa seito-ga *t<sub>i</sub>* akogareteiru ...  


→ The ungrammaticality of (54) indicates that this derivation is NOT possible.

**(Parasitic gaps)**

- (57) \*[[[Ryoosin-ga *e<sub>i</sub>* sikaru-mae-ni] **kare-zisin**<sub>*i*</sub>-no tan'nin-no sensei-ga *t<sub>i</sub>*  
 parents-NOM scold-before himself-GEN homeroom teacher-NOM  
 sikatta] seito<sub>*i*</sub>]-wa mattaku hansei-site-inai.  
 scolded student-TOP not at all be sorry for-NEG  
 ‘(lit.) The student<sub>*i*</sub> [(who) [himself<sub>*i*</sub>'s homeroom teacher *t<sub>i</sub>* scolded [before (his) parents *e<sub>i</sub>*  
 scolded]]] is not sorry (for what he did) at all.’  
 — Kitao (2016: 105)

**A-position is not available for parasitic gap licensing.**

- (58) a. \*John<sub>*i*</sub> was killed *t<sub>i</sub>* by a tree falling on *e<sub>i</sub>*. (= 16a, b)  
 b. \*Mary<sub>*i*</sub> seemed *t<sub>i</sub>* to disapprove of John's talking to *e<sub>i</sub>*. — Engdahl (1983: 13)
- (59) \*Which house<sub>*i*</sub> was sold *t<sub>i</sub>* [before we could demolish *e<sub>i</sub>*]? — Legate (2003: 511)

(60) A parasitic gap is licensed by a variable that does not c-command it.

— Chomsky (1982: 40)

(61) [<sub>CP</sub> seito<sub>i</sub> [<sub>TP</sub> **kare-zisin<sub>i</sub>**-no tan'nin-no sensei-ga *t<sub>i</sub>* sikatta ...



• Evidence: Take the anaphor out of the example (57), then it yields a grammatical outcome.

(62) [[[Ryoosin-ga *e<sub>i</sub>* sikaru-mae-ni] tan'nin-no sensei-ga *t<sub>i</sub>* sikatta] seito<sub>i</sub>-wa  
 parents-NOM scold-before homeroom teacher-NOM scolded student-TOP  
 mattaku hansei-site-inai.  
 not at all be sorry for-NEG  
 ‘(lit.) The student<sub>i</sub> [(who) [(his) homeroom teacher *t<sub>i</sub>* scolded [before (his) parents *e<sub>i</sub>* scolded]]]  
 is not sorry (for what he did) at all.’

— Kitao (2016: 105)

● Relativization is special?

(63) ? [<sub>TP</sub> **(Sono) Seito-o<sub>i</sub>** [<sub>TP</sub> **kare-zisin<sub>i</sub>**-no tan'nin-no sensei-ga *t<sub>i</sub>* hometeita/hometa]].  
 (the) student-ACC himself-GEN homeroom teacher-NOM was praising/praised  
 ‘(lit.) the student<sub>i</sub>, himself<sub>i</sub>’s homeroom teacher was praising/praised.

— Kitao (2011: 330)

(64) a. ?\* Soitu<sub>i</sub>-no hahaoya-ga dare<sub>i</sub>-o aisiteiru no.  
 he/she-GEN mother-NOM who-ACC love Q  
 ‘Who<sub>i</sub> does his<sub>i</sub>/her<sub>i</sub> mother love?’

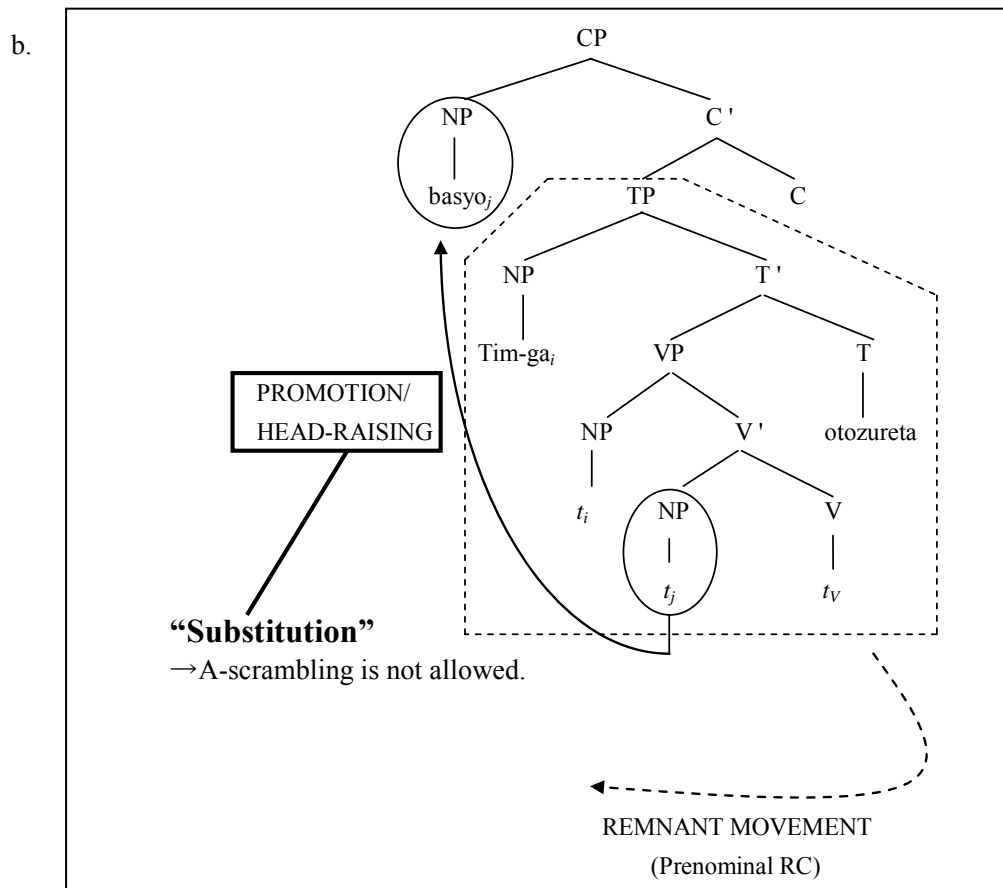
— Yoshimura (1992: 14)

b. ? **Dare-o<sub>i</sub>** **soitu<sub>i</sub>**-no hahaoya-ga *t<sub>i</sub>* aisiteiru no?  
 who-ACC he/she-GEN mother-NOM love Q  
 ‘Who<sub>i</sub> does his<sub>i</sub>/her<sub>i</sub> mother love?’

— Saito (1992: 73)

● ‘Short-distance’ relativization in Japanese

- (65) a. [Tim-ga otozureta] basyo  
 Tim-NOM visited place  
 ‘the place that John visited’



● ‘Long-distance’ relativization in Japanese

- (66) a. [[[ e<sub>i</sub> e<sub>j</sub> kiteiru] yoohuku<sub>j</sub>]-ga yogoreteiru] **sinsi<sub>i</sub>** (= 1a)  
 wearing suit-NOM dirty gentleman  
 ‘(lit.) a gentleman who the suit that (he) is wearing is dirty’



## Improper movement

### (69) **Principle of Unambiguous Binding (PUB)**

(a) A variable that is  $\alpha$ -bound must be  $\beta$ -free in the domain of the head of its chain (where  $\alpha$  and  $\beta$  refer to different types of positions).

— Müller and Sternefeld (1993: 461)

(b) A'-movement to a certain type to position (say,  $\alpha$ ) must not be followed by movement to another type of position (say,  $\beta$ ); otherwise, the initial variable will be bound ambiguously (i.e., from two different positions simultaneously) and hence will violate the PUB.

— Müller and Sternefeld (1996: 496)

## 5. Conclusion

### (70) Relativization in Japanese

• ‘Short-distance’ relativization: Promotion/Head-raising

• ‘Long-distance’ relativization: Matching (Operator mvt.) + (Null) Resumption

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LDD 2018 (October 4, 2018)  
at Humboldt-Universität zu Berlin

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