

Radical Reconstruction and the First-Position Effects

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1. Introduction: Radical Reconstruction

- (1) a. $[_{TP} \text{John-ga } [_{CP} [_{TP} \text{dare-ga } \text{sono hon -o } \text{katta}] \text{ ka}] \text{ siritagatteiru}]$ (koto)
-NOM who-NOM that book-ACC bought Q want-to-know fact
'[John wants to know [Q [who bought that book]]]'
- b. $*[_{TP} \text{Dare-ga } [_{CP} [_{TP} \text{John-ga } \text{sono hon -o } \text{katta}] \text{ ka}] \text{ siritagatteiru}]$ (koto)
-NOM -NOM that book-ACC bought Q want-to-know fact
'[Who wants to know [Q [John bought that book]]]' (Harada 1972)
- (2) A Wh-phrase must be contained within the CP where it takes scope.
- (3) a. $[_{CP} \text{Who}_i [_{TP} \text{t}_i \text{ asked whom to find out } [_{CP} \text{what}_j [_{TP} \text{Bill bought } \text{t}_j]]]]]$
- b. $[_{CP} \text{Who}_i [_{TP} \text{t}_i \text{ wonders } [_{CP} [\text{which picture of whom}]_j [_{TP} \text{Bill saw } \text{t}_j]]]]]$
(van Riemsdijk and Williams 1981)
- c. $??[_{CP} [\text{Which picture of whom}]_j \text{ does } [_{TP} \text{Bill wonder } [_{CP} \text{who}_i [_{TP} \text{t}_i \text{ saw } \text{t}_j]]]]]$
- (4) a. $[_{TP} \text{John-ga } [_{CP} [_{TP} \text{Mary-ga } \text{dono hon -o } \text{yonda}] \text{ ka}] \text{ siritagatteiru}]$ (koto)
-NOM -NOM which book-ACC read Q want-to-know fact
'[John wants to know [Q [Mary read which book]]]'
- b. $?[_{TP} \text{Dono hon -o}_i [_{John-ga } [_{CP} [_{TP} \text{Mary-ga } \text{t}_i \text{ yonda}] \text{ ka}] \text{ siritagatteiru}]]$ (koto)
which book-ACC -NOM -NOM read Q want-to-know fact
'[Which book_i, John wants to know [Q [Mary read t_i]]]'
- (5) a. $[_{TP} \text{John-ga } [_{CP} [_{TP} \text{minna-ga } [_{CP} \text{Mary-ga } \text{dono hon -o } \text{yonda to}] \text{ omotteiru}] \text{ ka}] \text{ siritagatteiru}]$ (koto)
-NOM all -NOM -NOM which book-ACC read that
think Q want-to-know fact
'[John wants to know [Q [everyone thinks [that Mary read which book]]]]'
- b. $??[_{TP} [_{CP} \text{Mary-ga } \text{dono hon -o } \text{yonda to}]_i [_{John-ga } [_{CP} [_{TP} \text{minna-ga } \text{t}_i \text{ omotteiru}] \text{ ka}] \text{ siritagatteiru}]]]$ (koto)
-NOM which book-ACC read that -NOM all -NOM
think Q want-to-know fact
'[[That Mary read which book]_i, John wants to know [Q [everyone thinks t_i]]]'

- (6) a. Scrambling can be literally undone in LF. (Saito 1989)
 b. There is no radical reconstruction. (4b) is focus movement. (Miyagawa 2006)
- (7) The scope of radical reconstruction
 a. Negative polarity items
 b. Topic-Focus
 c. Quantifiers
- (8) An analysis of the first-constituent effects
 a. Discourse-related information
 b. Quantifier scope
- (9) Speculations on the functional motivation for scrambling and the Japanese left periphery

2. Radical Reconstruction of Negative Polarity Items

● 'Wh-mo' as a negative polarity item

- (10) a. Dare-mo soko-ni ik-ana-katta
 who -MO there-to go-not-past
 'No one went there'
- b. Taroo-ga doko -ni-mo ik-ana-katta (koto)
 -NOM where-to-MO go-not-past fact
 'Taroo went nowhere' (Taroo did not go anywhere)
- (11) a. Nani-mo Tookyoo-kara todok-ana-katta
 what-MO -from arrive-not-past
 'Nothing arrived from Tokyo'
- b. Nimotu-ga doko -kara-mo todok-ana-katta
 luggage-NOM where-from-MO arrive-not-past
 'Luggage did not arrive from anywhere'
- (12) *Nani-mo Tookyoo-kara todoi-ta
 what-MO -from arrive-past

● The distribution of 'Wh-mo'

- (13) a. John did not see anyone
 b. *Anyone did not see John (vs. (10a), (11a))
- (14) a. *Dare-mo [_{CP} Taroo-ga soko-ni ik-ana-katta to] Ziroo-ni it -ta (koto)
 who -MO -NOM there-to go-not-past that -to say-past fact

- b. *Dare-mo [CP nimotu -ga Tookyoo-kara todok-ana-katta to] Ziroo-ni it -ta
 -MO luggage-NOM -from arrive-not-past that -to say-past
 (koto)
 fact

(15) ‘Wh-mo’ must be a constituent of a negative sentence.

- (16) a. Hanako-ga [CP Taroo-ga doko -ni-mo ik-ana-katta to] Ziroo-ni itta (koto)
 -NOM -NOM where-to-MO go-not-past that -to said fact
 ‘Hanako said to Ziroo that Taroo did not go anywhere’

- b. ?*Hanako-ga [CP Taroo-ga doko -ni-mo it -ta to] Ziroo-ni iw -ana-katta (koto)
 -NOM -NOM where-to-MO go-past that -to say-not-past fact
 ‘Hanako did not say to Ziroo that Taroo went anywhere’

- (17) a. Hanako-ga [CP nimotu -ga doko -kara -mo todok-ana-katta to] Ziroo-ni
 -NOM luggage-NOM where-from-MO arrive-not-past that -to
 it -ta (koto)
 say-past fact
 ‘Hanako said to Ziroo that luggage did not arrive from anywhere’

- b. ?*Hanako-ga [CP nimotu -ga doko -kara -mo todoi-ta to] Ziroo-ni
 -NOM luggage-NOM where-from-MO arrive-past that -to
 iw -ana-katta (koto)
 say-not-past fact
 ‘Hanako did not say to Ziroo that luggage arrived from anywhere’

(18) John did not say that Mary saw anyone

- (19) a. Taroo-ga doko -ni-mo ik-ana-katta (koto)
 -NOM where-to-MO go-not-past fact
 ‘Taroo did not go anywherehere’

- b. Doko -ni-mo_i Taroo-ga \bar{t}_i ik-ana-katta (koto)
 where-to-MO -NOM go-not-past fact

● Radical reconstruction of negative polarity items

(Lee 1994, Sohn 1994, Tanaka 1997, Saito 2005)

- (20) a. [TP Doko -ni-mo_i [Hanako-ga [CP Taroo-ga \bar{t}_i ik-ana-katta to] Ziroo-ni it -ta]]
 where-to-MO -NOM -NOM go-not-past that -to say-past
 (koto)
 fact
 ‘Hanako said to Ziroo that Taroo did not go anywhere’

- b. [TP Doko -kara -mo_i [Hanako-ga [CP nimotu -ga t_i todok-ana-katta to]
 where-from-MO -NOM luggage-NOM arrive-not-past that
 Ziroo-ni it -ta]] (koto)
 -to say-past fact
 ‘Hanako said to Ziroo that luggage did not arrive from anywhere’

● Argument ellipsis and indefinites (cf. Soo-Won Kim 1999, Oku 1998, Shinohara 2006)

- (21) A. Nani-ka tabemashita ka
 what-KA ate Q
 ‘Did you eat something’
- B. Iie, (nani -mo) tabemasen desita
 no what-MO eat-not COP-Past
 ‘No, I did not (eat anything)’

- (22) A. Nani-mo tabemasen desita ka
 what-MO eat-not COP-Past Q
 ‘Haven’t you eaten anything’

- B. Iie, (nani -ka) tabemasita
 no what-KA ate
 ‘Yes, I have (eaten something)’

- (23) *It is anything that John did not eat
 (John did not eat anything)

- (24) a. Radical reconstruction is observed with long-distance scrambling.
 b. Phrases that are not focused are subject to long-distance scrambling.

3. The First-Position Effects

3.1. Exhaustive Listing Focus and Thematic Topics

● Exhaustive listing interpretation of sentence-initial nominative phrase
 (Kuno 1973, Heycock 1993)

- (25) a. Taroo-ga atama-ga ii
 -NOM head -NOM good
 ‘It is Taroo who is smart’
- b. Taroo-ga kooen-o hasitta
 -NOM park -ACC ran
 ‘Taroo ran in the park’

- (26) a. Saru -ga kasikoi
 monkey-NOM smart
 ‘It is monkeys that are smart’
- b. Nihon-ga saru -ga kasikoi
 Japan -NOM monkey-NOM smart
 ‘It is Japan where monkeys are smart’
- (27) Taroo-wa [Hanako-ga atama-ga ii to] omotteiru
 -TOP -NOM head -NOM good that think
 ‘Taroo thinks that Hanako is smart’
- (28) When the matrix clause has an individual-level predicate, the sentence-initial nominative phrase receives ‘exhaustive listing’ interpretation.

● The interpretation of topic as the theme of the sentence (Kuno 1973, Heycock 2006)

- (29) Taroo-wa kono hon -o yonda
 -TOP this book-ACC read
 A. ‘Speaking of Taroo, he read this book’ (thematic *wa*)
 B. ‘Taroo read this book, but I don’t know about the other people’ (contrastive *wa*)
- (30) a. Taroo-ga kono hon -wa yonda
 -NOM this book-TOP read
 ‘Taroo read this book, but I don’t know about the other books’ (contrastive *wa*)
- b. Kono hon -wa_i Taroo-ga e_i yonda
 this book-TOP -NOM read
 A. ‘Speaking of this book, Taroo read it’ (thematic *wa*)
 B. ‘Taroo read this book, but I don’t know about the other books’ (contrastive *wa*)
- (31) Only the sentence-initial *wa*-phrase can be interpreted as the theme of the sentence.
- (32) Kono hon -o_i Taroo-wa t_i yonda
 this book-ACC -TOP read
 A. ‘Speaking of Taroo, he read this book’ (thematic *wa*)
 B. ‘Taroo read this book, but I don’t know about the other people’ (contrastive *wa*)
- (33) a. Taroo-wa soko-e -wa itta
 -TOP there-to-TOP went
 A. ‘Speaking of Taroo, he went there, but I don’t know about the other places’
 (*Taroo*: thematic, *soko-e*: contrastive)
 B. ‘Taroo went there, but I don’t know about the other people and the other places’
 (*Taroo*: contrastive, *soko-e*: contrastive)

- b. Soko-e -wa_i Taroo-wa *t_i* itta (See Saito 1985 on PP-topicalization.)
 there-to-TOP -TOP went
 A. ‘Speaking of Taroo, he went there, but I don’t know about the other places’
 (*Taroo*: thematic, *soko-e*: contrastive)
 B. ‘Taroo went there, but I don’t know about the other people and the other places’
 (*Taroo*: contrastive, *soko-e*: contrastive)
 C. ‘Speaking of that place, Taroo went there, but I don’t know about the other people’
 (*Taroo*: contrastive, *soko-e*: thematic)
 ?D. ‘Speaking of that place, speaking of Taroo, he went there’
 (*Taroo*: thematic, *soko-e*: thematic)

- (34) a. A scrambled phrase may, but need not, be construed as sentence-initial.
 b. Radical reconstruction applies optionally to clause-internally scrambled phrases.
 (See Saito 2005 for the precise mechanism.)

3.2. The Relative Scope Relation of Subject and Negation

● Miyagawa’s (2001, 2003) core data

- (35) a. Zen’in-ga sono tesuto-o uke -na -katta (yo /to omo -u)
 all -NOM that test -ACC take-Neg-Past Part that think-Pres
 ‘All did not take that exam’ (All > Not, *Not > All)
 b. Sono tesuto-o_i zen’in-ga *t_i* uke -na -katta (yo /to omo -u)
 that test -ACC all -NOM take-Neg-Past Part that think-Pres
 ‘That exam, all did not take’ (All > Not, Not > All)
- (36) Syukudai -o_i zenn’in-ga [_{CP} sensei -ga *t_i* das -u to] omow-ana -katta (yo)
 homework-ACC all -NOM teacher-NOM assign-Pres that think -Neg-Past Part
 ‘Homework, all did not think that the teacher will assign’
 All > Not, *Not > All
- (37) specific quantifiers, verb forms, and sentence endings
- (38) Zen’in-ga sono tesuto-o uke -na -katta-ra, raigetū mata tesuto-o su-ru
 all -NOM that test -ACC take-Neg-Past -if next month again test -ACC do-Pres
 ‘If all do not take the exam, (we will) have another exam next month’
 All > Not, Not > All (subjunctive?)
- (39) Zen’in-ga siken-o erab -ana -i to omo -u
 all -NOM exam-ACC choose-Neg-Pres that think-Pres
 ‘I think that all will not choose an exam (over a term paper)’
 All > Not, Not > All

- (40) a. The initial phrase of the sentence tends to take wide scope over negation.
 b. A scrambled phrase may, but need not, count as the initial phrase.
 c. A phrase scrambled long-distance does not count as the initial phrase.
 (Radical reconstruction is obligatory for long-distance scrambling. See Saito 2005 for more precise discussion.)

(41) The pattern in (40) is a familiar one.

● Anaphor binding (Mahajan 1990)

- (42) a. [TP Karera-ga [otagai -no sensei]-o hihansita] (koto)
 they -NOM each other-GEN teacher-ACC criticized fact
 ‘They criticized [each other’s teachers]’
- b. ?*[TP [Otagai -no sensei]-ga karera-o hihansita] (koto)
 each other-GEN teacher-NOM they -ACC criticized fact
 ‘[Each other’s teachers] criticized them’
- c. ?[TP Karera-o_i [[otagai -no sensei]-ga t_i hihansita]] (koto)
 they -ACC each other-GEN teacher-NOM criticized fact
 ‘Them_i, [each other’s teachers] criticized t_i’
- (43) a. *[TP [Otagai -no sensei]-ga [CP [TP Tanaka-ga karera-o hihansita]
 each other-GEN teacher-NOM -NOM they -ACC criticized
 to] itta] (koto)
 that said fact
 ‘[Each other’s teachers] said that Tanaka criticized them’
- b. *[TP Karera-o_i [[otagai -no sensei]-ga [CP [TP Tanaka-ga t_i
 they -ACC each other-GEN teacher-NOM -NOM
 hihansita] to] itta]] (koto)
 criticized that said fact
 ‘Them_i, [each other’s teachers] said that Tanaka criticized t_i’

● Quantifier scope (Kuroda 1971, Tada 1993)

- (44) a. Dareka -ga daremo -o aisite iru
 someone-NOM everyone-ACC love
 ‘Someone loves everyone’ (□ > □)
- b. Daremo -o_i dareka -ga t_i aisite iru
 everyone-ACC someone-NOM love
 ‘Someone loves everyone’ (□ > □, □ > □)

- c. Dareka $-o_i$ daremo $-ga$ t_i aisite iru
 someone-ACC everyone-NOM love
 ‘Everyone loves someone’ ($\square > \square$, $\square > \square$)

- (45) a. Dareka $-ga$ [_{CP} Taroo- ga daremo $-o$ aisite iru to] itta (koto)
 someone-NOM -NOM everyone-ACC love that said fact
 ‘Someone said that Taroo loves everyone’ ($\square > \square$)

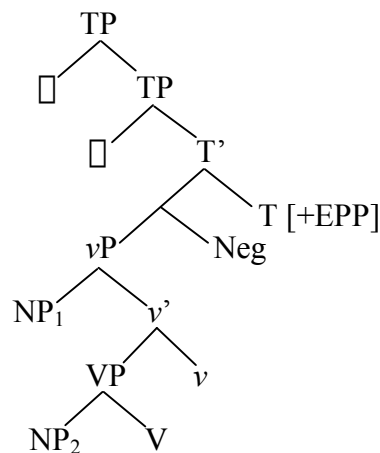
- b. Daremo $-o_i$ dareka $-ga$ [_{CP} [_{TP} Taroo- ga t_i aisiteiru] to] itta (koto)
 everyone-ACC someone-NOM -NOM love that said fact
 ‘Someone said that Taroo loves everyone’ ($\square > \square$)

- (46) Where in the structure is the ‘initial phrase’?

4. The Japanese Left Periphery and Scrambling

4.1. The Position of the “First Constituent”

- (47) Miyagawa 2001, 2003



‘Not > All’ → NP₂ moves to \square and NP₁ stays in vP Spec. The “first position” is TP spec.

- Evidence that the landing site of the object in (35b) is not TP Spec.

- (48) [_{TP} Zibunzisin- o_i [_{TP} Taroo- ga t_i semeta]] (koto)
 self -ACC -NOM blamed fact

‘Himself_i, Taro blamed t_i ’

- (49) a. Zen’in- ga zibun-zisin- ni toohyoosi- na - $katta$ (to omo - u)
 all -NOM self -self -DAT vote -Neg-Past that think-Pres
 ‘Everyone did not vote for herself/himself’
 (All > Not, *Not > All)

- b. Zibun-zisin-ni_i zen'in-ga t_i toohyoosi-na -katta (to omo -u)
 self -self -DAT all -NOM vote -Neg-Past that think-Pres
 'For herself/himself, everyone did not vote'
 (All > Not, Not > All)

- (50) a. Zen'in-ga zibun-zisin-o seme -na -katta (to omo -u)
 all -NOM self -self -ACC blame-Neg-Past that think-Pres
 'Everyone did not blame herself/himself'
 (All > Not, *Not > All)

- b. Zibun-zisin-o_i zen'in-ga t_i seme -na -katta (to omo -u)
 self -self -ACC all -NOM blame-Neg-Past that think-Pres
 'Herself/himself, everyone did not blame'
 (All > Not, Not > All)

- (51) Hanako-ga Taroo-o zibun-no ie -de sikat -ta
 -NOM -ACC self -GEN house-at scold-Past
 'Hanako scolded Taroo at her house'

- (52) Taroo-o_i Hanako-ga t_i zibun-no ie -de sikat -ta (See Saito 2006 for details.)
 -ACC -NOM self -GEN house-at scold-Past
 'Hanako scolded Taroo at her house'

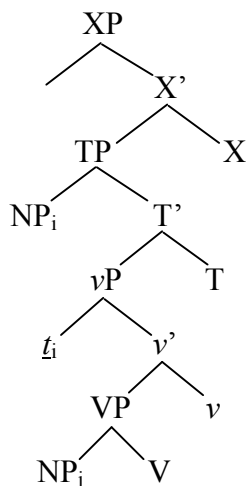
● Suggestive evidence that the "first position" is higher than TP Spec in (35a).

- (53) Everyone had not left. There were still some people talking and drinking.

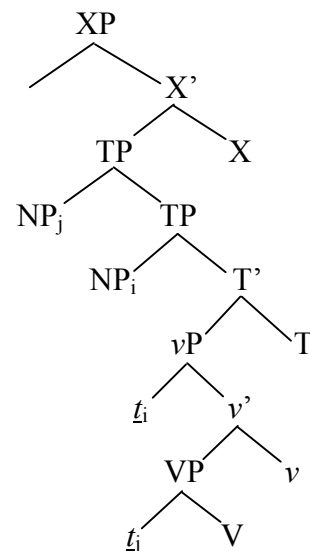
● A functional head above TP

- (54) a. The first constituent is in a position higher than TP Spec.
 b. A phrase scrambled to the sentence-initial position may but need not be construed as the first constituent. (Radical reconstruction)

- (55) a.



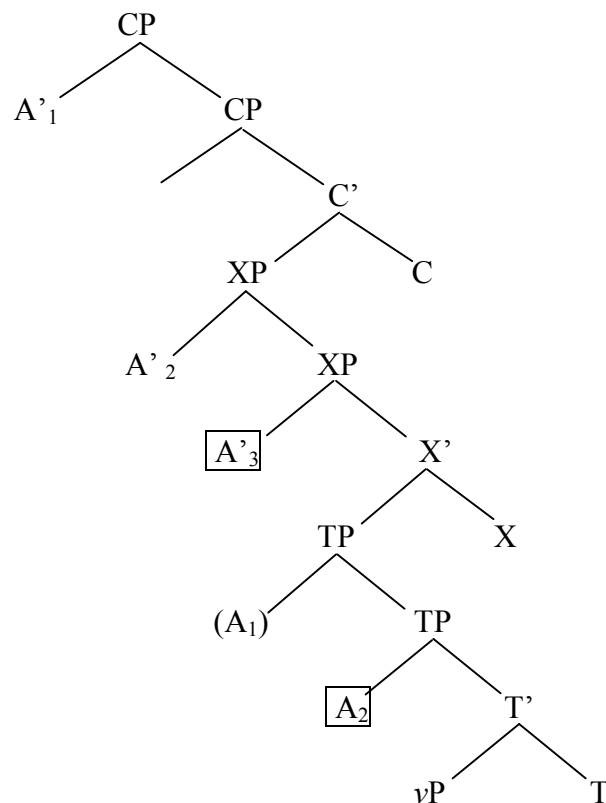
- b.



- (56) In (55b), if radical reconstruction applies, the subject moves to XP Spec. Otherwise, the scrambled object does.
- (57) a. Negation takes sentential scope. The phrase in XP Spec takes scope above TP.
 b. A nominative phrase in XP Spec receives exhaustive listing interpretation if the predicate is individual level.
 c. A *wa*-phrase in XP Spec can be interpreted as a thematic topic. (Contrastive interpretation is always possible.)

4.2. The Interpretation of Scrambling Chains

(58)



- (59) a. Subject-Neg scope interaction
 b. Exhaustive listing nominative
- (60) a. A-binding
 b. Quantifier scope (See Saito 2003, 2005 for the details.)
- (61) a. [TP □ [..... □]]
 {cat, ~~arg~~, phon} {cat, arg, ~~phon~~}
- b. [TP □ [CP □ [TP □]]]
 {cat, phon} {cat, ~~arg~~, phon} {cat, arg, ~~phon~~}
- (62) Condition (A) is an anywhere condition. (Belletti and Rizzi 1988)

(63) **Thematic topics**

- (64) a. Saru -ga kasikoi
 monkey-NOM smart
 ‘It is monkeys that are smart’
- b. Nihon-ga saru -ga kasikoi
 Japan -NOM monkey-NOM smart
 ‘It is Japan where monkeys are smart’
- c. Nihon-ga saru -wa kasikoi
 Japan -NOM monkey-TOP smart
 ‘It is Japan that I know monkeys are smart but don’t know about humans’
- (65) Exhaustive listing *ga*-phrase and thematic *wa*-phrase cannot be both in XP Spec.
- (66) Rizzi 1997: Force - (Topic)* - (Focus) - (Topic)* - Finite
- (67) Soko-e -wa_i Taroo-wa t_i kinoo itta (cf. (33d))
 there-to-TOP -TOP yesterday went
 ‘*Lit.* Speaking of that place, speaking of Taroo, he went there yesterday’
- (68) Soko-e -wa_i Taroo-wa [Hanako-ga t_i itta to] omotteiru
 there-to-TOP -TOP -NOM went that think
 ‘*Lit.* Speaking of that place, speaking of Taroo, he thinks that Hanako went there’
- (69) X allows multiple Specs when it hosts thematic topics.

5. Conclusion

- (70) Scrambling is “semantically vacuous,” but it affects scope and discourse interpretation because of the functional head X.
- (71) X does not induce any specific interpretation. The phrase in XP Spec is interpreted sometimes as the thematic topic, sometimes as the exhaustive listing focus, and sometimes as neither. (It always takes scope over negation.)
- (72) The verb in Celtic languages moves to a functional head between C and T.
 (McCloskey 2005, Roberts 2006)
- (73) There are focus and topic positions below C in Italian. An NP is interpreted as topic if it binds a clitic (CLLD), and as focus if it binds a variable. (Rizzi 1997)

- (74) Speculations:
- a. X attracts V in Celtic languages.
 - b. X requires Spec in Japanese and Italian.
 - c. X is optional and recursive in Italian.

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