Medial left-node raising in Japanese

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Right-node raising (RNR)

• Canonical right-node raising

  This tall and that short **student** are a couple. (from Shen (2015))

• Medial right-node raising

  Are you talking about a new or that ex-**boyfriend** you used to date? (from Chaves (2014))
In this paper, I'm going to show ...

• that there is a phenomenon that can be viewed as a mirror image of medial RNR and thus might be designated as medial left-node raising, and

• that the properties of this phenomenon are consistent with the predictions of the HPSG-based theory of non-constituent coordination proposed in Yatabe (2001, 2012)
Why this is significant

Medial right-node raising is often slightly awkward, and the following two views are both plausible.

- **A grammar-based view:** Medial right-node raising is grammatical. Its slight awkwardness comes from the degraded parallelism between conjuncts.

- **A performance-based view:** Medial right-node raising is a result of a performance error.

The grammar-based view predicts the existence of medial left-node raising, a prediction yet to be tested.
Left-node raising (LNR) in English?

We **went to** Paris yesterday and London today.

(Probably left-node raising, but hard to distinguish from gapping)
Left-node raising in Japanese

\[
\begin{array}{l}
[ [ \text{Omoidasu} \text{ ka}] \ [\text{omoi}] \text{dasanai} \text{ ka}] \text{ ga}\\
[ \text{recall-PRES or}] \ [ \text{recall-NEG-PRES or}] \text{ NOM}\\
\text{mondai} \text{ da.}\\
\text{problem cop}
\end{array}
\]

‘Whether you recall it or you don’t is the problem.’

\textbf{omoi} 'thought' + \textbf{das}- 'to exude'

= \textbf{omoidasas}- 'to recall'
Questionnaire 1A

- 16 respondents
- 3 experimental sentences, 29 fillers (for the purpose of this paper). Order of sentences randomized for each respondent.
- 4-point scale
  1: Perfect
  2: Slightly unnatural
  3: Considerably unnatural
  4: Impossible
A questionnaire result

"omoi-" is elided here

mondai da. <12, 3, 1, 0>
problem cop

"perfect"
"considerably unnatural"
"slightly unnatural"
"impossible"
A part of a compound is normally not elidable

Omoidashita?
recall-PAST
‘Have you recalled it?’
Iya, omoidasanai. <12, 2, 1, 1>
no recall-NEG-PRES
‘No, I don’t recall it.’

?? Iya, dasanai. <3, 3, 4, 6>
no ‘exude’-NEG-PRES
The mark in front of each sentence is determined by the average rating $M$ of the sentence, according to the following rule.

**No mark**, when $1 \leq M < 2$

?, when $2 \leq M < 2.5$

??, when $2.5 \leq M < 3$

?*, when $3 \leq M < 3.5$

*, when $3.5 \leq M \leq 4$

(Recall that 1 means "perfect", 2 means "slightly unnatural", 3 means "considerably unnatural", and 4 means "impossible")
Questionnaire 1B

- 19 respondents
- 6 experimental sentences, 37 fillers (for the purpose of this paper). Order of sentences randomized for each respondent.
- The same 4-point scale
- **atar-** 'to bump' + **chiras** 'to sprinkle' = **atarichiras**- 'to throw tantrums'
- **tabe-** 'to eat' + **kir-** 'to cut' = **tabekir**- 'to eat up'
Another example of LNR

The boldfaced string is elided here

[[[[Sô yû toki ni] atarichirasu
[[[[such occasion DAT] throw tantrums-PRES
ka] [chirasanai ka] de, zuibun
or] ['sprinkle'-NEG-PRES or]] INST considerably
inshô ga chigaimasu yo. <17, 0, 1, 1>
impression NOM differ-POL.PRES I tell you

‘The impression you leave will be considerably dif-
ferent, depending on whether you throw tantrums
on such occasions or you don’t, I tell you.’
Yet another example of LNR

[[[Dasareta tabemono o] tabekireru
[[serve-PASS-PAST food acc] eat up-can-PRES
ka] [kirenai ka] ga wakaremichi
or] [[cut’-can-NEG-PRES or]] nom crossroads
desu. <11, 6, 1, 1>
cop.pol The boldfaced string is elided here

‘Whether you can eat up the food that you’re served or you cannot is the deciding issue.’
Non-elidability of the first part of the compound in the second example

Atarichirashita no?
throw tantrums-PAST NML
‘Did you throw tantrums?’
Iya, atarichirasanakatta. <18, 1, 0, 0>
no throw tantrums-NEG-PAST
‘No, I didn’t throw tantrums.’
?? Iya, chirasanakatta. <2, 3, 12, 2>
no ‘sprinkle’-NEG-PAST
Non-elidability of the first part of the compound in the third example

Tabekireta no?
eat up-can-PAST NML
‘Were you able to eat it up?’
Iya, tabekirenakatta. <19, 0, 0, 0>
no eat up-can-NEG-PAST
‘No, I couldn’t eat it up’
?* Iya, kirenakatta. <0, 4, 11, 4>
no ‘cut’-can-NEG-PAST
Summary of questionnaires 1A and 1B

- Japanese allows left-node raising of part of a compound
If LNR is a mirror image of RNR, then ...

• Medial left-node raising must be possible. In other words, it must be possible for the left-node-raised string to be at a non-initial position within the initial conjunct. (Cf. a new _ or that ex-boyfriend you used to date)

• It must be impossible for the left-node-raised string to be missing from a non-initial position within a non-initial conjunct. (Cf. *that tall _ you used to date or a new boyfriend)
Questionnaire 2A

- 28 respondents

- 2 experimental sentences, 14 fillers (for the purpose of this paper). Order of sentences randomized for each respondent.

- The same 4-point scale

- **omoi** 'thought' + **das-** 'to exude' = **omoidas-** 'to recall'
The LNRed expression can be realized at a non-initial position in the initial conjunct

"omoi" is elided here

? [[Sukoshi wa omoidasu no ka],
[[at least a little recall-PRES NML or]
dasanai no ka], ga mondai
[‘exude’-NEG-PRES NML or]] NOM problem
da. <10, 10, 4, 4>
cop

‘Whether you recall it at least a little or you don’t is the problem.’
LNR is not possible from a non-initial position in the final conjunct

"omoi" is elided here

?? [ [Sukoshi mo omoidasanai no ka], [at all recall-NEG-PRES NML or] [sukoshi wa dasu no ka], ga [at least a little ‘exude’-PRES NML or] ] NOM mondai da. <8, 6, 6, 8> problem cop

‘Whether you don’t recall it at all or you do at least a little is the problem.’
The subtlety of the contrast was part of the prediction

• Medial left-node raising was expected to be slightly awkward, just like medial right-node raising.

• The example showing that the first part of the compound *omoidas*- is normally not elidable was in the "??" range, so the example of impossible left-node raising was predicted to be in the "??" range, too.
Questionnaire 2B

• 27 respondents

• 4 experimental sentences, 12 fillers (for the purpose of this paper). Order of sentences randomized for each respondent.

• The same 4-point scale

• atar- 'to bump' + chiras 'to sprinkle' = atarichiras- 'to throw tantrums'

• tabe- 'to eat' + kir- 'to cut' = tabekir- 'to eat up'
The second example of medial LNR

[[Sô yû toki ni] sukoshi wa
[[such occasion DAT] at least a little
atarìchirasu no ka], [chirasanai no throw tantrums-PRES NML or] ['sprinkle'-NEG-PRES NML ka] de, zuibun inshô ga chigaimasu or] ] INST considerably impression NOM differ-POL.PRES yo. <14, 7, 4, 2>
I tell you

‘The impression you leave would differ considerably, depending on whether you throw tantrums at least a little on such occasions or you don’t.’
The second example that shows that LNR is not possible from a non-initial position in the final conjunct.

?? [ [ [Sô yû toki ni] atari chirasu no
[ [ [such occasion DAT] throw tantrums-PRES NML
ka], [sukoshi mo chirasanaı no ka] ] de, or] [at all ‘sprinkle’-NEG-PRES NML or] ] INST
zuibun inshô ga chigaimasu yo. considerably impression NOM differ-POL.PRES I tell you
<4, 8, 12, 3>
‘The impression you leave would differ considerably, depending on whether you throw tantrums on such occasions or you don’t at all.’
The third example of medial LNR

? [ [ [Dasareta tabemono o] dônika kônika
[[serve-PASS-PAST food acc] somehow or other
tabe kireru ka] [kirenaì ka] ] ga
eat up-can-PRES or] [‘cut’-can-NEG-PRES or] ] NOM
wakaremichi desu. <4, 16, 5, 2>
crossroads COP.POL

‘Whether you can somehow or other eat up the food that you’re served or you cannot is the deciding issue.’
The third example that shows that LNR is not possible from a non-initial position in the final conjunct.

‘Whether you can eat up the food that you’re served or you cannot for the life of you is the deciding issue.’
Summary of Questionnaires 2A and 2B

• Medial left-node raising is possible. In other words, it is possible for the left-node-raised string to be at a non-initial position within the initial conjunct.

• It is impossible for the left-node-raised string to be missing from a non-initial position within a non-initial conjunct.
A linearization-based account

- Each node in a syntactic tree is associated with an order domain, which is a list of domain objects, which are essentially prosodic constituents that are semantically interpreted.

- Right-node raising and left-node raising take place in order domains. (Yatabe 2001, 2012)

- RNR and LNR come in 2 types: a phonological type, which is merely prosodic ellipsis, and a syntactic type, which involves merging of domain objects.
two domain objects merged
two domain objects merged

one string deleted
SYNSEM|CONT [SEMHEAD 1]

DOM 〈

PHON none

SYNSEM|CONT|EP

PHON 〈〈sō, yū〉,〈toki〉, ni〉, 〈sukoshi, wa〉, 〈〈atari, chirasu〉〉, no, ka〉

SYNSEM|CONT

PHON 〈none, 〈〈chirasanaï〉〉, no, ka〉

SYNSEM|CONT

SYNSEM|CONT [LTOP SEMHEAD 2 3]

DOM 〈

PHON 〈〈sō, yū〉,〈toki〉, ni〉, 〈sukoshi, wa〉, 〈〈atari, chirasu〉〉

SYNSEM|CONT|EP A

PHON no

SYNSEM|CONT|EP D

SYNSEM|CONT [LTOP SEMHEAD 4]

DOM 〈

PHON 〈〈sō, yū〉,〈toki〉, ni〉, 〈sukoshi, wa〉, 〈〈atari, chirasu〉〉

SYNSEM|CONT|EP E

PHON no

SYNSEM|CONT|EP G

DOM 〈

PHON 〈〈atari, chirasanaï〉〉

SYNSEM|CONT|EP F

PHON no

SYNSEM|CONT|EP G}
The persistence constraint

• Any ordering relation that holds between domain objects $\alpha$ and $\beta$ in one order domain must also hold between $\alpha$ and $\beta$ in all other order domains that $\alpha$ and $\beta$ are members of. (Kathol 1995)

• The generalized persistence constraint: (substitute "strings" for "domain objects" in the above)
Right-node raising and the persistence constraint

does this tall student
(and) that short student
→ This tall and that short student
(Blue>Black and Red>Black throughout)

and a new boyfriend
(or) that ex-boyfriend you used to date
→ a new or that ex-boyfriend you used to date
(Blue>Black, Red>Black, and Black>Green throughout)
Right-node raising and the persistence constraint (continued)

that tall boyfriend you used to date
(or) a new boyfriend

\[ \rightarrow \quad \text{*that tall you used to date or a new boyfriend} \]

(Black>Green at first, but Green>Black in the new structure)
Left-node raising and the persistence constraint

pre-LNR

sô yû toki ni suksoshi wa atari chirasu no ka

sô yû toki ni atari chirasanai no ka

↓

post-LNR

sô yû toki ni suksoshi wa atari chirasu no ka

chirasanai no ka

Blue>Green>Black>Red and Blue>Black>Gold throughout
Left-node raising and the persistence constraint (Continued)

pre-LNR

sô yû toki ni atarîchirasu no ka
sô yû toki ni sukoshi mo atarîchirasanai no ka

↓

post-LNR

*sô yû toki ni atarîchirasu no ka sukoshi mo chirasanai no ka

Green>Black at first but Black>Green in the new structure
Comparison with Categorial Grammar-based accounts

- Categorial Grammar-based account cannot capture the medial LNR facts.

- The linearization-based accounts can explain the semantic effects of RNR and LNR, pace Kubota and Levine (2015).
Semantic interpretation in the linearization-based account

• In most theories, larger and larger syntactic constituents are interpreted, on the basis of the meaning of smaller syntactic constituents.

• In contrast, in the theory of Yatabe (2001), larger and larger domain objects are interpreted, mainly on the basis of the meaning of smaller domain objects.

• Therefore, in the latter theory, when two or more domain objects are merged, the semantic interpretation is naturally affected.
Semantic interpretation in the standard theory
Semantic interpretation in the proposed theory
Comparison with SLASH-based accounts

- Meaning-preserving RNR = ellipsis and Meaning-changing RNR = movement?
- No.
- Carl Philip Emmanuel Bach secretly hid or donated every manuscript in his father's collection to the library. (Many of the former type remain lost, while the latter are well preserved.) (from Warstadt (2015))
Summary

• There is a phenomenon that can be viewed as a mirror image of medial RNR and thus might be designated as *medial left-node raising*.

• The properties of this phenomenon are mostly consistent with the predictions of the HPSG-based theory of non-constituent coordination proposed in Yatabe (2001, 2012).