

Scope and Presuppositionality of Object QPs in Japanese *

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This paper proposes that the syntactic structure of clauses in Japanese has a functional projection where a presuppositional object QP is licensed, and that this functional projection also serves as a position where the scope of the object QP is determined. The paper also discusses a piece of empirical consequence of the proposal.

Keywords: Scope, Presuppositionality, Syntax

1. Introduction

This paper proposes that the syntactic structure of Japanese clauses has a functional projection that exclusively accommodates presuppositional DPs, and that the functional projection also serves as a position where the scope of an object QP is determined. In Section 2 we review Shibata's (2015) proposal on the scope of an object QP and negation, and point out an inadequacy of his proposal. Section 3 proposes a functional projection that checks the [Pres(upposition)] feature of object DPs, and shows that the proposal can account for the cases that cannot be explained by Shibata (2015). Section 4 shows that our proposal can nicely account for the facts pointed out by Ishii (1997, 1998) about the form and the presuppositionality of QPs with a floating quantifier.

2. Scope of an Object QP and Negation

Shibata (2015) provides an extensive analysis of the scope of an object QP and negation, based on the observation that an object QP can easily take wide scope over negation in Japanese.

- (1) Taroo-wa go-nin-izyoo-no gakusei-o sikar-anakat-ta
Taro-Top 5-Cl-or.more-Gen student-Acc scold-Neg-Past
[ambiguous: 5 or more > Neg, Neg > 5 or more]

(Shibata (2015))

* This paper was originally presented as part of the talk given at *The 40th Conference of Tsukuba English Linguistics Society* held on November 30, 2019. I would like to thank Yukio Hirose, Seiji Iwata, Masaru Kanetani, and Masaharu Shimada for comments and discussions. This work is supported by a grant-in-aid from Japan Society for the Promotion of Science (2018-2021, Scientific Research (C), Project #18K00640, Head investigator: Shinsuke Homma). Any remaining error is my own.

In order to account for this fact, Shibata proposes that an object in Japanese must be obligatorily raised over negation into the functional projection called PrtP (Particle Phrase), where the object QP has its Accusative Case particle *-o* licensed. This process is illustrated below:

- (2) [TP T [PrtP [NP NP-*o*]_i Prt [NegP Neg [VP *t*_i V [... *t*_i ...]]]]]

(Shibata (2015))

Since this movement raises the object over negation, Shibata argues, it allows the object to take scope over negation.

Shibata's proposal that movement of the object QP into PrtP allows it to have wide scope over negation predicts that *any* object QP must be able to take wide scope over negation. Contrary to this prediction, however, there are at least two types of object that strongly favor narrow scope under negation. The first type is a bare DP that has an existential interpretation. As the following example shows, the object existential bare DP may not take wide scope over negation. The sentence cannot be interpreted as "There are some students who were not praised by Prof. Yamada." It can only refer to the situation where Prof. Yamada praised no students.

- (3) Yamada-sensei-wa *gakusei-o* home-nakat-ta
 Yamada-teacher-Top student-Acc praise-Neg-Past
 'Prof. Yamada didn't praise students.'
 [unambiguous: * \exists > Neg, Neg > \exists]

The second type of object that has difficulty taking wide scope over negation is a DP with a floating quantifier (henceforth, an FQ) in the prenominal position.

- (4) a. Keisatu-wa *san-nin-izyoo-no toboohan-o* taihosi-nakat-ta
 police-Top 3-Cl-or.more-Gen fugitive-Acc arrest-Neg-Past
 'The police did not arrest three or more fugitive criminals.'
 [ambiguous: 3 or more > Neg, Neg > 3 or more]
 b. Keisatu-wa *toboohan-o san-nin-izyoo* taihosi-nakat-ta
 police-Top fugitive-Acc 3-Cl-or.more arrest-Neg-Past
 [ambiguous: 3 or more > Neg, Neg > 3 or more]
 c. Keisatu-wa *san-nin-izyoo toboohan-o* taihosi-nakat-ta

police-Top 3-Cl-or.more fugitive-Acc arrest-Neg-Past
 [unambiguous: *3 or more > Neg, Neg > 3 or more]

The object QP with a prenominal FQ in (4c) may only take, or at least strongly favors, narrow scope under negation, while the QP with a prenominal quantifier ((4a)) and the QP with a post-nominal FQ ((4b)) may take either narrow or wide scope with respect to negation.

The existence of at least two kinds of object favoring narrow scope thus poses a problem for Shibata's (2015) claim that movement of the object QP into PrtP allows it to have wide scope over negation.

3. Scope and Presuppositionality of Object QPs

The preceding section pointed out that at least two particular types of object QP cannot take wide scope over negation, contrary to the prediction by Shibata's (2015) analysis. But then why is it that these two types of object QP cannot take wide scope? I would like to point out that it is the particular semantic property called "presuppositionality" that allows object QPs to have wide scope.

First, consider the referential property of existential bare DPs.

- (5) Yamada-sensei-wa *gakusei-o* home-ta
 Yamada-teacher-Top student-Acc praise-Past
 'Prof. Yamada praised students.'

The object bare DP *gakusei-o* can have an existential reading and thus can be paraphrased as *nan-nin-ka-no gakusei-o* 'some students.' However, while this latter QP may refer either to a subset of the set of students that the speaker has in mind (the presuppositional reading), or to some students that are newly introduced into the discourse (the nonpresuppositional reading), the object bare DP *gakusei-o* may only refer to some students newly introduced into the discourse (the nonpresuppositional reading).

Second, consider how the three types of QP in (4) are interpreted:

- (6) a. Keisatu-wa *san-nin-izyoo-no tooboohan-o* taihosi-ta
 police-Top 3-Cl-or.more-Gen fugitive-Acc arrest-Past
 'The police arrested three or more fugitive criminals.'
 b. Keisatu-wa *tooboohan-o san-nin-izyoo* taihosi-ta

- police-Top fugitive-Acc 3-Cl-or.more arrest-Past
- c. Keisatu-wa *san-nin-izyoo tooboohan-o* taihosi-ta
 police-Top 3-Cl-or.more fugitive-Acc arrest-Past

While all these three types of object QP have a nonpresuppositional reading, where they refer to fugitives that are newly introduced into the discourse, there is a difference among them in the availability of a presuppositional reading. The object QP with a prenominal quantifier in (6a) may have a presuppositional reading: it can refer to a subset of fugitives in the set of fugitives already known to the speaker and the addressee (Homma et al. (1992)). The object QP with a post-nominal FQ in (6b) can also be interpreted as presuppositional, but the QP with a prenominal FQ in (6c) cannot have the presuppositional reading (Ishii (1997, 1998)).

Thus the above observation leads us to the generalization that only presuppositional object QPs may have wide scope over negation. Now our next task is to explain why this is so.

4. A Functional Projection for Presuppositional Objects

In this section I propose that there is a functional projection above Shibata's (2015) PrtP and below TP which attracts what I call the feature [Pres], the feature that is borne exclusively by the presuppositional DPs. I call the relevant projection Pres(u)positional)P. Thus the structure above VP of a sentence in Japanese looks like the following:¹

- (7) [TP DP_{SUBJ} [vP ... [PresP ... [PrtP ... [VP DP_{OBJ} V]]]]]

The head of PresP accommodates the feature [Pres], which attracts the movement of the object DP with the feature [Pres]. I also assume that those DPs that have a presuppositional interpretation optionally bear the [Pres] feature, which enters into a checking relation with the corresponding [Pres] feature in the Pres head.

This hypothesis is supported by the fact that in Dutch optional movement of the object is triggered by the presuppositionality of it. Consider:

- (8) a. dat de politie gisteren veel taalkundigen opgepakt heeft
 that the police yesterday many linguists arrested has

¹ The proposal illustrated in this section is a modified version of the one presented in Homma (2019), where the [Pres] and the [Prt] feature are assumed to appear in a single head.

- ‘that the police arrested many linguists yesterday’
- b. dat de polite *veel taalkundigen* gisteren opgepakt heeft
 that the police many linguists yesterday arrested has
 (De Hoop (1996))

While the object QP *veel taalkundigen* ‘many linguists’ is adjacent to the verb *opgepakt* ‘arrested’ in (8a), the object QP occurs to the left of the adverb *gisteren* ‘yesterday’ in (8b). As observed in De Hoop (1996), among others, this difference in word order affects the interpretation of the object QP. The object QP in (8a) has two different readings, a presuppositional and a nonpresuppositional reading. It can refer to many in the set of linguists established in the preceding context (the presuppositional reading), while it can also have the reading where such a particular set of linguists is not assumed to exist (the nonpresuppositional reading). In contrast, the object QP in (8b) is obligatorily interpreted as presuppositional: it may only refer to a subset of the particular set of linguists. In fact, a bare plural DP, which can only have a nonpresuppositional reading, must be adjacent to the verb, as in (9):

- (9) a. dat de polite gisteren *taalkundigen* opgepakt heeft
 that the police yesterday linguists arrested has
 ‘that the police arrested many linguists yesterday’
- b. *dat de polite *taalkundigen* gisteren opgepakt heeft
 that the police linguists yesterday arrested has
 (De Hoop (1996))

This fact can be captured by positing a functional projection that checks the feature having to do with the presuppositionality of the object DP. An object with a presuppositional reading may have the feature [Pres], which enters into the checking relation with the corresponding [Pres] in the head Pres by driving the movement of the object into [Spec PresP]. In contrast, a nonpresuppositional DP cannot bear the [Pres] feature and thus cannot move into [Spec Pres]. This is why the nonpresuppositional reading is not allowed in (8b) and why a bare plural DP cannot move to the left of the adverb in (9b).

Now let us consider how the above proposal can account for the scope facts in Japanese in (3) and (4). Since the object QPs in (4a) and (4b) have a presuppositional reading, they can be raised into [Spec Prt] for Case-checking and then into [Spec Pres] to have their [Pres] feature checked. They may also remain in [Spec Prt] without moving to [Spec Pres] since the [Pres] feature can be

borne optionally and that these QPs may also have a nonpresuppositional reading. These two derivations are illustrated in (10):

- (10) a. [keisatu-wa [_{PresP} [**3-nin-izyoo-no tooboohan-o**]_i [_{PrtP} *t_i* [_{NegP} [_{VP} *t_i* V] **Neg**]]] -ta]
- \uparrow _____ | \uparrow _____ |
 [Pres] checked [Prt] checked
- b. [keisatu-wa [_{PresP} [_{PrtP} [**3-nin-izyoo-no tooboohan-o**]_i [_{NegP} [_{VP} *t_i* V] **Neg**]]] -ta]
- \uparrow _____ |
 [Prt] checked

Then I adopt the principle of scope determination proposed in Homma (2015):

(11) Scope Principle:

QP₁ takes scope over QP₂ iff the head of the SI chain of QP₁ c-commands the head of the SI chain of QP₂.²

An SI position and an SI chain are defined as follows:

(12) SI positions:

An *SI position* of X is a position where X's semantic interpretation is established by

- i) a grammatical feature that is semantic in nature or
- ii) a thematic role.

(13) SI chains and SI heads:

An *SI chain* of X consists of the SI positions in the set of positions of the syntactic chain of X. The head of an SI chain (the *SI head*) is the topmost SI position of the SI chain.

Briefly put, if a QP's final destination in the structure checks the QP's feature that is relevant to the QP's semantic interpretation, that destination is the position where the QP takes scope. If not, then the second highest position where the QP's semantically relevant feature is checked is its scope position. If a QP has no such feature checked, then its underlying position, where its thematic role is determined, is where it takes scope.

² For the sake of convenience, the term "QP" in (11) refers not only to quantificational DPs, but also to such scope-taking elements as negation and modal expressions.

In (10), [Spec Pres] is the position where the object QP's scope is determined, since the feature [Pres] has to do with the object's semantic interpretation, but [Spec Prt] is not since the feature for Case-particles only has to do with the object's morpho-syntactic property, not its semantic interpretation. Thus the object in [Spec Pres] in (10a) takes wide scope over negation, since the object has its scope determined there, while the scope position for the object in [Spec Prt] in (10b) is as low as its underlying position in VP since [Spec Prt] cannot be a scope position. This explains why the QPs in (4a) and (4b) may take wide and narrow scope over negation.

In contrast, the bare DP in (3) and the QP with a prenominal FQ in (4c) can only move as far as to [Spec Prt] and cannot reach [Spec Pres] since they lack a presuppositional reading and thus may not bear the [Pres] feature. Thus they take scope only in their underlying position in VP. This is why these two objects cannot take wide scope over negation.

5. An Empirical Consequence

In addition to a successful account of the correlation between presuppositionality and wide scope of object QPs, our proposal can also account for an interesting fact first pointed out by Ishii (1997, 1998) about the form of QPs with an FQ and their (non)presuppositionality.

Ishii (1997, 1998) observes that the object QP with a post-nominal FQ in (14) is ambiguous between a presuppositional and a nonpresuppositional interpretation.

- (14) John-ga isoide [urenokot-ta hon-o] san-satu kaesi-ta
 John-Nom quickly left. unsold-Past book-Acc 3-Cl return-Past
 'John returned three unsold books quickly.'
 [✓presuppositional, ✓nonpresuppositional]

(Ishii (1997, 1998))

The object *urenokot-ta hon-o san-satu* 'three unsold books' may either refer to three in the set of unsold books that the speaker has in mind (the presuppositional reading), or to three unsold books that are not included in a particular set of books (the nonpresuppositional reading). Ishii then observes that if the post-nominal FQ is separated by a constituent, say an adverbial, from its host noun, the object can only have the presuppositional reading.

- (15) John-ga [urenokot-ta hon-o] isoide san-satu kaesi-ta
 John-Nom left. unsold-Past book-Acc quickly 3-Cl return-Past
 'John returned three unsold books quickly.'

[√presuppositional, *nonpresuppositional]

(ibid.)

In our analysis, the structure of (14) is represented either as (16a) or (16b), depending on the presuppositionality of the object:

- (16) a. [John-ga [_{PresP} [**urenokot-ta hon-o san-satu**]_i [_{PrtP} *t_i* [_{VP} *t_i kaesi*]]] -ta]
- ↑_____ | ↑_____ |
- [Pres] checked [Prt] checked
- b. [John-ga [_{PresP} [_{PrtP} [**urenokot-ta hon-o san-satu**]_i [_{VP} *t_i kaesi*]]] -ta]
- ↑_____ |
- [Prt] checked

If the object is presuppositional, it may move into [Spec Pres] to have its [Pres] feature checked ((16a)), or move only as far as to [Spec Prt], as in (16b). If it is nonpresuppositional, it can only end up being in [Spec Prt], as in (16b).

On the other hand, the sentence in (15), where the host nominal and the FQ are separated, can only have the following structure:

- (17) a. [John-ga [_{PresP} [**urenokot-ta hon-o**]_j [_{PrtP} [*t_j* **san-satu**]_i [_{VP} *t_i kaesi*]]] -ta]
- ↑_____ | ↑_____ |
- [Pres] of the [Prt] of the
- host checked whole object checked

The derivation proceeds as follows. Firstly, the whole object (the host nominal and the FQ) *urenokot-ta hon-o san-satu* is raised to [Spec Prt] to have its [Prt] feature checked. Then the host nominal is raised into [Spec Pres] to have its [Pres] feature checked, stranding the FQ in PrtP. This means that the raised host nominal must have the [Pres] feature, which in turn means that the raised host must be presuppositional. The presuppositionality of the host nominal, a constituent without a quantifier, means that this constituent is definite and is paraphrasable as “the unsold books.” Indeed, in Dutch a definite object DP behaves in a fashion parallel to presuppositional QPs in that it can move to the left of an adverb.

- (18) a. dat de politie gisteren *de taalkundigen* opgepakt heeft
 that the police yesterday the linguists arrested has
 ‘since the police arrested the linguists yesterday’
- b. dat de politie *de taalkundigen* gisteren opgepakt heeft
 that the police the linguists yesterday arrested has

The definite DP *de taalkundigen* ‘the linguists’ can either move to the left of the adverbial ((18b)) or stay in its original object position ((18a)).

Thus we can account for the interpretive fact in (15) that the split object can only be presuppositional since for the object to be separated from its FQ, (17) is the only possible structure, where the moved host nominal has the [Pres] feature.

One might argue that instead of the structure in (17) the sentence in (15) is derived by the movement out of VP of the host nominal only, with the FQ stranded in its original argument position inside VP. This process would be represented as follows:³

- (19) [TP John-ga [**[urenokot-ta hon-o]**]_i [VP *t_i* **san-satu** kaesi-]] -ta]
- ↑ _____ |

However, there is a reason to believe that the FQ *san-satu* lies outside the VP. Consider the following example:

- (20) a. John-ga [urenokot-ta hon-o] san-satu isoide kaes-anakat-ta
 John-Nom left.unsold-Past book-Acc 3-Cl quickly return-Neg-Past
 ‘John did not return three unsold books quickly.’
- b. John-ga [urenokot-ta hon-o] isoide san-satu kaes-anakat-ta
 John-Nom left.unsold-Past book-Acc quickly 3-Cl return-Neg-Past

The difference between (20a) and (20b) is the order of the FQ *san-satu* and the adverbial *isoide*: the FQ (and its host nominal) occurs to the left of the adverbial while in (20b) it occurs to the right of the adverbial, separated from its host nominal. In addition to the order of these constituents, there is an interpretive difference between these two examples. Suppose that John returned three unsold

³ The analysis along these lines is presented in Ishii (1997, 1998). Ishii identifies the movement of the object to a pre-VP position as A-scrambling, and argues that it is this type of scrambling that gives the object a presuppositional reading. See Ishii (1997, 1998) for details.

books and he did it without hurrying. This situation can be described by sentence (20a) but not by (20b). That is, the adverbial *isoide* can be under the scope of negation in (20a), but it must be outside the scope of negation in (20b). Instead of denoting the situation expressed by the narrow scope reading of the adverbial, (20b) yields an anomalous interpretation: John was in a hurry in not returning three unsold books.

If so, this fact can be explained by our analysis. The structure of (20a) can be (21a) or (21b).

- (21) a. [John-ga [_{PresP} **urenokot-ta hon-o san-satu**]_i [_{PrtP} Adv [_{PrtP} *t_i'* [_{NegP} Adv [_{NegP} [_{VP} Adv [_{VP} *t_i kaesi*]]]]]]] -ta]
- ↑_____↑
[Pres] checked [Prt] checked
- _ |
- b. [John-ga [_{PresP} [_{PrtP} **urenokot-ta hon-o san-satu**]_i [_{NegP} Adv [_{NegP} [_{VP} Adv [_{VP} *t_i kaesi*]]]]]]] -ta]
- ↑_____↑
[Prt] checked

As we have already proposed, the object can be in [Spec Pres] or in [Spec Prt]. If the object is moved to [Spec Pres], there are three possible positions (marked as Adv in (21)) for the adverbial: the adverbial can be adjoined either to PrtP, Neg, or VP. Adjunction to Prt and NegP gives the adverbial a wide scope over negation, while adjunction to VP gives it a narrow scope. If the object is in PrtP, there are two choices: the adverbial can either be adjoined to NegP or VP. Thus both the wide and the narrow scope are possible for the adverbial in (20a).

The structure of (20b), on the other hand, is represented as follows:

- (22) [John-ga [_{PresP} **urenokot-ta hon-o**]_j [_{PrtP} **isoide** [_{PrtP} [_{t_j} san-satu]_i [_{NegP} [_{VP} *t_i kaes*]]]]] **Neg**]]]-ta]
- ↑_____↑
[Pres] checked [Prt] checked

As we have proposed above, the FQ is stranded in PrtP by the object DP that has moved into PresP. This means that adjunction to PrtP is the only possibility for the position of the adverbial to the left of the FQ, which means that this adverbial must be structurally higher than Neg. This explains why the adverbial cannot be in the scope of negation in (20b).

If we assumed the structure in (19), then it would not be possible to account for the lack of the narrow scope of the adverbial under negation in (20b) since there would be no reason to prohibit the adverbial from occurring in the domain structurally lower than negation.

6. Conclusion

This squib has proposed the existence of a functional projection that checks what we have called the [Pres] feature which can be borne only by the DP with a presuppositional reading. This proposal has successfully accounted for the correlation between the scope and the (non)presuppositional reading of object QPs in Japanese. Moreover, it has also accounted for the obligatoriness of the presuppositional interpretation of those object QPs with a stranded FQ.

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