# Acquisition of Particle Drop in Japanese: A Preliminary study

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**Research Question:**
Do children know that locative arguments cannot drop their particle(s) in the Subj-Loc-V order?

**Answer:** Yes!

**Insights:** Children have precise knowledge of two particle-drop rules, the structure of two-place unaccusatives, and topic structure.

**Implication:** Acquisition of labeling

## Introduction: Particle Drop in Japanese

- Nouns are usually marked with particles to indicate grammatical and semantic functions.

| | | | |
|---|---|---|---|
| *-ga* | : Nominative Case | *-no* | : Genitive Case |
| *-o* | : Accusative Case | *-wa* | : Topic |
| *-ni* | : Dative Case | *-dake* | : Focus: 'only' |

### Case-Particle Drop

- Case particles can drop <u>in the complement of V</u> <u>in surface syntax</u>.

✓ *Subj-case drop vs. Obj-case drop (Kuno 1973; see Otsu 1994)

1a. *[obake(-o) tukamaeta] hito.*
ghost-ACC caught person
'A person who caught a ghost$_{ACC/\emptyset}$.'

1b. *[John*(-ga) tukamaeta] obake.*
John-NOM caught ghost
int. 'A ghost that John$_{NOM/*\emptyset}$ caught.'

1c. *[John*(-ga) hasitteiru] kooen.*
John-NOM is.running park
lit. 'A park where John is running.'

✓ *Case-drop of moved items (Kuno 1973; Saito 1983)

2. *[obake*(-o) John-ga $t_{Obj}$ tukamaeta] basyo.*
ghost-ACC John-nom caught place
lit. 'A place where a ghost$_{ACC/*\emptyset}$, John$_{NOM}$ caught $t_{Obj}$.'

### Topic-Particle Drop

- Topic particles can drop in the matrix SpecTopP. (Kuno 1973)

✓ Bare subjects and bare moved-items in the matrix

3a. *John(-wa) obake-o tukamaeta yo.*
John-TOP ghost-ACC caught SFP
'John$_{TOP/\emptyset}$ caught a ghost$_{ACC/\emptyset}$.'

3b. *Obake(-wa) John-ga $t_{Obj}$ tukamaeta yo.*
ghost-TOP John-NOM caught SFP
lit. 'A ghost$_{TOP/\emptyset}$, John$_{NOM}$ caught $t_{Obj}$.'

- Japanese bare nouns appears relatively unconstrained.

## Particle Drop of Locative Arguments

### Two-Place Unaccusatives

- Locative arguments are base-generated higher than unaccusative subjects (Kuno 1971; Takezawa 1993).

4a. *Kono-heya-ni John-ga iru.*
this-room-DAT John-NOM exist
'John is in this room.'

4b. [Loc [$_{VP}$ Subj V]]

➢ Test: Japanese shows scope-rigidity in its canonical word order.

5a. *Dareka-ga daremo-o aisiteiru.*
someone-NOM everyone-ACC is.loving
'Someone loves everyone.' (some > every) / *(every > some)

5b. *Daremo-o dareka-ga aisiteiru.*
lit. 'Everyone, someone loves.' (some > every) / (every > some)

✓ The 'Loc-Subj-V' order shows scope-rigidity.

6a. *Dokoka-no heya-ni daremo-ga ita.*
somewhere-GEN room-DAT everyone-NOM existed
lit. 'In some room, everyone exists.' (some > every)/*(every > some)

6b. *daremo-ga dokoka-no heya-ni ita.*
lit. 'everyone exists in some room.' (some > every) / (every > some)

### Particle Drop of Locative Arguements

- Canonical word-order: Loc-Subj-V

7a. *Kono-biru-ni yakkyoku-ga aru yo.*
this-building-DAT pharmacy-NOM exist SFP
'There is a pharmacy in this building.'

7b. *Kono-biru-wa yakkyoku-ga aru yo.* (topic construction)

7c. *Kono-biru-Ø yakkyoku-ga aru yo.* (topic-particle drop)

- Scrambled word-order: Subj-Loc-V

8a. *Yakkyoku-ga kono-biru-ni $t_{Subj}$ aru yo.*
pharmacy-NOM this-building-DAT exist SFP
'There is a pharmacy in this building.'

8b. ***Yakkyoku-ga kono-biru-wa** $t_{Subj}$ aru yo.*

8c. ***Yakkyoku-ga kono-biru-Ø** $t_{Subj}$ aru yo.*

- Missing subject: Loc-V

9a. *kono-biru-ni aru yo.*
this-building-DAT exist SFP
'(It) is in this building.'

9b. *kono-biru-wa aru yo.* (topic construction)

9c. *kono-biru-Ø aru yo.* (topic-particle drop)

## Corpus Analysis

- Longitudinal corpora of three Japanese-speaking children, ArikaM (3;0-3;11), Asato (1;11-3;09), and Nanami (2;2-3;11) in the CHILDES database (MacWhinney 2000).

- Methods:
(i) *aru* (exist), *nai* (not exist), *hairu* (enter), *agaru* (raise)
(Why these four? - the top four verbs among ArikaM's two-place unaccusative utterances, identified by searching for *–wa/ga*. ⇒ I'm currently listing additional verbs from children's utterances by searching for *–ni*.)

(ii) A total of 2,030 utterances were manually categorized:
(A) Loc-Subj-Verb, (B) Subj-Loc-Verb, (C) Loc-Verb

(iii) They were further classified based on whether the locative argument was marked with a dative-case particle or without (i.e. either bare or with only a topic particle).

- Result:

| Word-Order | Particle | ArikaM | Asato | Nanami | Total |
|---|---|---|---|---|---|
| **(A) Loc Subj V** | **+DAT** | 33 | 19 | 19 | 71 |
| | **-DAT** | 41 | 9 | 11 | 61 |
| **(B) Subj Loc V** | **+DAT** | 32 | 8 | 14 | 54 |
| | **-DAT** | **0** | **0** | **2** | **2** |
| **(C) Loc V** | **+DAT** | 97 | 25 | 33 | 155 |
| | **-DAT** | 17 | 8 | 10 | 35 |

10a. *Kore-Ø ashi-ga nai.*
this leg-NOM not.exist
'This does not have a leg.' (Nanami 2;7)

10b. *Kono-naka-Ø haitteru yo.*
this-inside enter SFP
'(It) is inside this.' (Asato 2;0)

**11.** *Hanachan ofuro-**Ø** haittenakatta.*
Hanachan bath did.not.go.in
'Hanachan had not taken a bath.' (Nanami 3;3)

## Implication: Acquisition of Labeling

- What exactly do children understand when they know the two rules of particle drop? — Labeling.
- ➢ Chomsky (2013): Merging two phrases creates a labeling problem, [$_{??}$ [XP, YP]], which can cause a derivation to crash. Such labeling problems do not arise when either of them is a head, [$_{YP}$ [X, YP]], and when they share a prominent feature: e.g. [$_{[\phi]}$ [NP$_{[\phi]}$, TP$_{[\phi]}$]].
- ➢ Saito (2014): Particles in Japanese function as an anti-labeling device, which resolves this labeling problem: e.g. [$_{TP}$ [NP$_{NOM}$, TP]]
- This explains the (im)possible distribution of bare nouns in Japanese: Case-particle drop - [$_{VP}$ [NP$_{\emptyset}$ V]] / Topic-particle drop - [$_{[TOP]}$ [NP$_{[TOP]}$, TopP$_{[TOP]}$]]
- This study thus implies that children at this age already know how labeling functions in the context of Japanese particle-drop phenomena.

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