Overt and implicit arguments and Voice in Japanese passives

A child language perspective

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BCGL 15, October 6-7, 2022

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Introduction

Introduction

At least two issues have been controversially discussed in the literature on passives:

- the **status of implicit arguments** (see Bhatt and Pancheva (2017) for a comprehensive overview)
- the **role of Voice morphology** in transitivity alternations

Introduction

- The fact that in e.g., English, silent subjects are not allowed in active clauses (1-b), while agents of passives are usually left unpronounced (2-b), may suggest that agents are not projected in the syntax.
- As they may optionally be realized (2-a) within a *by-phrase*, agent PPs are viewed as adjuncts to the VoiceP (Bruening 2013).

(1) a. The girl hugged the dog.

b. *Hugged the dog.

(2) a. The dog was hugged by the girl.

b. The dog was hugged.

This talk

- We approach this discussion from the perspective of **child language**.
- We examine the status of **external**, i.e., agent, and **internal**, theme, **arguments in Japanese direct passive constructions** (for the distinction between direct and indirect passives in Japanese see Ishizuka 2012) in child productions.
- We focus on the role of **overt Voice morphology** in the acquisition of passives.

This talk

Our results:

- support the idea that early acquisition of passives is related to the presence of overt morphology
- are generally compatible with an analysis of *by*-phrases as adjuncts, as put forth in Bruening (2013) and Alexiadou et al. (2015).

The puzzle

The puzzle

- The acquisition of passives has been controversially discussed in the literature. Several studies have claimed that **passives** are **delayed up to the age of 5** (Armon-Lotem et al. 2016).
- In a large-scale study of 11 typologically different languages, Armon-Lotem et al. (2016) demonstrate that **short** passives, i.e., forms lacking an overt external argument, are **acquired first** compared to long passives where both external and internal arguments are present.
- For **Japanese** in particular the claim is that acquisition of **passives** is **delayed to the age of 7** (Okabe and Sano 2002).

The puzzle

- It has been proposed that the main source of difficulties in the acquisition of long passives lies in external arguments:
  - *by*-phrases in English (Fox and Grodzinsky 1998)
  - *ni*-phrases in Japanese (Okabe and Sano 2002)
- Thus the production of such passives by Japanese children is surprising.

The puzzle

- Our data shows that children have available both **long** (3-a) and **short** passives (3-b) very early on **at the age of 3**.

(3) a. Ayumi-chan-wa ka-ni sas-**are**-n-ai n
Ayumi-DIM-TOP mosquito-DAT bite-PASS-NEG-PRES QUD
da mon.
be ASSERT

'Little Ayumi isn't bitten by a mosquito.' (Ayumi, 3;01)

b. Otokonoko-ga oite ik-**are**-ta.
boy-NOM put go-PASS-PAST.

'The boy was left behind.' (Ayumi, 4;10)

Puzzle: Consensus on delayed acquisition of passives

Previous studies converge on the idea that in the process of language acquisition:

- active clauses precede passive
- short passives precede long passives

Puzzle: Consensus on delayed acquisition of passives

This view was put forth in various guises of the maturation approach:

- A-Chain Deficit Hypothesis (Borer and Wexler 1987), Universal Phase Requirement (Wexler 2004)
- Universal Freezing Hypothesis (Hyams and Snyder 2005), building on smuggling analysis of passive in Collins (2005)
- Smuggling (Belletti 2021)

Syntactic approach:

- Difficulties with external theta-role transmission to the *by*-phrase (Fox and Grodzinsky 1998)

Proposal

Language as compression (Sauerland and Alexiadou 2020)

Meaning First architecture

- **Generator** - a language-independent component consisting of an inventory of logical primitives that combine into complex concepts.
- **Compressor** - a morphological component that radically reduces full conceptual representation (CR) to articulated strings suitable for communication.
- MF adopts the *Universal Late Insertion* of early DM with a twist
- $\rightarrow$ DM - structure generation is part of grammar, MF - structure generation is *outside of grammar*

The Compressor

- **Two types of morphemes (I)**:
  - contributing functional information - tense, number
  - contributing lexical content - roots
- **Two types of morphemes (II)**:
  - realization of a particular unit (Vocabulary items)
  - abstract morphemes that combine to build this unit (Beard 1995)
- Words $\neq$ lexical entries, but are composed on the basis of abstract morphemes in combination with roots, the most deeply embedded morphemes.
- The sequence of functional morphemes is universal.
- Both functional elements and roots are subject to late insertion, i.e. the building blocks of meaning lack phonological content.
- Certain morphemes are simply realized via zero.

1:1 mapping of Alexiadou et al. (2021)

Alexiadou et al. (2021) develop the idea that:

- Individual languages reflect only fragments of thought structures, i.e., conceptual representations (CRs) → big blind spots of cognitive structures that no adult language ever expresses.
- Grammatical sentences in adult language are maximally compressed → the least informative for investigating the underlying universal CRs.

Transparency principle

- Children are biased towards a one-to-one mapping from CRs to language.

1:1 mapping of Alexiadou et al. (2021)

- Evidence for one-to-one mapping → **errors of commission**
- Often in child grammars overt realizations of material that stays unpronounced in adult grammar can be found.

(4) Das Mädchen sein, das der Opa **das Mädchen** umarmt.
the girl be that the granddad the girl hugs

Lit.: 'Be the girl who the granddad hugs the girl.'

Yatsushiro and Sauerland (2018)

- **Errors of commission** serve as a tool for investigating universal conceptual representations (CRs).

Research Question & Hypotheses

Research Question: Why do we find early acquisition of passive in Japanese?

Overt passive morphology hypothesis: The overt special passive morpheme *-(r)are*, consistently present in all child passive utterances in our data, facilitates the early acquisition of passive in Japanese compared to other languages as children follow the 1:1 mapping principle from conceptual representations (CRs) to morphology (Alexiadou et al. 2021).

Corpus study: Methodology & Data

Methodology

- CHILDES (MacWhinney 2000), *Ogawa* corpus (Ogawa 2016)
- We extracted all the utterances surfacing with the passive morpheme ***-(r)are*** in two longitudinal diary data of typically developing children acquiring Japanese.
- Ayumi, data recorded daily, age range: 0;9.00-6;01.00
- Mari, data recorded daily, age range: 0;5.00-4;02.00

Data

- Total number of utterances: $N = 35666$
- Sentences surfacing with the passive morpheme: $N = 393 \rightarrow$ selected for the analysis
- The analysis covers the time span between the age of 3;00, when the first occurrence of passive is attested in our corpora, and the age of 6;1.

Data Annotation

(I) Type of passive

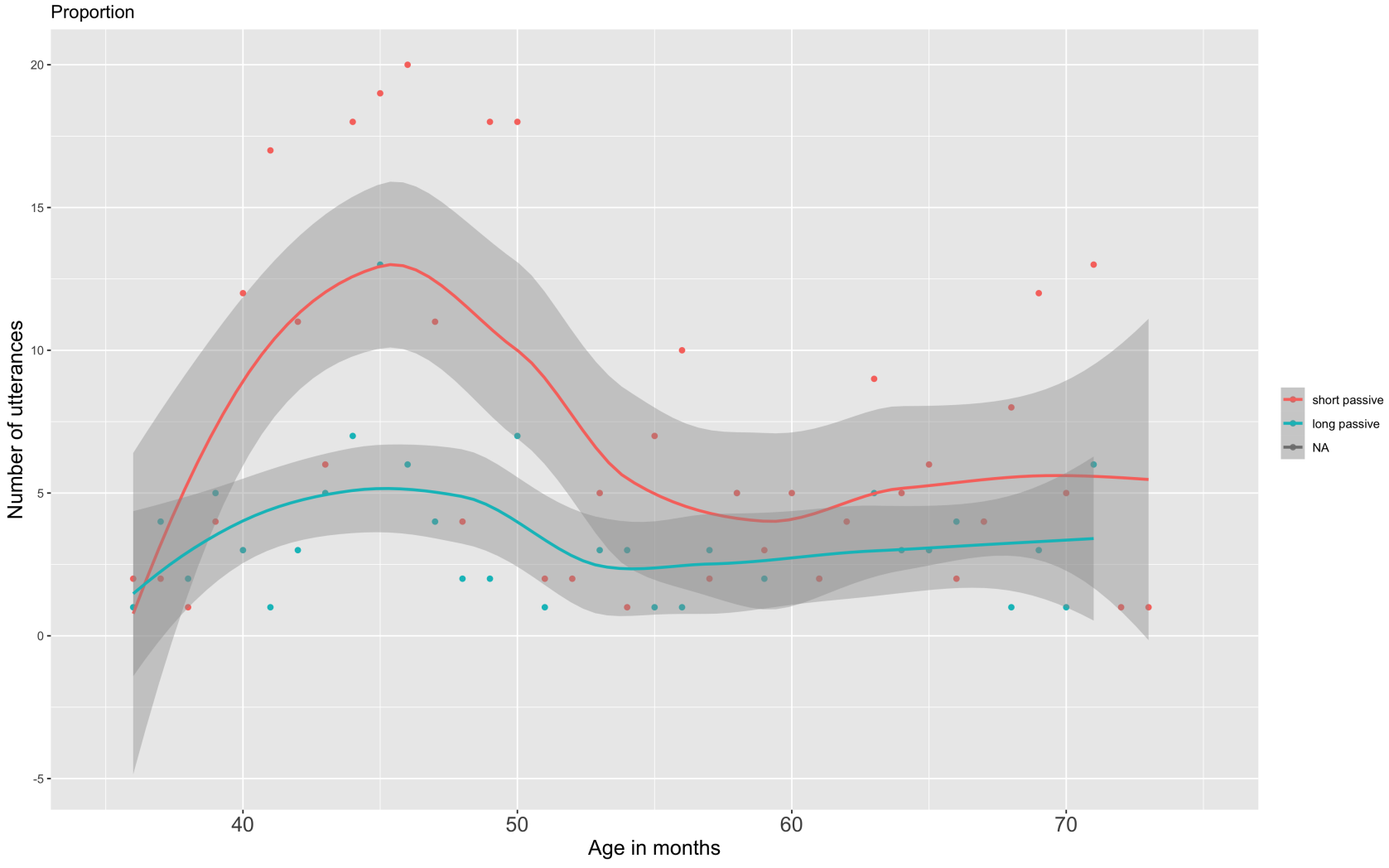
- long
- short

(II) Argument realization patterns

- both external and internal arguments overtly realized
- both external and internal arguments unpronounced
- only external argument overtly realized
- only internal argument overtly realized

Corpus study: Results

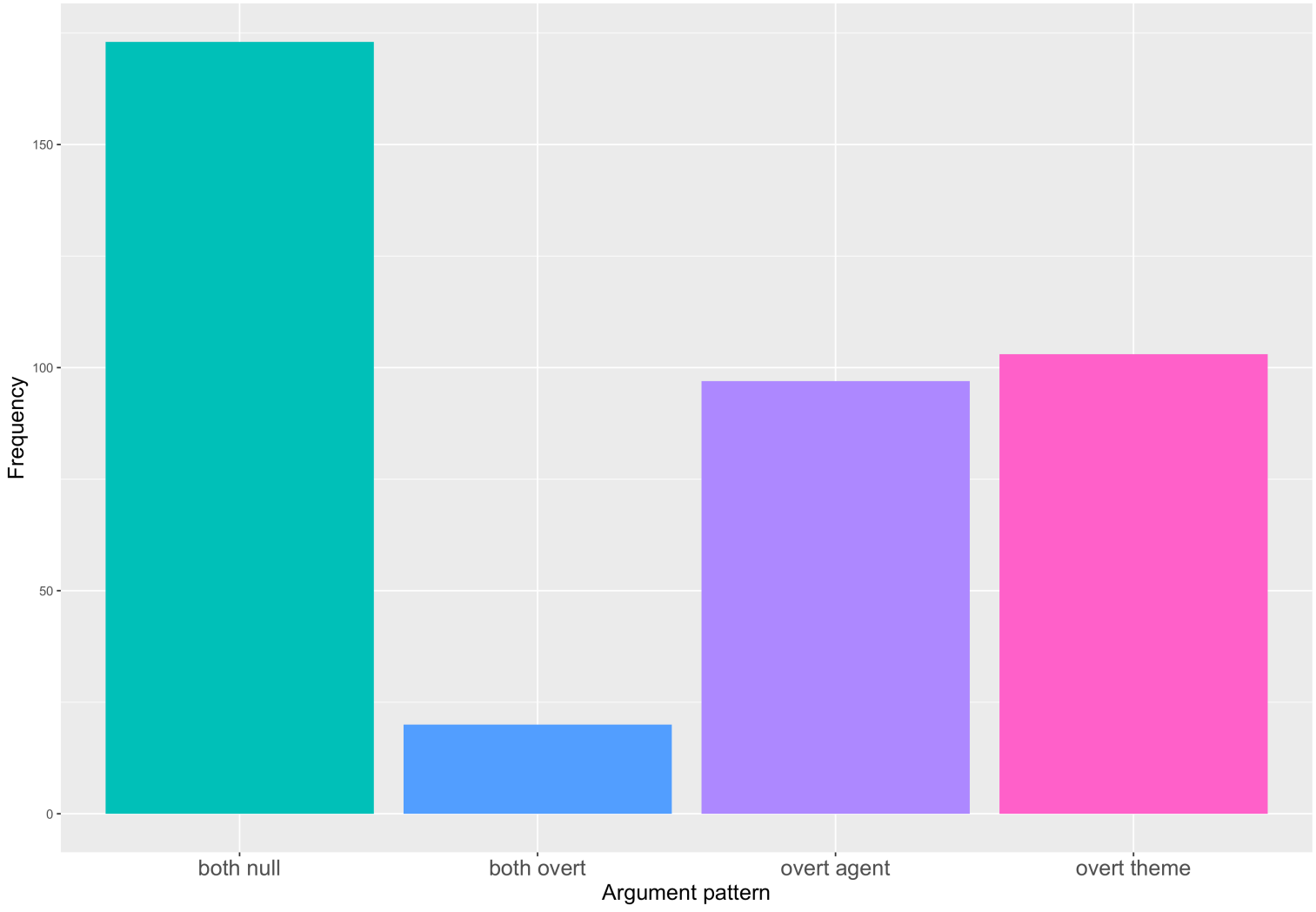
Results: Short vs. Long Passive



Results: Short vs. Long Passive

- Short and long passives appear at the same time in child spontaneous production in Japanese, i.e., short passives do not emerge first.
- Short passives are more frequent (N = 276) compared to long passives (N = 117).
- Both forms show increase in frequency between 40 and 50 months (age 3;4-4;2).

External and internal arguments in Japanese passive



External and internal arguments in Japanese passive

- Passive forms with **both arguments unpronounced** are **significantly more frequent** (N = 173) than clauses with both arguments overt (N = 20).
- There is an **asymmetry** between utterances surfacing with an overt internal argument and silent external argument (N = 103) and utterances with an overt external argument but silent internal argument (N = 97).

argument pattern	***N***
both null	173
both overt	20
overt agent	97
overt theme	103

Implicit arguments & morphology

Implicit arguments and overt morphology

- We observe a strong preference for both external and internal arguments to be left implicit in Japanese (5-6).
- If agent PPs are adjuncts → this is expected for the EA.
- Japanese is a radical *pro*-drop language → it further allows an internal pronominal argument to be realized as *pro* (Neeleman and Szendrői 2007).

(5) Otera de sas-**are**-ta n janai?
temple LOC stab-PASS-PAST NEG TAG

'Weren't you stabbed at the temple?' (Ayumi, 3;01)

(6) Tsukamae-**rare**-ta.
catch-PASS-PST

'I was caught.' (Mari, 3;05)

-rare as an exponent of Voice

Ishizuka (2012) argues that:

- Japanese has a designated Voice head, *-rare*
- The external argument is introduced by *-ni*
- Competition: they cannot both spell-out the same head.

-rare as an exponent of Voice

- *-rare* is **incompatible with middle Voice marking**, which further supports the view that it realizes Voice.

(7) *Taroo-ga musuko-ni kaidan-kara oti-**rare**-ta.
Taro-NOM son-DAT stairs-from fall-PASS-PST

Int. 'Taro$_i$ was affected by his$_i$ son's falling from the stairs.'

Ishizuka (2012)

-rare as an exponent of Voice

- Ishizuka (2012), moreover, notes that *-rare* may combine with transitive verbs yielding **idiomatic readings**.
- This pattern is reminiscent of languages such as Greek that make use of Voice heads hosting non-active morphology (Alexiadou et al. 2015, Oikonomou and Alexiadou 2022).

(8) O Petros tsimbithike me ti Marina.
the Peter pinch.NACT.PST.3PL with the Marina

'Peter fell in love with Marina.'

Oikonomou and Alexiadou (2022)

Passive exponence & acquisition

Japanese passive

- Japanese exhibits dichotomy between the *direct passive* (9), associated with transitive verbs, and *indirect passive* (10), found mostly with intransitives, whose nominative DP is adversely affected by the passive event (Ishizuka 2012).
- In contrast to languages such as English, Japanese employs a dedicated passive morpheme -***(r)are***, attested in both forms.

(9) Ken-ga keisatsu-ni tsukamae-**rare**-ta.
Ken-NOM police-DAT catch-PASS-PST

'Ken was caught by the police.'

(10) Ken-ga Naomi-ni nige-**rare**-ta.
Ken-NOM Naomi-DAT escape-PASS-PST

Lit. 'Ken was escaped from by Naomi.' (Ishizuka 2012)

Acquisition of passive in Japanese

- Okabe and Sano (2002) & Okabe and Okubo (2005) comprehension studies:
  - Children acquiring Japanese demonstrate comprehension difficulties with forms involving the *ni*-phrase (counterpart of the English *by*-phrase)
  - Possible reason: *ni* marks agent, but also goal and source

The role of overt morphology (Alexiadou et al. 2021)

- In contrast to previous work, our study demonstrates early acquisition of passive in Japanese, at the age of 3.
- Furthermore, our data does not support the view that short passive emerges first compared to long passive, as both forms appear simultaneously.
- To explain this pattern, we adopt the idea that there is a one-to-one correspondence between form and meaning (Alexiadou et al. 2021), often obscured in natural languages.

Overt passive exponence in child Japanese

Overt passive morphology hypothesis: The overt special passive morpheme *-(r)are*, consistently present in all child passive utterances in our data, facilitates the early acquisition of passive in Japanese compared to other languages as children follow the 1:1 mapping principle from conceptual representations (CRs) to morphology (Alexiadou et al. 2021).

- The results of our study and consistent presence of overt passive marking from the early age **strongly supports morphological account** of passive acquisition.
- In contrast to Japanese, acquisition of passive in languages such as English, where dedicated passive morphology is not present, is significantly delayed.

Overt passive exponence in child Japanese

- We argue that our result stems from the transparent Voice morphology in Japanese, realized in the form of the morpheme *-rare*, which:
  - strongly supports the idea in Alexiadou et al. (2021) that children follow a 1:1 correspondence between conceptual representations (CRs) and morphology, and
  - predicts that overt passive morphology facilitates the acquisition of otherwise challenging structures.

Agent-Theme Asymmetry

Agent-Theme Asymmetry

- We observe a strong preference for both external and internal arguments to be left implicit in Japanese (11-12), which correlates with the preference to short passives.
- As Japanese is a radical *pro*-drop language, it allows all arguments to be dropped (Neeleman and Szendrői 2007).

(11) Otera de sas-**are**-ta n janai?
temple LOC stab-PASS-PAST NEG TAG

'Weren't you stabbed at the temple?' (Ayumi, 3;01)

(12) Tsukamae-**rare**-ta.
catch-PASS-PST

'I was caught.' (Mari, 3;05)

Agent-Theme Asymmetry

- However, when only one of the arguments is expressed overtly, children demonstrate a preference for an overt theme and a silent agent, as in (14), over an overt agent and silent theme (13).
- (13) is possible as the internal argument is syntactically projected.

(13) Ka-ni sas-**are**-ta no.
mosquito-DAT bite-PASS-PAST QUD

'I was bitten by a mosquito.' (Ayumi, 3;01)

(14) Misoshiru kobos-**are**-ru.
miso.soup spill-PASS-PRES

'Miso soup is spilled.' (Ayumi, 5;00)

Agent-Theme Asymmetry

- This asymmetry is reminiscent of the behavior of agent PPs in nominalizations, where the presence of an agentive PP is dependent on the presence of the internal argument (Grimshaw 1990).
- Furthermore, it is consistent with treating *by*-phrases as adjuncts (Bruening 2013, Alexiadou et al. 2015).

Summary

Summary

- The presence of dedicated passive morphology, *-rare*, enables the early acquisition of passive in Japanese.
- This result provides direct evidence for the proposal that children follow the 1:1 mapping principle from conceptual representations (CRs) to morphology (Alexiadou et al. 2021).
- Acquisition data in line with analysis of *by*-phrases as adjuncts (Bruening 2013, Alexiadou et al., 2015).

Outlook

Outlook: Causative passive in Japanese

- We aim to extend our **Overt passive morphology hypothesis**, that straightforwardly follows from Alexiadou et al. (2021), to all other cases where dedicated passive exponence is attested.
- Our data provides evidence for early production of **causative passive** in Japanese (15). Similarly to dedicated passive morphology, Japanese employs special causative morphology realized as -***(s)as(e)***.

(15) Ouchi made tob-**as**-**are**-ch-au?
home TERM fly-CAUS-PASS-COMPL-PRES

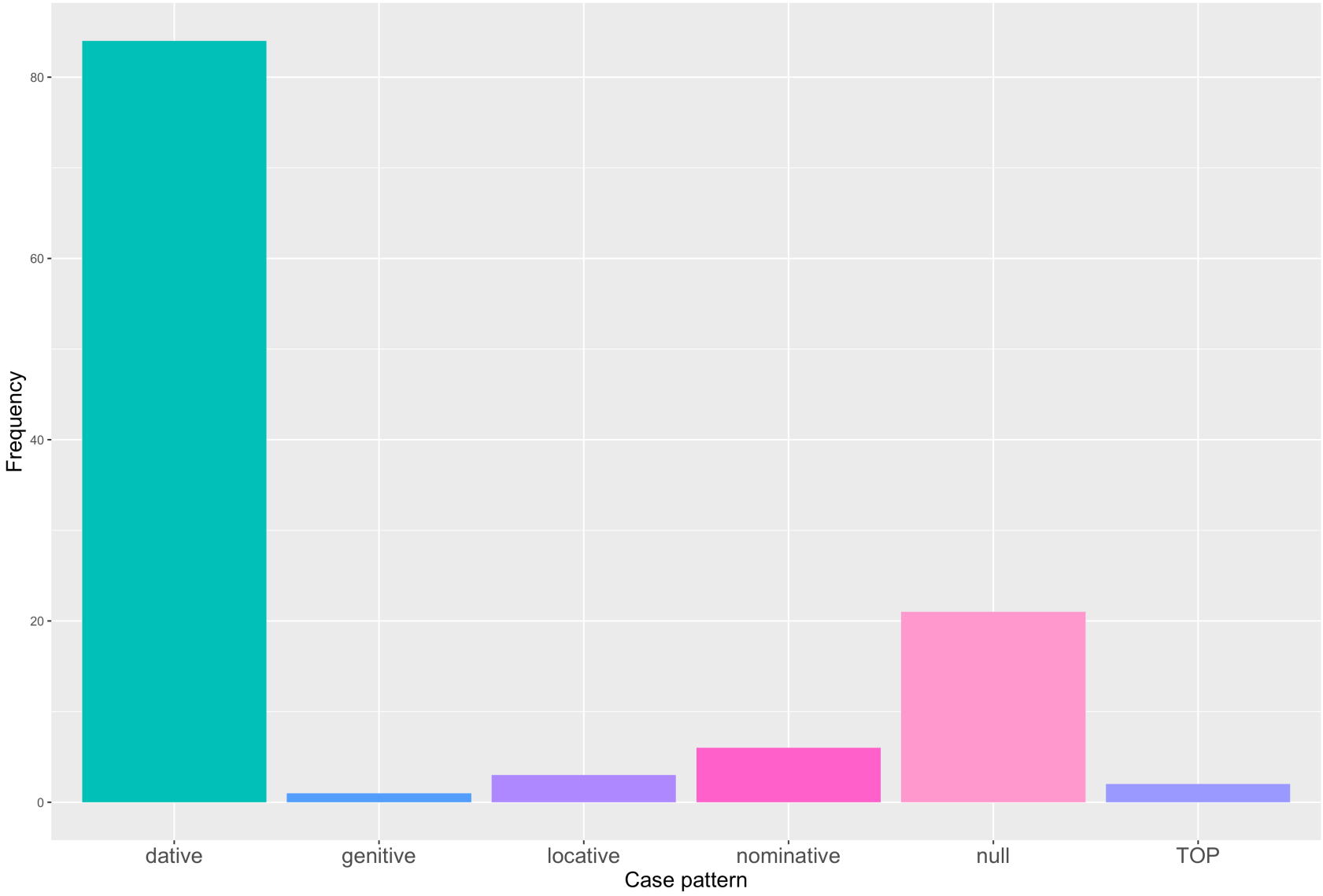
'Will I be flown home?' Ayumi, 3;04

Acknowledgements

This project has received funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (grant agreement No 856421).

Appendix

Case: Agent

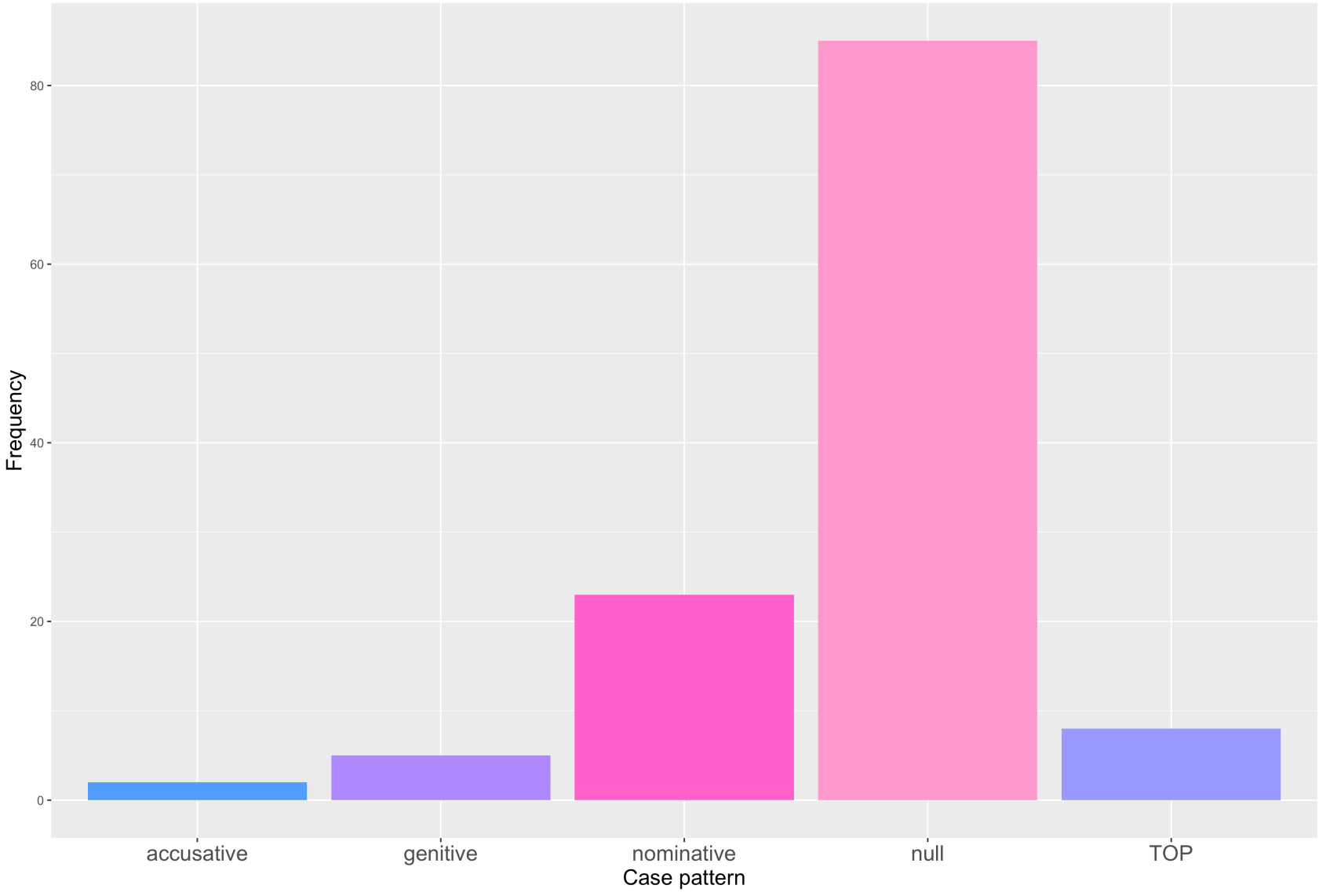

80
60
40
20
0
Frequency
dative
genitive
locative
nominative
null
TOP
Case pattern

Case: Agent

- When agent is overtly realized, in majority of cases it surfaces with the dative morpheme *ni* (*N* = 84).
- In addition, it may be realized without any case morphology (*N* = 21).

case pattern	***N***
dative	84
genitive	1
locative	3
nominative	6
null	21
TOP	2

Case: Theme


Frequency
80
60
40
20
0
accusative
genitive
nominative
null
TOP
Case pattern

Case: Theme

- In contrast to agent argument, when theme is overtly realized, it does not surface with any case morphology in the majority of cases (N = 85).
- In some cases, it may surface with nominative morpheme (N = 23).

case pattern	***N***
accusative	2
genitive	5
nominative	23
null	85
TOP	8

Results: Summary

- *ni*-phrases are consistently present in our data from early stages of passive production, which suggests that they cannot cause difficulties in acquisition.
- Topic marking is not preferred and overt arguments in child data do not appear in focus environments, as is the case in adult Japanese.

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