Argument ellipsis and topicalization: a view from their interaction with \textit{wh}-dependencies

Teruyuki Mizuno

University of Connecticut
(teruyuki.mizuno@uconn.edu)

March 19-21, 2021 © PLC 45
Null arguments in East Asian languages

Productive use of null arguments in East Asian languages (e.g. JPN):

(1) \textit{John-ga \_ \_ mita.}
\textit{John-NOM saw}
\texttt{‘John saw (it / them / him / her / someone / something).’}

(2) \_ \textit{Bill-o \_ mita.}
\textit{Bill-ACC saw}
\texttt{‘(It / They / He / She / Someone) saw Bill.’}

Earliest analysis (Kuroda 1965): silent \textit{pro} underlies the null positions

(3) \textit{John-ga pro mita.}

(4) \textit{pro Bill-o mita.}
Sloppy identity in null arguments (Otani and Whitman 1991: 4):

    John-TOP self-GEN letter-ACC threw.out
    ‘John\textsubscript{1} threw out his\textsubscript{1} letter.’

b. Mary-mo ___ suteta.
    Mary-also ___ threw.out
    ‘Mary\textsubscript{2} also threw out (her\textsubscript{2} letter).’

Simply assuming a silent pronoun doesn’t predict sloppiness:

(6)  Mary-mo sore-o suteta.
    Mary-also it-ACC threw.out
    ‘Mary also threw it out.’ (‘it’ = John’s letter/*Mary’s letter)
Argument ellipsis (AE)

Possible approaches:
- V-stranding VP-ellipsis (Otani and Whitman 1991; a.o.)
- Rich semantics of pro (Hoji 1998; Tomioka 2003; a.o.)
- **Argument ellipsis** (Oku 1998; Kim 1999; Saito 2007; a.o.)

Argument ellipsis (AE)
- analyzes null arguments as involving ellipsis of NPs
- overcomes issues of VP-ellipsis/Rich pro approaches
- See Sakamoto (2017, 2018) for recent comprehensive discussion

Today I confine my attention to the AE analysis
Two views on ellipsis:

(7) PF-deletion (Takahashi 2008)
PF: Mary-also [self-gen letter] threw.out

(8) LF-copy (Oku 1998; Saito 2007; Sakamoto 2017, 2018; a.o.)
Overt: Mary-also threw.out

\[\text{Empty}\]

LF: Mary-also \([\text{self-GEN letter}]\) threw.out

\[\text{LF-copied}\]

See Sakamoto (2017, 2018) for detailed discussion
Central question: What is the hidden syntax behind AE?
- What syntactic properties does it show?
- Is the application of AE unbounded or syntactically constrained?

My answer: AE involves topicalization in its derivation
- Wh--phrases are intervenors to both in Japanese
- Elided arguments are analyzed as deleted topics
Outline of talk

1. Introduction
2. The *wh*-scope generalization for AE
3. Parallelism with topicalization
4. AE as topic deletion
5. Conclusion
The generalization for AE in Japanese

I first propose a novel generalization for AE:

\[(9) \quad \text{The } \textit{wh}-\text{scope generalization for Japanese AE:} \]

AE is banned if the ellipsis site is c-commanded by a \textit{wh}-phrase

Assumptions:

1. NOM \(>\) DAT \(>\) ACC (Hoji 1985; Takano 1998; a.o.)
2. AE is banned \(\Leftrightarrow\) the absence of sloppy reading
3. We throughout target DAT (for reasons to become clear later)

I illustrate (9) with five examples.
AE data 1

(10) *: $wh_1 ... [ ... self_1 ... ] ...$

a. \textit{Dono dansi}_1-ga [zibun_1-no hahaoya-ni] tegami-o watasita no?
which boy-nom self-gen mother-dat letter-acc gave Q
‘Which boy$_1$ gave a letter to his$_1$ mother?’

b. [\textit{Dono zyosi}-ga ____ tegami-o watasita ka] mo osiete.
which girl-nom letter-acc gave Q also tell
*‘Also tell me which girl$_2$ gave a letter (to her$_2$ mother) as well.’
AE data 2

(11)  \(\checkmark: \) NP

\(\text{a. }\) John\(_1\)-wa [zibun\(_1\)-no ha haoya-ni] nani-o watasita no?  
John-TOP self-GEN mother-DAT what-ACC gave Q  
‘What did John\(_1\) give to his\(_1\) mother?’

\(\text{b. }\) [Mary-ga ___ nani-o watasita ka] mo asiete.  
Mary-NOM what-ACC gave Q also tell  
Also tell me what Mary\(_2\) gave (to her\(_2\) mother), too.
(12)  * : NP₁ [CP wh ... [ ... self₁ ... ] ... ]

gave Q is.curious
‘Mary₁ is curious who gave her₁ son chocolate.’

is.curious
*‘Nancy₂, too, is curious who gave (her₂ son) chocolate.’
(13) √: NP₁ [CP [ ... self₁ ... ] ... wh ... ]

a.  John₁-wa [Taroo-ga [zibun₁-no musume-ni] nani-o
       John-top Taroo-nom self-gen daughter-dat what-acc
       watasita ka] kyoomigaaru.
       gave Q is.curious
       ‘John₁ is curious what Taroo gave his₁ daughter.’

b.  Bill₂-mo [Taroo-ga ___ nani-o watasita ka]
       Bill-also Taroo-nom what-acc gave Q
       kyoomigaaru.
       is.curious
       ‘Bill₂, too, is curious what Taroo gave (his₂ daughter).’
AE data 5

(14) *: wh₁ ... [CP [ ... self₁ ... ] ... wh ... ] ...

what-ACC gave Q is.curious Q
‘Which professor₁ is curious what Taroo gave his₁ daughter?’

gave Q is.curious Q also tell
*‘Also tell me which grad student₂ is curious what Taroo gave (his₂ daughter) as well.’
To take stock

<table>
<thead>
<tr>
<th></th>
<th>[ $wh_1$ ... [ ... self$_1$ ... ] ... ]</th>
<th>✓</th>
</tr>
</thead>
<tbody>
<tr>
<td>(10)</td>
<td>[ NP$_1$ ... [ ... self$_1$ ... ] ... $wh$ ... ]</td>
<td>✓</td>
</tr>
<tr>
<td>(11)</td>
<td>[ NP$_1$ [CP $wh$ ... [ ... self$_1$ ... ] ... ] ... ]</td>
<td>✓</td>
</tr>
<tr>
<td>(12)</td>
<td>[ NP$_1$ [CP [ ... self$_1$ ... ] ... $wh$ ... ] ... ]</td>
<td>✓</td>
</tr>
<tr>
<td>(13)</td>
<td>[ $wh_1$ ... [CP [ ... self$_1$ ... ] ... $wh$ ... ] ... ]</td>
<td>✓</td>
</tr>
<tr>
<td>(14)</td>
<td>[ NP$_1$ [CP [ ... self$_1$ ... ] ... $wh$ ... ] ... ]</td>
<td>✓</td>
</tr>
</tbody>
</table>
Question: Why is AE impossible in the scope of a *wh*-phrase?

- Higher *wh*-phrases seem to function as ‘intervenors’
- AE induces a syntactic/semantic dependency that could interact with *wh*-dependencies

What sort of dependency does AE involve?
Table of Contents

1. Introduction

2. The *wh*-scope generalization for AE

3. Parallelism with topicalization

4. AE as topic deletion

5. Conclusion
AE involves movement

Fujiwara (2019): AE involves movement in its derivation

(15) a. $\text{John}_1\text{-wa} \ [\text{kodomotati-ga} \ [\text{zibun}_1\text{-no kuruma-o}] \ \text{arau} \ \text{toki}]$
John-TOP children-NOM self-GEN car-ACC wash when
$\text{okozukai-o} \ \text{ageru}.$
allowance-ACC give
‘$\text{John}_1$ gives children an allowance when they wash his$_1$ car.’

b. $\text{Bill-wa} \ [\text{kodomotati-ga} \ \text{arau} \ \text{toki}] \ \text{okozukai-o}$
Bill-TOP children-NOM not.wash when allowance-ACC
$\text{agenai}.$
not.give
*‘$\text{Bill}_2$ doesn’t give children an allowance when they wash
(his$_2$ car).’

The availability of sloppy reading is island-sensitive
Fujiwara’s analysis:

1. Arguments move to the CP left-periphery (i.e. A’-movement)
2. They are deleted at PF

\[(16)\]
\[
a. \quad [\text{CP } \alpha_i \ldots [\ldots t_i \ldots ] \ldots] \quad \text{(Pre-spell-out)}
\]
\[
b. \quad [\text{CP } \alpha'_i \ldots [\ldots t_i \ldots ] \ldots] \quad \text{(PF)}
\]

The movement cannot cross islands, hence no sloppy reading

\[(17)\]
\[
*\{\text{self}_i \text{-gen} \text{-car}\}_j \quad [\text{Bill}_i \text{-top} \ldots [\text{Island} \ldots t_j \ldots ] \ldots]
\]

Remaining puzzles:

- Fujiwara doesn’t specify the exact status of the movement
- What type of A’-dependency does it induce?
I show that AE shows striking parallelism with topicalization:

(18) **The *wh*-scope generalization for Japanese topicalization:**
Topicalization is banned if its launching site is c-commanded by a *wh*-phrase.
To set the stage: Japanese topicalization

Particle ‘-wa’ + Preposing = Topic (Kuroda 1965; Kuno 1973; a.o.)

(19) a.  Bill-
        -wa;
        John-ga   e; hometa.
        Bill-TOP John-NOM praised
        ‘As for Bill, John praised him (and as for Mary, ...).’

b.  John-ga    Bill-
        -wa  hometa.
        John-NOM Bill-TOP praised
        ‘John praised Bill (but he didn’t praise others).’

■ (19a) preposed ‘-wa’: genuine sentential topic
■ (19b) in-situ ‘-wa’: contrastive focus
Bare *wa*-phrases involve base-generation (Kuno 1973; Saito 1985):

\[(20) \textit{Pekin-}wa_1 \textit{John-wa} [\text{NP} [e_2 e_1 \textit{itta koto-ga aru}] \textit{hito}_2] - o \]
\[\text{Beijing-}\text{TOP John-}\text{TOP went fact-}\text{NOM have person-}\text{ACC mituketa rasii.} \]
\[\text{found EVID} \]
\[\text{‘As for Beijing}_1, \text{ I heard John found a person who has been there}_1.’\]

PP/Case-marked *wa*-phrases involve movement (Saito 1985):

\[(21) *\textit{Pekin-ni-}wa_1 \textit{John-wa} [\text{NP} [e_2 e_1 \textit{itta koto-ga aru}] \textit{hito}_2] - o \]
\[\text{Beijing-}\text{DAT-}\text{TOP John-}\text{TOP went fact-}\text{NOM have} \]
\[\text{hito}_2] - o \textit{mituketa rasii.} \]
\[\text{person-}\text{ACC found EVID} \]
\[\text{lit. ‘Beijing}_1, \text{ I heard John found a person who has been to } t_1.’\]

I use datives to ensure movement given that AE involves movement
(22) $*: [\ldots \text{self}_1 \ldots ]_2\text{-top} \ldots [\text{wh}_1 \ldots \text{t}_2 \ldots ]$

*[$\text{Zibun}_1\text{-no hahaoya-ni-wa}]_2$, $\text{dono dansi}_1\text{-ga t}_2 \text{tegami-o}$

$\text{self-gen}$ $\text{mother-DAT-TOP which boy-NOM letter-ACC}$

$\text{watasita no?}$

gave $\text{Q}$

‘To his$_1$ mother, which boy$_1$ gave a letter?’
(23) ✓: [ ... self₁ ... ]₂-top ... [ NP₁ ... t₂ ... wh ... ]

\[Zibun₁-no hahaoya-ni-wa\]₂, John₁-wa t₂ nani-o watasita no?
self-gen mother-dat-top John-top what-acc gave Q
‘To his₁ mother, what did John₁ give?’
(24)  \[ * : [ \ldots \text{self}_1 \ldots ]_{2-\text{top}} \ldots [ \text{NP}_1 [\text{CP} \text{wh} \ldots t_2 \ldots ] \ldots ] \]

\[ *[\text{Zibun}_1\text{-no musuko-ni-wa}]_{2}, \text{Mary}_1\text{-wa [dare-ga } t_2 \text{self-gen son-dat-top Mary-top who-nom choko-o watasita ka] kyoomigaaru.}
\text{chocolate-acc gave Q is.curious}
\]

‘To her\textsubscript{1} son, Mary\textsubscript{1} is curious who gave chocolate.’
(25) ✓: [ ... self$_1$ ... ]$_2$-top ... [ NP$_1$ [CP $t_2$ ... wh ... ] ... ]

[Zibun$_1$-no musume-ni-wa]$_2$, John$_1$-wa [Taroo-ga $t_2$
self-GEN daughter-DAT-TOP John-TOP Taroo-NOM
nani-o watasita ka] kyoomigaaru.
what-ACC gave Q is.curious
‘To his$_1$ daughter, John$_1$ is curious what Taroo gave.’
(26)  * : [ ... self₁ ... ]₂-top ... [ wh₁ ... [CP t₂ ... wh ... ] ... ]

*[Zibun₁-no musume-ni-wa]₂, dare₁-ga [Taroo-ga t₂ self-gen daughter-dat-top who-nom Taroo-nom nani-o watasita ka] kyoomigaaru no?
what-acc gave Q is.curious Q
‘To his₁ daughter, who₁ is curious what Taroo gave?’
To take stock

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(22)</td>
<td>[ ... self₁ ... ]₂-top ... [ wh₁ ... t₂ ... ]</td>
<td>*</td>
</tr>
<tr>
<td>(23)</td>
<td>[ ... self₁ ... ]₂-top ... [ NP₁ ... t₂ ... wh ... ]</td>
<td>✓</td>
</tr>
<tr>
<td>(24)</td>
<td>[ ... self₁ ... ]₂-top ... [ NP₁ [CP wh ... t₂ ... ] ... ]</td>
<td>*</td>
</tr>
<tr>
<td>(25)</td>
<td>[ ... self₁ ... ]₂-top ... [ NP₁ [CP t₂ ... wh ... ] ... ]</td>
<td>✓</td>
</tr>
<tr>
<td>(26)</td>
<td>[ ... self₁ ... ]₂-top ... [ wh₁ ... [CP t₂ ... wh ... ] ... ]</td>
<td>*</td>
</tr>
</tbody>
</table>
To take stock everything

The distributions of AE and topicalization exactly correlate!
## Table of Contents

1. Introduction
2. The *wh*-scope generalization for AE
3. Parallelism with topicalization
4. AE as topic deletion
5. Conclusion
Recall the two generalizations:

(27) **The *wh*-scope generalization for Japanese AE:**
AE is banned if the ellipsis site is c-commanded by a *wh*-phrase.

(28) **The *wh*-scope generalization for Japanese topicalization:**
Topicalization is banned if its launching site is c-commanded by a *wh*-phrase.

- The ellipsis site in (27) corresponds to the launching site in (28)
- The parallelism follows if AE involves topicalization
I propose:

1. To-be-elided materials move to Spec,TopP
2. Moved elements are deleted at PF

(29) a. \[ \text{TopP } \alpha_i \ldots [ \ldots t_i \ldots ] \ldots \] (Pre-spell-out)

b. \[ \text{TopP } \alpha_i \ldots [ \ldots t_i \ldots ] \ldots \] (PF)

That is, elided arguments are deleted topics
    John-top self-gen  letter-acc threw.out
    ‘John₁ threw out his₁ letter.’

    b.  Mary-mo ___ suteta.
    Mary-also  threw.out
    ‘Mary₂ also threw out (her₂ letter).’

(31)  The derivation of (30b):

    [TopP selfᵢ’s letterᵢ ... [ Maryᵢ tᵢ threw.out ] ...  (Pre-spell-out)
    [TopP selfᵢ’s letterᵢ ... [ Maryᵢ tᵢ threw.out ] ...  (PF)
    [TopP ... [ Maryᵢ [ selfᵢ’s letter ] threw.out ...  (LF)
Interaction with *wh*-phrases

In-situ *wh*-phrases count as A’-elements (Cheng and Demirdache 1990; Bošković 2011; a.o.):

\[(32)\]
\[\text{a. } \left[ \text{TopP } \alpha-wa_1 \ [ \ldots \ [ \ldots t_1 \ldots ] \ldots \right] \]
\[\text{b. } \ast \left[ \text{TopP } \alpha-wa_1 \ [ \ldots \ [ \ldots \text{wh} \ldots ] \ldots \right] \]

*Crossing an A’-intervenor*

Precise explanation is left for future research.
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction</td>
</tr>
<tr>
<td>2</td>
<td>The <em>wh</em>-scope generalization for AE</td>
</tr>
<tr>
<td>3</td>
<td>Parallelism with topicalization</td>
</tr>
<tr>
<td>4</td>
<td>AE as topic deletion</td>
</tr>
<tr>
<td>5</td>
<td>Conclusion</td>
</tr>
</tbody>
</table>
Conclusion

AE induces topic-related A’-dependency:
- The distributions of AE and topicalization exactly correlate
- No previous account predicts the parallelism between the two

The idea that arguments drop under topic identity is not new:
- Productive use of null anaphora bears on topic continuity (Givón 1983; Hinds 1983)
- Null embedded objects in Chinese are ‘empty topics’ (Huang 1984)
- Argument drop in Germanic are ‘topic drop’ (Sigurðsson 2011; a.o.)

This work highlighted a way for unifying AE and discourse pro-drop
Prediction: Topicalizability $\approx$ Elidability

E.g. Wh-phrases cannot undergo AE (Sugisaki 2012; Ikawa 2013)

(33) a. $John$-[nani-o] $katta$ $no$?
    John-top what-acc bought q
    ‘What did John buy?’

b. $[Bill-ga]$ ___ $katta$ $ka$ $mo$ $osiete$.
    Bill-nom bought q also tell
    *‘Also tell me what Bill bought, too.’

Wh-phrases cannot be topicalized (Kuno 1973; Miyagawa 1987)

(34) *[Nani-wa] $John$-[ga] $katta$ $no$?
    what-top John-nom bought q
    lit. ‘As for what, did John buy it?’

Further investigation is left for future work.
Thanks!

I’m grateful to Željko Bošković, Jon Gajewski, Adrian Stegovec, Mamoru Saito, Yoshiki Fujiwara, Hiromune Oda, Akihiko Arano, Muyi Yang for their insights.


