

Simpler Syntax for Scope in Japanese: A Case Study with Obligatory Wide Scope Phenomena

Tomoya Tanabe¹, Ryoichiro Kobayashi², and Yosuke Sato³

¹Hokkaido University

²Tokyo University of Agriculture

³Tsuda University

April 30, 2024

Abstract

This paper tackles the problem of puzzling wide scope phenomena in Japanese, which have been discussed in Goro (2007, 2024) and Shibata (2015a). We reexamine relevant data on the scope relations between disjunction/focus particles and negation in transitive sentences. A careful examination of the syntax-discourse-prosody interactions reveals that the wide scope reading of these scope elements is not obligatory. Hence, the syntactic analyses that have been proposed to account for the apparent wide scope phenomena are neither necessary nor correct. Instead, we propose a simpler syntax for scope possibilities, where the object NPs with the scope elements can either stay in-situ below negation or optionally undergo movement out of the negative scope. The proposed analysis needs no additional syntactic mechanisms or principles other than External and Internal Merge, which apply freely. Therefore, it is fully compatible with the *Free-Merge Hypothesis* (Chomsky 2004) in the minimalist model.

Keywords

implicit prosody, default prosody, scope of negation, disjunction, focus particles, Japanese

1 Introduction

In the early years of generative grammar, it has been argued that the scope of negation in Japanese is relatively narrow when compared to other languages such as English (Kuno 1980, 1983; Takubo 1985; Kishimoto 2007, among others). Notably, researchers such as Kuno (1980) and Takubo (1985) suggest that the scope of negation in Japanese is basically limited to the immediately preceding verb or adjective which a negative morpheme is attached to. However, a body of studies in the last three decades or so have revealed that the scope of negation is wider than it was once thought (see studies cited in Shibata 2015a; Kishimoto 2018, for a review).

For example, as Kato (1985) observes, *zenbu* ‘all’ in (1) can be interpreted both inside and outside negation, though the narrow scope reading of negation may be more salient.

- (1) Taroo-wa [yoteisi-tei-ta mono-o zenbu] kaw-anakat-ta. ($^{OK}_{ALL>NEG}$, $^{OK}_{NEG>ALL}$)
Taro-TOP plan-ASP-PST thing-ACC all buy-NEG-PST
lit. ‘Taro did not buy all of the things that he planned to buy.’ (Kato 1985, p. 106)

The wide scope reading of negation in (1) is naturally explained if we assume that NegP is located above vP/VP in Japanese (Shibata 2015a; Kishimoto 2018). That is, since NEG is higher than VP, the object takes scope under the negation in its base-generated position, and it takes scope over the negation if it undergoes movement out of the scope of negation.¹ Naturally, the negative structure in (2) is now more or less standardly assumed in the Japanese literature.

- (2) [TP Subject [TP [NegP [VP Object V] NEG] T]]

Against this backdrop, the so-called obligatory wide scope phenomenon has attracted much attention. In general, judgements on the relative scope relation between object NPs and their clausemate negation are often unstable and there are nontrivial interspeaker variations (see Kato 1985; Han et al. 2004; Kataoka 2006; Kishimoto 2008; Shibata 2015a). However, a consensus seems to have been reached among most Japanese linguists that when some focus-sensitive elements are adjoined to object NPs, the NPs obligatorily take wide scope with respect to local negation. Such elements include disjunction *-ka* ‘or’ (Goro 2007) and focus particles like *-dake* ‘only’ and *-mo* ‘also’ (Hasegawa 1994; Aoyagi 1999; Shoji 1986, among others). In (3)-(5), the wide scope reading of the disjunction/focus particle is predominant, whereas the narrow scope reading seems to be absent.

- (3) Erina-wa supeingo-**ka** furansugo-o hanas-ana-i. (^{OK}_{OR>NEG}, ^{??}_{NEG>OR})
 Erina-TOP Spanish-or French-ACC speak-NEG-PRS
 lit. ‘Erina doesn’t speak Spanish or French.’
- (4) Erina-wa yasai-**dake** tabe-nakat-ta. (^{OK}_{ONLY>NEG}, ^{??}_{NEG>ONLY})
 Erina-TOP vegetable-only eat-NEG-PST
 lit. ‘Erina didn’t eat only vegetables.’
- (5) Erina-wa yasai-**mo** tabe-nakat-ta. (^{OK}_{ALSO>NEG}, ^{??}_{NEG>ALSO})
 Erina-TOP vegetable-also eat-NEG-PST
 lit. ‘Erina didn’t eat also vegetables.’

In the early years, such phenomena may not have been a puzzle since the wide scope reading of those elements could be attributed to the fact that the scope of negation in Japanese in general is extremely narrow (Kuno 1980, 1983; Takubo 1985). However, the alleged unavailability of the narrow scope reading of these elements is mysterious as a body of studies have suggested that NegP is located above vP/VP, as in (2). Indeed, a fair amount of works have been conducted over the last 15 years or so to account for this obligatory wide scope phenomena (illustrated in (3)-(5)).

In this paper, we address the problem of this obligatory wide scope phenomenon by examining the intricate interfaces of syntax with other modules of grammar. Specifically, we show that the syntax-discourse-prosody interplay determines scope possibilities. We provide novel pieces of data which show that disjunction and focus particles attached to object NPs can actually take scope under negation, contrary to the common wisdom repeated in the literature. The empirical findings of our study reveal that the syntax of (3) through (5) is simpler than it has been argued in the literature. The rest of this paper is structured as follows. In Section 2, we review two prominent approaches to the puzzle. In Section 3, we reemphasize the methodological moral pointed out by Kitagawa and Fodor (2003, 2006); contexts and prosodies must be controlled in the study of narrow syntax. We then demonstrate that once the methodological moral is taken into account, the alleged impossibility of the narrow scope readings of those scope elements with respect to negation is not real. Section 4 concludes the paper by stating some theoretical implications of our proposal for the latest minimalist model.

¹We do not discuss whether the subject is generated vP/VP-internally and takes scope below negation or instead NEG raises above TP and takes scope over the subject (see Kishimoto 2018, for discussion).

2 Previous approaches to the obligatory wide scope phenomena

To this day, scholars studying syntax have hotly discussed how the scope facts in (3)-(5) can be given a principled account. Goro (2007, 2024) and Shibata (2015a) put forth an analysis which posits that objects accompanied by particular wide-scope taking elements cannot be interpreted in-situ (i.e., in the complement position of V) due to obligatory movement of the objects out of VP.² Below, we illustrate their analyses in some detail.

First, since Goro (2007), it has been reported in a number of studies that the only interpretation of (3) is the OR>NEG reading ‘(Erina doesn’t speak Spanish) OR (Erina doesn’t speak French)’, and that the NEG>OR reading ‘it is not the case that Erina speaks Spanish or French’ is absent (see Funakoshi 2013; Tomioka 2014; Shibata 2015a; Oku 2016; Saito 2017; Maeda 2019; Otani 2021; Sato and Maeda 2021; Tanabe and Hara 2021; Goro 2024, and studies cited therein). Note that the corresponding English sentence in (6) allows both interpretations.

- (6) Erina doesn’t speak Spanish or French. (^{OK}_{OR>NEG}, ^{OK}_{NEG>OR})

Yet, this (putative) contrast between (3) and (6) (putative because this contrast is not real, as we will show shortly) does not mean that the semantics of *ka* in Japanese is different from that of English *or*, which is a Boolean disjunction. As Goro (2007) points out, the disjunction in the embedded clause may take scope below the matrix negation even in Japanese.

- (7) Ken-wa [Erina-wa supeingo-ka furansugo-o hanasu to] omow-anai. (NEG>OR)
Ken-TOP Erina-TOP Spanish-or French-ACC speak that think-NEG
‘Ken doesn’t think that Erina speaks Spanish or French.’

Thus, (7) is interpreted as ‘Ken doesn’t think that Erina speaks Spanish AND Ken doesn’t think that Erina speaks French’ just like the English sentence in (8). It follows that *ka* is also a Boolean disjunction, which obeys de Morgan’s laws (i.e., $\neg(p \vee q) = \neg p \wedge \neg q$).

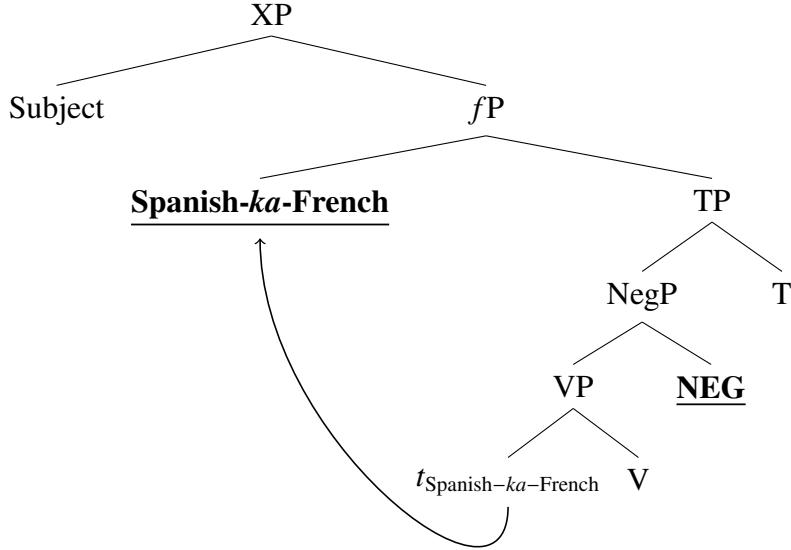
- (8) Ken doesn’t think that [Erina speaks Spanish or French]. (NEG>OR)

Given these observations, the unavailability of the NEG>OR reading in (3), if real, should be ascribed instead to some syntactic difference(s) between the disjunctive sentences in Japanese (3) and English (6).

Goro (2007, 2024) argues that the disjunctive object obligatorily moves out of VP because Japanese *ka* is a Positive Polarity Item (**PPI**) whose weak uninterpretable feature (in the sense of Chomsky (1995)) must be checked in the specifier position of *fP*, which is higher than *NegP*. The analysis is illustrated in (9).

²Before these authors, a number of different proposals had been put forth to explain the obligatory wide scope phenomena. We refer the readers to Shibata (2015a) for those literature.

(9)

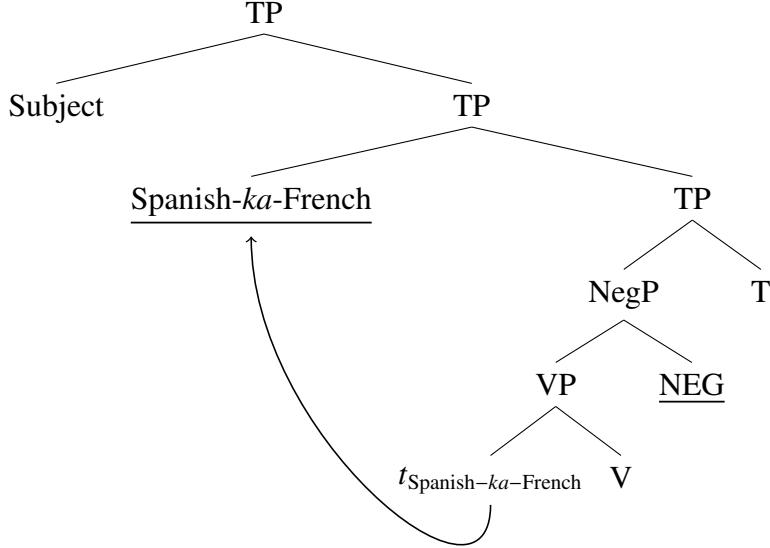


In a similar vein, Shibata (2015a) proposes an analysis which generally account for the obligatory wide scope phenomena in (3)-(5). For illustration, let us focus on his analysis of disjunction. First, Shibata (2015a) claims that objects with an accusative case particle *-o* must move to the TP-domain for licensing the uninterpretable feature on the particle, as depicted in (10a).^{3,4} In addition, Shibata (2015a) argues that the disjunctive object in question must be merged with the exhaustive operator O_{ALT} to be properly interpreted. Shibata claims that O_{ALT} must be acyclically merged to the disjunctive object after movement, as depicted in (10b). Shibata argues that this is because if O_{ALT} merged to the object in the base position, the movement of the object would result in an uninterpretable semantic representation with two identical operators in different positions (but see Goro 2024, p. 236, for arguments against this line of analysis). Consequently, a convergent derivation yields the representation in (10b), in which the disjunctive object with O_{ALT} cannot be reconstructed in the object position below negation.

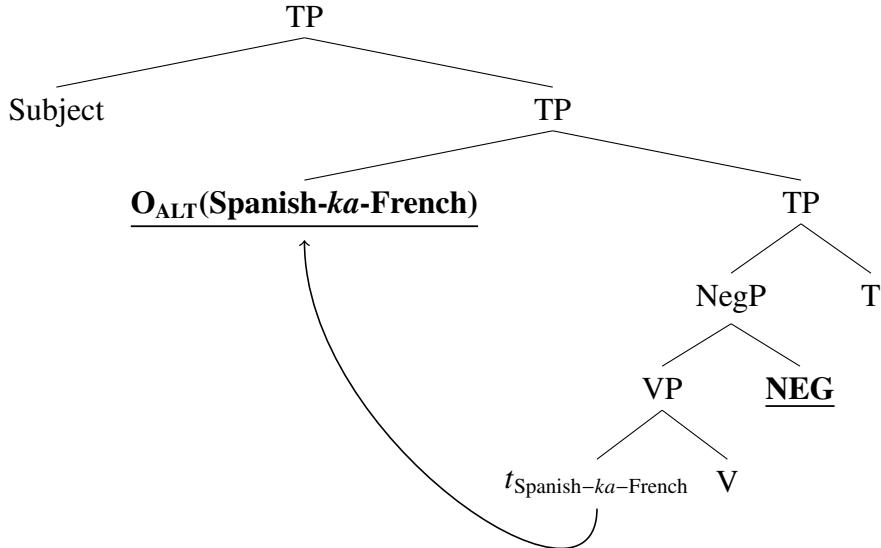
³See Section 4 in Shibata (2015a), for further details and empirical arguments for this analysis.

⁴Shibata (2015b) proposes that all overt vP-internal elements obligatorily move out of vP because they otherwise would interfere between predicative heads such as *v* and *V*, violating the adjacency requirement for *Morphological Merger* (see Shibata 2015b, p. 146, for the definition of structural adjacency in his analysis). The difference between Shibata (2015a) and Shibata (2015b) does not affect the discussions and proposals in this paper.

(10) a.



b



Overall, the analyses proposed by Goro (2007, 2024) and Shibata (2015a) successfully account for the obligatory wide scope phenomena. They can explain why *NP-ka NP* and *NP-dake/mo* in (3)-(5) do not take scope below negation.

3 Simpler syntax interacts with prosody and discourse

In this section, we investigate the syntax-discourse-prosody interactions and demonstrate that the apparently unavailable narrow scope readings of the scope elements with respect to negation are actually syntactically available but they have been masked by complex extra-syntactic factors.

In this connection, it is worth noting that it has occasionally been emphasized that the syntax of sentences must be studied by carefully controlling contexts and prosodies (see Fodor 2002a,b; Kitagawa and Fodor 2003, 2006; Kitagawa 2017; Kobayashi et al. 2024, among others). The methodological moral is most explicitly described in the *Implicit Prosody Hypothesis* by Fodor (2002a,b) as follows:

(11) *The Implicit Prosody Hypothesis:*

In silent reading, a default prosodic contour is projected onto the stimulus, and it may influence syntactic ambiguity resolution. Other things being equal, the parser favors the syntactic analysis associated with the most natural (default) prosodic contour for the construction. (Fodor 2002a, p. 113)

The takeaway here is that unless we carefully control the context, we are most likely to read or parse the sentences with the prosody that fits a salient/natural context that happens to come to our mind first. Accordingly, careful analyses of the nature of the solicited judgements (i.e., whether they reflect our pure syntactic knowledge or they result from complex interactions with non-syntactic factors) tend to be disregarded. In the following sections, we seriously take the methodological moral and reconsider data on disjunction/focus particles and negation.

3.1 Disjunctive objects can escape negation, but they don't have to

The sentence in (3) with a disjunctive object has been presented without specifying a particular context. Given the above discussion, however, we argue that the often reported judgement that the OR>NEG reading is predominant is in fact dependent on an implicit context, which for most researchers, comes to mind first. One such context is provided in (12), where what is under discussion among the interlocutors is what languages Erina does not speak. As an answer to (12Q), (12A) is naturally interpreted under the OR>NEG reading. The follow-up sentence in (12A'), which is compatible only with the OR>NEG reading, is perfectly acceptable. As for prosody, (12A) is most naturally read with a stress on the disjunctive object, as indicated by capitals.

- (12) Context: The speaker heard that Erina speaks more than 20 languages including most of the European languages, and wondered what languages she does not speak.

- Q: Erina-wa nanigo-o hanas-anai-no?
Erina-TOP what.language-ACC speak-NEG-Q
'Which language does Erina not speak?'
- A: Erina-wa SUPEINGO-KA FURANSUGO-O hanas-anai-yo. (^{OK}_{OR>NEG}, ^{NOT}_{NEG>OR})
Erina-TOP Spanish-or French-ACC speak-NEG-SFP
lit. 'Erina doesn't speak Spanish or French.'
- A': Dotti-ka-wa zettai hanasu hazu da kedo.
which-Q-TOP absolute speak must.be cop though
'Though I'm sure that she speaks either one of the languages.'

Now, the following example reveals that the judgement changes if the sentence is interpreted in a different context. In the context specified in (13), the immediate goal of the discourse is to find out whether Erina speaks at least one language, either Spanish or French. When (13A) is understood as an answer to (13Q), the most likely interpretation is the NEG>OR reading: 'No, it is not the case that she speaks Spanish or French'.⁵ (13A'), which contradicts the NEG>OR reading, is unacceptable.

- (13) Context: Taro is looking for someone who speaks Spanish or French, and Erina is a candidate who Taro knows speaks multiple languages.

- Q: Erina-wa supeingo-ka furansugo-o hanasu-no?
Erina-TOP Spanish-or French-ACC speak-Q
'Does Erina speak Spanish or French?'
- A: Erina-wa supeingo-ka furansugo-o HANAS-anai-yo. (^{??}_{OR>NEG}, ^{OK}_{NEG>OR})
Erina-TOP Spanish-or French-ACC speak-NEG-SFP
lit. 'Erina doesn't speak Spanish or French.'

⁵We credit this novel observation to anonymous (p.c.).

- A': #Furansugo-wa hanasu rasii kedo.
 French-CONT speak seem though
 'I heard that she speaks French, though.'

The judgement becomes more stable and varies to a lesser extent when we place an emphatic stress on the verb (and perhaps with the disjunctive phrase deaccented globally). The contrast between (12A) and (13A) is clear, which shows that whether the disjunctive element can be interpreted inside the scope of negation depends on the context and prosody.⁶

Let us consider another example in (14). With the context specified in mind, Ken's utterance naturally allows the NEG>OR reading that it is not the case that he ate potstickers or peperoncino spaghetti. More precisely, it is most likely to be understood as an utterance which rejects Risa's conjecture that Ken ate either potstickers or peperoncino spaghetti. If (14A) had only the OR>NEG reading, Ken's second utterance would not sound contradictory.

- (14) Context: When Risa met Ken, she realized that his breath smells like garlic. Risa knew that Ken often goes to a *ramen* shop and an Italian restaurant. For this reason, she suspected that he had eaten either potstickers or peperoncino spaghetti and asked:

- Risa: Gyooza-ka Peperonchiino tabe-ta-desyo?
 potsticker-or peperoncino.spaghetti eat-PST-didn't.you
 'Did you eat potstickers or peperoncino spaghetti, didn't you?'
 Ken: Gyooza-ka peperonchiino TABE-te-nai-yo. (^{NOT}_{OR}>NEG, ^{OK}_{NEG}>OR)
 potsticker-or peperoncino.spaghetti eat-ASP-NEG-SFP
 lit. 'I didn't eat potstickers or peperoncino spaghetti.'
 Ken: #Gyooza-wa tabe-ta kedo.
 potsticker-CONT eat-PST though
 'I ate potstickers, though.'

These results show that a disjunctive element attached to the object NP can be interpreted inside the scope of its clausemate negation, contrary to what has been taken for granted in the literature.

However, our story does not end here. We must address the question of why the NEG>OR reading has been overlooked in the literature. We suggest that when we give judgements on sentences such as (3) without specifying a context, the context in (13) rarely comes to our mind due to pragmatic unnaturalness. That is to say, while the NEG>OR reading provides a negative answer to (13Q), cooperative language users would choose to answer the question more directly by sentences such as (15a) and (15b).

- (15) a. Erina-wa **sueingo-mo furansugo-mo** hanas-anai-yo.
 Erina-TOP Spanish-also French-also speak-NEG-SFP
 'Erina speaks neither Spanish nor French.'
 b. Erina-wa **dotti-mo** hanas-anai-yo.
 Erina-TOP which-also speak-NEG-SFP
 'Erina speaks neither language.'

When compared to these sentences, (13A) with the NEG>OR reading answers the question rather indirectly and hence it is pragmatically more unnatural. In fact, such an exchange as (13Q-A) is so unnatural that it may not be observed in real language use. In this respect, we normally do not imagine the context in (13) because stating that Erina speaks neither languages by answering that it is not the case that she speaks Spanish or French (i.e., NEG>OR) is pragmatically, odd to begin with. Note that in (13), the OR>NEG reading of (13A) is also excluded since it does not provide an answer to (13Q). That is, the OR>NEG reading does not entail that Erina speaks one of the languages. Logically

⁶The judgement in (13) is supported by an informal survey we conducted. Six native speakers of Japanese we consulted, all of whom work in generative linguistics, agreed that the NEG>OR reading is obtained in (13A).

speaking, the OR>NEG reading leaves open the possibility that she speaks neither (see Tanabe and Hara 2021). This may be another reason why the context in (13) is less likely to come to our minds.

In contrast, the OR>NEG reading is more salient in (3) because the exchange in (12Q-A) is pragmatically more natural than the exchange in (13Q-A). Although (12A) does not fully resolve (12Q), it is acceptable in a situation where the utterer of (12A) does not remember which language Erina does not speak (see also Gualmini et al. 2008, whose experimental results suggest that a preference for a certain scope reading is significantly affected by contexts specified by Questions Under Discussion in the sense of Roberts (2012)).

As Kitagawa and Fodor (2006, p. 337) put it, “not everyone is good at thinking up such a context when none is provided. That is not a part of normal language use. Hence out-of-context judgments are more variable since they depend on the happenstance of what might or might not spring to the mind of the person making the judgment.” In the case at hand, the OR>NEG reading has been reported as the only interpretation in (3) because such a context exemplified in (13) and (14) does not spring to our mind, and thus the sentence was not read with the prosody indicated in (13A). As a result, the NEG>OR reading escaped our attention most (if not all) of the time.

Given the above discussion, let us turn to the data in (16) from Goro (2024). Goro observes that when a disjunctive object is contained in the antecedent of a conditional sentence, the disjunction somehow takes scope below its clausemate negation. The most salient interpretation of (16) is ‘(If you don’t speak French) AND (If you don’t speak Spanish), you’ll be in trouble (i.e., NEG>OR).

- (16) [Mosi furansugo-ka supeingo-o hanas-e-nai-to] komaru-yo.
 if French-or Spanish-ACC speak-can-NEG-that be.in.trouble-SFP
 lit. ‘If you don’t speak French or Spanish, you’ll be in trouble.’ ([?]OR>NEG, ^{OK}NEG>OR)

(Goro 2024, p. 235)

Goro (2024) maintains that the disjunctive object in (16) also obligatorily moves out of the scope of negation, as in (9). Hence, under his analysis, (16) is an exceptional case, in which the NEG>OR structure is syntactically derived via head-raising of NEG above TP (see Kato 1997, for a NEG-raising analysis of conditionals which Goro (2024) adopts). Importantly, Goro argues that the NEG>OR reading never obtains in simple transitive clauses like (3). However, as we have seen above, this is not the case.

We argue that whether the disjunction in the conditional clause is interpreted inside the scope of negation or outside of it is also dependent on the context. First, the OR>NEG reading is obtained in the context in (17), where the people will be in trouble if Taro does not speak at least one language, either Spanish or French. The OR>NEG reading is supported by the observation that (17B3), which contradicts the NEG>OR reading of the conditional, is acceptable. Goro’s NEG-raising analysis undergenerates the OR>NEG reading of (17B2) because NEG moves to a position higher than the direct object, as depicted in (10b).

- (17) A: Asita-no kankoo-annai-wa Taroo-ga eigo-o hanas-e-nai nara
 tomorrow-GEN sightseeing-guide-TOP Taro-NOM English-ACC speak-can-NEG if
 komaru naa.
 be.in.trouble PRT
 ‘If Taro cannot speak English, we will be in trouble in tomorrow’s tour guide.’
 B1: Iya, asita-no kankookyaku-wa speinzin-to-furansuzin da-yo.
 no tomorrow-GEN tourists-TOP Spanish-and-French COP-SFP
 ‘In fact, the tourists we are going to guide tomorrow are Spanish and French.’
 B2: Dakara [Mosi Taro-ga FURANSUGO-KA SUPEINGO-O hanas-e-nai-to]
 so if Taro-NOM French-or Spanish-ACC speak-can-NEG-that

komaru-ne. (^{OK}_{OR>NEG}, ^{NOT}_{NEG>OR})

be.in.trouble-SFP

lit. ‘So, if Taro doesn’t speak French or Spanish, we’ll be in trouble.’

B3: Dotti-ka dake hanas-e-naku-temo motiron komaru.

which-Q only speak-can-NEG-even of.course be.in.trouble

‘Even if it is only one of the languages that he cannot speak, we will of course be in trouble.’

In contrast, if the context is such that the person will be in trouble if they speak neither language, the NEG>OR reading is obtained. Consider (18). B’s first utterance is naturally interpreted as ‘(If you don’t speak Japanese) AND (If you don’t speak English), you’ll be in trouble (i.e., NEG>OR). Indeed, (18B2) sounds contradictory.

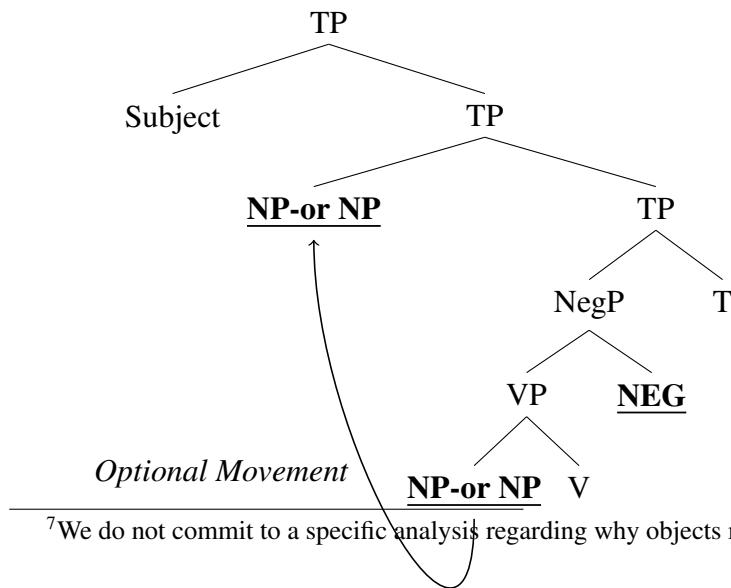
(18) Context: In Japan, most people speak only Japanese and some people speak Japanese and English. On the other hand, there aren’t many people who speak languages other than Japanese and English. A is going to Japan for sightseeing, and B tells A:

- B1: Nihon-ni iku nara, [nihongo-ka eigo-o hanas-e-nai-to] komaru-yo.
 Japan-to go if Japanese-or English-ACC speak-can-NEG-COMP be.in.trouble-SFP
 lit. ‘If you don’t speak Japanese or English, you’ll be in trouble.’
 (^{NOT}_{OR>NEG}, ^{OK}_{NEG>OR})
- B2: #Eigo-dake hanas-e-naku-temo komaru kedo-ne.
 English-only speak-can-NEG-even be.in.trouble though-SFP
 ‘Even if you cannot speak only English, you will be in trouble.’

Overall, the observations in this section have shown that disjunctive objects can be interpreted not only outside the scope of negation but also inside the scope of negation. The narrow scope reading of Japanese disjunction *ka* in cases such as (3) was overlooked in the previous studies because the complex interactions between pragmatic and prosodic factors, we argue, had not been carefully controlled.

The availability of the wide and narrow scope of the disjunction relative to negation indicates that the syntax of the sentence in (3) with a disjunctive object is maximally simple, as shown in (19). The object bearing the disjunction is merged with V and it can optionally undergo movement out of the negative scope. When the object NP stays in-situ, it is interpreted inside the scope of negation and when it undergoes movement, it is interpreted outside the scope of negation.⁷

(19)



⁷We do not commit to a specific analysis regarding why objects move.

Note that even if movement of the object is obligatory, as argued by Goro (2007) and Shibata (2015a), there is no reason to assume that it cannot undergo reconstruction.⁸ Accordingly, regardless of whether object movement is optional or obligatory, the simpler syntax in (19) is compatible with our observation that both readings concerning disjunction are derived.

3.2 NP-dake/mo and negation

In addition to disjunction, it has been claimed that Japanese focus particles like *-dake* ‘only’ and *-mo* ‘also’ take only wide scope with respect to their clause-mate negation (Hasegawa 1994; Aoyagi 1999, among others).⁹ Relevant examples in (4) and (5) are repeated here as (20) and (21), respectively.

- (20) Erina-wa yasai-**dake** tabe-nakat-ta. (^{OK}_{ONLY>NEG}, ^{??}_{NEG>ONLY})
 Erina-TOP vegetable-only eat-NEG-PST
 lit. ‘Erina didn’t eat only vegetables.’
- (21) Erina-wa yasai-**mo** tabe-nakat-ta. (^{OK}_{ALSO>NEG}, ^{??}_{NEG>ALSO})
 Erina-TOP vegetable-also eat-NEG-PST
 lit. ‘Erina didn’t eat also vegetables.’

These observations are mysterious if the objects with the focus particles are base-generated in the object position below NegP. However, they can be explained by Shibata’s obligatory movement + anti-reconstruction analysis. Below, we present novel observations which reveal that *-dake* ‘only’ and *-mo* ‘also’ may take scope below negation once the context and prosody are properly controlled.

First, when researchers claim that only the ONLY>NEG reading is available, the judgement is based on contexts such as (22), where the sentence is read with a stress on the object. In the following context, what is under discussion is what Erina did not eat, and her first utterance is interpreted as clarifying that it is only vegetables that she did not eat at the party (i.e., ONLY>NEG). Thus, the follow-up sentence, which entails the existence of other foods that she did not eat, sounds contradictory.

- (22) Context: Ren heard that Erina didn’t eat much in the dinner party, so he asks her:
 Ren: Kinoo, paatii-de anmari tabe-nakat-ta-no?
 yesterday party-at much eat-NEG-PST-Q
 lit. ‘Didn’t you eat much in the party yesterday?’
 Erina: Iya, YASAI-DAKE tabe-nakat-tan-da-yo. (^{OK}_{ONLY>NEG}, ^{NOT}_{NEG>ONLY})
 no vegetable-only eat-EAT-PST-COP-SFP
 lit. ‘No, I didn’t eat only vegetables.’
 Erina: #Niku-mo gohan-mo tabe-nakat-ta-yo.
 meat-also rice-also eat-NEG-PST-SFP
 ‘I ate some meat and rice as well.’

Here again, the judgement significantly changes according to contexts. Consider (23).

⁸Shibata (2015a) argues that the operator O_{ALT} is acyclically merged to the disjunctive object only after movement, hence it cannot be interpreted in-situ. However, Goro (2024, p. 236, fn 4) points out that when disjunction is interpreted inside the scope negation, O_{ALT} , whose function is to yield the exclusive-OR reading, is not necessary for the disjunction to be properly interpreted. This is because the exclusive-OR reading does not arise from the NEG>OR interpretation to begin with.

⁹If an accusative case particle *-o* attaches to the object, the ONLY>NEG reading becomes easier to get, as shown in (i) (Koizumi 1994).

- (i) Erina-wa yasai-dake-o tabe-nakat-ta. (ONLY>NEG, NEG>ONLY)
 Erina-TOP vegetable-only-ACC eat-EAT-NEG-PST
 lit. ‘Erina didn’t eat only vegetables.’

We leave investigations into cases involving *NP-dake-o* for future research.

context, the Ren's question is about whether it is the case that Erina ate only vegetables in the BBQ restaurant. As an answer to this question, Erina's first utterance, read with the indicated prosody, has the NEG>ONLY reading.¹⁰

- (23) Context: Ren saw Erina eating vegetables in a BBQ restaurant. He was surprised that she wasn't eating any meat, so the next day, he asks her:

Ren: Kinoo, yakinikuya-de yasai-dake tabe-ta-no?
yesterday BBQ.restaurant-in vegetable-only eat-PST-Q
lit. 'Did you eat only vegetables in the BBQ restaurant yesterday?'
Erina: YASAI-DAKE TABE-NAkat-ta-yo. (??ONLY>NEG, OK_{NEG>ONLY})
vegetable-only eat-EAT-PST-SFP
lit. 'I didn't eat only vegetables.'
Erina: Niku-mo gohan-mo tabe-ta-yo.
meat-also rice-also eat-PST-SFP
'I ate some meat and rice as well.'

This novel observation raises the question of why the ONLY>NEG reading has been reported as much more salient in (20). The reason may be that the NEG>ONLY reading requires a non-default prosody in (23), and when a particular prosody is not indicated, researchers normally do not read the sentence with such a peculiar prosody. On the other hand, the ONLY>NEG reading is obtained with the prosody in (22), but it seems to obtain without putting an emphatic stress on the object, as in (20). In other words, the ONLY>NEG reading is obtained with the default prosody while the NEG>ONLY reading isn't. This is why the NEG>ONLY reading has been overlooked in the literature.

Let us turn to data on the focus particle *-mo* 'also'.¹¹ First, the ALSO>NEG reading, which has been argued to be the only interpretation of (21), is salient in (24). In this context, (24A) is intended to give an answer to (24Q), which asks whether Ken is dating Rina, and a stress is put on the object alone. (24A) seems to have only the ALSO>NEG reading 'Ken is not dating Yumi anymore, and it is also Rina that he is not dating', and (24A') naturally follows.

- (24) Context: Ken broke up with his girlfriend, Yumi. However, the rumor has it that Ken started dating another girl Rina.

Q: Ken-wa Yumi-to wakare-ta rasii keto, ima-wa Rina-to tukiatteru-no?
Ken-TOP Yumi-with break.up-PST seem but now-TOP Rina-with dating-Q
'I heard that Ken broke up with Yumi but, is he dating Rina now?'
A: Ken-wa RINA-TO-MO tukiatte-nai-yo. (ALSO>NEG, ??NEG>ALSO)
Ken-TOP Rina-with-also dating-NEG-SFP
lit. 'Ken is not also dating Rina.'
A': Yumi-to-mo moo tukiatte-nai rasii-yo.
Yumi-with-also no.longer dating-NEG seem-SFP
'I heard that Ken is no longer dating Yumi, either.'

Now, (25) shows that *-mo* 'also' is interpreted inside the scope of negation in a different context. In (25), what is under discussion is whether it is the case that in addition to Yumi, Ken is also dating Rina. (25A) has the interpretation that it is not the case that Ken is also dating Rina (i.e., NEG>ALSO). The interpretation is salient when the object is deaccented and the V-NEG complex is stressed.¹²

¹⁰Note that it is natural to include the negation within the stress domain as indicated in the answer in (23). On the other hand, in (13A), where the verb is *hanasu* 'speak', it is more natural to read the answer with stress only on the verb. We are not concerned with the question of why such differences in stress domains occur as they do.

¹¹*-mo* in Japanese also means 'even'. However, in this paper, we present data in contexts in which *-mo* is unambiguously interpreted as an additive particle.

¹²Here again, it is natural to stress the negation along with the verb in (25A). If we place a stress only on the verb, the NEG>ALSO reading may not be obtained.

With this particular context in mind, (25A') sounds unnatural, though it does not necessarily sound contradictory.

- (25) Context: Ken has a girlfriend named Yumi, but the rumor has it that he is also dating Rina.

Q: Ken-wa Rina-to-mo tukiatteru-no?

Ken-TOP Rina-with-also dating-Q

'Is Ken also dating Rina?'

A: Ken-wa Rina-to-mo TUKIATTE-NAI-yo. (^{??}_{ALSO>NEG}, ^{OK}_{NEG>ALSO})

Ken-TOP Rina-with-also dating-NEG-SFP

lit. 'Ken is not also daitng Rina.'

A': ??Yumi-to-mo moo tukiatte-nai rasii-yo.

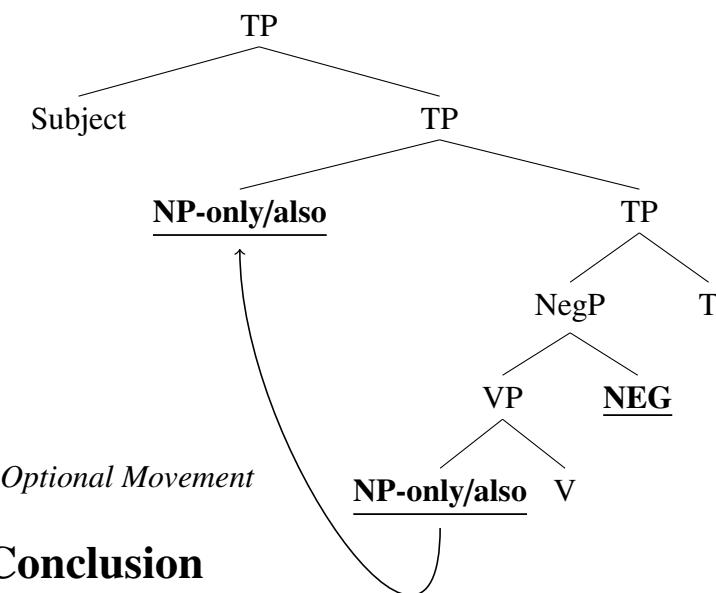
Yumi-with-also no.longer dating-NEG seem-SFP

'I heard that Ken is no longer dating Yumi, either.'

Again, the question is why the NEG>ALSO reading has not been detected. We suggest that the answer lies in the prosodic difference between (24A) and (25A). The former may be the default prosody in that the focus-marked object is stressed. The latter deviates from this prosody in that the focus-marked object is deaccented and the verbal complex is read with stress on it.

We have shown that once the context and prosody are controlled for, NP-*mo* and NP-*dake* can be interpreted inside the scope of their clausemate negation. Given this, we propose that the syntax of (20) and (21) looks like (26). If the object stays in-situ, it yields the wide scope reading of negation. If it undergoes movement out of VP, it yields the narrow scope reading of negation.

- (26)



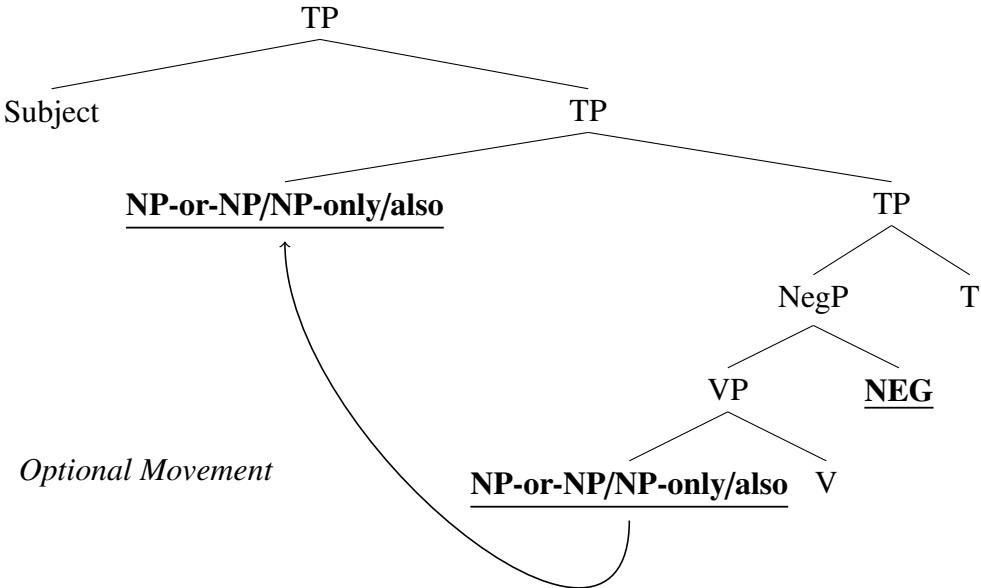
4 Conclusion

In this paper, we addressed the long standing problem of the obligatory wide scope phenomena in Japanese negative sentences. Previous studies have approached the issue by proposing analyses based mainly on syntax and semantics. In our study, we approached the problem from a different angle. We seriously took into account the methodological moral emphasized by Kitagawa and Fodor (2003, 2006), and showed that the syntax-discourse-prosody interplay determines scope possibilities. More specifically, we provided novel observations that the alleged unavailability of the narrow scope readings of such elements as disjunction, focus particles -*dake* 'only' and -*mo* 'also' with respect to negation is only apparent. The data we presented reveals that when the sentence under investigation is read or parsed in an appropriate context with a suitable prosody, the scope elements attached to object NPs can actually take scope below their clausemate negation.

Based on the novel observations, we proposed that the syntax of the negative sentences involving

disjunctive objects and NP-*dake/mo* is maximally simple, as illustrated in (27). To be brief, as long as narrow syntax is concerned, NP-*ka* NP and NP-*dake/mo* can be interpreted both inside and outside the scope of their clause-mate negation as long as context and prosody make the readings available.

(27)



Unlike the previous analyses, all we need to assume is External Merge and Internal Merge whose application is not triggered or forced (i.e., they can apply freely); hence our analysis keeps to the Strong Minimalist Thesis (SMT) (SMT; Chomsky 2000 *et seq.*), which Narita and Fukui (2022) summarize as follows:¹³

(28) *The Strong Minimalist Thesis*

The faculty of language, or narrow syntax consists only of *Merge*, and it is an optimal solution to legibility conditions imposed by language-external cognitive systems that interface with language.
(cf. Narita and Fukui 2022, p. 12)

In this sense, our analyses satisfy both descriptive and explanatory adequacy, providing a “genuine explanation” (in the sense of Chomsky 2019, 2021, 2023) for the apparently problematic wide-scope phenomena. Hopefully, future research on scopal interactions fully takes into account the syntax-prosody-discourse interplay and solves remaining problems in ways that maintain the simplest theory of *Free-MERGE syntax* advocated here.

References

- Aoyagi, Hiroshi. 1999. On association of quantifier-like particles with focus in Japanese. In *Linguistics: In search of the human mind*, ed. Masatake Muraki and Enoch Iwamoto, 24–56. Tokyo: Kaitakusya.
- Chomsky, Noam. 1995. Categories and transformations. In *The minimalist program*, 201–363. Cambridge, Mass: The MIT Press.
- Chomsky, Noam. 2000. Minimalist inquiries. In *Step by step: essays on minimalist syntax in honor of Howard Lasnik*, ed. Roger Martin, David Michaels, and Juan Uriagereka, 89–155. Cambridge, Mass.: MIT Press.

¹³For a detailed discussion on SMT, see Freidin (2021).

- Chomsky, Noam. 2004. Beyond explanatory adequacy. In *The cartography of syntactic structures: Vol. 3. Structure and beyond*, ed. Adriana Belletti, 104–131. Oxford: Oxford University Press.
- Chomsky, Noam. 2019. Some puzzling foundational issues: The reading program. *Catalan Journal of Linguistics* Special Issue:263–285.
- Chomsky, Noam. 2021. Minimalism: Where are we now, and where can we hope to go. *Gengo Kenkyu* 160:1–41.
- Chomsky, Noam. 2023. Genuine explanation and the strong minimalist thesis. *Cognitive Semantics* 8:347–365.
- Fodor, Janet D. 2002a. Prosodic disambiguation in silent reading. In *Proceedings of the Thirty-second Annual Meeting of the North-Eastern Linguistic Society*, ed. Masako Hirotani, 113–137. University of Massachusetts, Amherst: GLSA.
- Fodor, Janet D. 2002b. Psycholinguistics cannot escape prosody. In *Proceedings of the Speech Prosody 2002 Conference*, 83–88. Aix-en-Provence, France.
- Freidin, Robert. 2021. The strong minimalist thesis. *Philosophies* 6:97.
- Funakoshi, Kenshi. 2013. Disjunction and object drop. *Tampa Papers in Linguistics* 4:11–20.
- Goro, Takuya. 2007. Language specific constraints on scope interpretation in first language acquisition. Doctoral dissertation, University of Maryland, College Park.
- Goro, Takuya. 2024. Cross-linguistic variation in the scope of disjunction: Positive polarity, or anti-reconstruction? In *Polarity-sensitive expressions: Comparisons between Japanese and other languages*, ed. Hideki Kishimoto, Osamu Sawada, and Ikumi Imani, 225–258. Berlin: De Gruyter Mouton.
- Gualmini, Andrea, Sarah Hulsey, Valentine Hacquard, and Danny Fox. 2008. The question–answer requirement for scope assignment. *Natural Language Semantics* 16:205–237.
- Han, Chung-hye, Dennis Storoshenko, Ryan, and Yasuko Sakurai. 2004. Scope of negation and clause structure in Japanese. In *Proceedings for Berkeley Linguistics Society*, ed. Marc Ettlinger, Nicholas Fleisher, and Mischa Park-Doob, volume 30, 118–129.
- Hasegawa, Nobuko. 1994. Economy of derivation and A'-movement in Japanese. In *Current topics in English and Japanese*, ed. Masaru Nakamura, 1–26. Tokyo: Hituzi Syobo.
- Kataoka, Kiyoko. 2006. *Nihongo hiteibun-no koozoo [The structure of Japanese negative sentences]*. Tokyo: Kuroshio Publishers.
- Kato, Yasuhiko. 1985. *Negative sentences in Japanese*. Tokyo: Sophia University.
- Kato, Yasuhiko. 1997. Negation, focus, and interface economy. *Sophia Linguistica : Working papers in linguistics* 41:29–36.
- Kishimoto, Hideaki. 2007. Negative scope and head raising in Japanese. *Lingua* 117:247–288.
- Kishimoto, Hideaki. 2008. On the variability of negative scope in Japanese. *Journal of Linguistics* 44:379–435.
- Kishimoto, Hideaki. 2018. Projection of negative scope in Japanese. *Gengo Kenkyu* 153:5–39.

- Kitagawa, Yoshihisa. 2017. Interfacing syntax with sounds and meanings. In *Handbook of Japanese syntax*, ed. Masayoshi Shibatani, Shigeru Miyagawa, and Hisashi Noda, 497–552. Berlin: De Gruyter Mouton.
- Kitagawa, Yoshihisa, and Janet D Fodor. 2003. Default prosody explains neglected syntactic analyses in Japanese. In *Japanese/Korean linguistics 12*, ed. William McClure, 267–279. Stanford, CA: CSLI Publications.
- Kitagawa, Yoshihisa, and Janet D Fodor. 2006. Prosodic influence on syntactic judgements. In *Gradience in grammar: Generative perspective*, ed. Gisbert Fanselow, Caroline Féry, Matthias Schlesewsky, and Ralf Vogel, 336–354. Oxford: Oxford University Press.
- Kobayashi, Ryoichiro, Tomoya Tanabe, and Yosuke Sato. 2024. Focusing on the diagnostic validity of the adjunct test in Japanese ellipsis: Where prosody meets information structure. In *Proceedings of the 25th Seoul International Conference on Generative Grammar (SICOGG 25)*, ed. Tae Sik Kim, 60–73. Seoul: The Korean Generative Grammar Circle.
- Koizumi, Masatoshi. 1994. Nominative objects: The role of TP in Japanese. In *Formal Approaches to Japanese Linguistics (FAJL) 1*, ed. Masatoshi Koizumi and Hiroyuki Ura, 211–230. Cambridge, MA: MIT Working Papers in Linguistics.
- Kuno, Susumu. 1980. The scope of the question and the negation in some verb-final languages. In *Papers from the Sixteenth Regional Meeting, Chicago Linguistic Society*, ed. Jody Kreiman and Almerindo E. Ojeda, 155–169. Chicago: University of Chicago.
- Kuno, Susumu. 1983. *Shin nihon bunpoo kenkyu [New Japanese grammar study]*. Tokyo: Taisyukan Shoten.
- Maeda, Masako. 2019. Argument ellipsis and scope economy. *Syntax* 22:419–437.
- Narita, Hiroki, and Naoki Fukui. 2022. *Symmetrizing syntax: Merge, minimality, and equilibria*. London/New York: Routledge.
- Oku, Satoshi. 2016. A note on ellipsis-resistant constituents. *Nanzan Linguistics* 11:57–70.
- Otani, Shuki. 2021. Ellipsis of disjunction for LF-copy analysis. In *Japanese/Korean Linguistics 28*, ed. Hae Sung Jeon. Stanford, CA: CSLI Publications.
- Roberts, Craige. 2012. Information structure in discourse: Towards an integrated formal theory of pragmatics. *Semantics and Pragmatics* 5:1–69.
- Saito, Mamoru. 2017. Ellipsis. In *Handbook of Japanese syntax*, ed. Masayoshi Shibatani, Shigeru Miyagawa, and Hisashi Noda, 701–750. Berlin: Mouton de Gruyter.
- Sato, Yosuke, and Masako Maeda. 2021. Syntactic head movement in Japanese: Evidence from verb-echo answers and negative scope reversal. *Linguistic Inquiry* 52:359–376.
- Shibata, Yoshiyuki. 2015a. Negative structure and object movement in Japanese. *Journal of East Asian Linguistics* 24:217–269.
- Shibata, Yoshiyuki. 2015b. Exploring syntax from the interfaces. Doctoral dissertation, University of Connecticut, Storrs.
- Shoji, Atsuko. 1986. *Dake and sika in Japanese: Syntax, semantics and pragmatics*. Doctoral dissertation, Cornell University, Ithaca, NY.

- Takubo, Yukinori. 1985. On the scope of negation and questions in Japanese. *Journal of Japanese Linguistics* 10:87–115.
- Tanabe, Tomoya, and Yurie Hara. 2021. Question under Discussion-based analysis of Japanese ellipses. In *The meeting handbook of the 162nd Meeting of the Linguistic Society of Japan*, 329–335. Online.
- Tomioka, Satoshi. 2014. Remarks on missing arguments in Japanese. In *Formal Approaches to Japanese Linguistics: Proceedings of FAJL 7*, ed. Shigeto Kawahara and Mika Igarashi, 251–263. Cambridge, Mass: MIT Working Papers in Linguistics.