Agreeing to wonder: Non-intrusive questions in Japanese

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Abstract. This paper analyzes *kana*-questions in Japanese as non-intrusive questions, such as *oare*-questions in Romanian (Farkas 2022). *Kana*-questions have two distinctive features: (i) Intonation interacts with this question type (Hirayama 2024), and (ii) they can respond to a question by signaling that the speaker agrees to wonder about the same issue. I derive the second feature from the combination of discourse effects from the question type and intonation; *Kana*-questions signal that the projected set might remain unchanged. Intonation contours, on the other hand, mark the discourse participant in charge of resolving issues.

Keywords. discourse effects; questions; non-intrusive questions; interrogatives; intonation

1. Introduction. In many languages, asking a question is done in a variety of ways. Some languages use discourse particles, and others use different syntax. Questions asked in non-canonical manners are known to do something extra in many languages. For example, (1b) conveys some bias that is not necessarily carried by (1a). This additional force is called *discourse effects* (Farkas & Roelofsen 2017).

(1) a. Is it raining?

b. It is raining, isn't it?

This paper discusses the discourse effects of a non-canonical question in Japanese, *kana*-questions (henceforth *kana*-Qs). This question is used as a self-addressed question and can be translated as '*I wonder*' in English, with different connotations, which are realized with a different intonation contour. In addition to that, it is possible to use it to agree to wonder the same issue. It is roughly translated as *I also wonder about it*. However, not all question types allow the speaker and the addressee to ponder an issue together. When the speaker expresses some bias, the addressee cannot 'agree to wonder,' and thus *kana*-Qs are unavailable.

The rest of the paper is structured as follows. Section 2 provides a background of *kana*-Qs. Section 3 introduces non-intrusive questions, citing examples in Romanian. I also compare non-intrusive questions with another type of non-canonical question: conjectural questions. Section 4 provides the analysis of *kana*-Qs as intonation-sensitive non-intrusive questions using the discourse model of Farkas & Bruce (2010). Section 5 discusses why this non-canonical question can be used to agree to wonder. Section 6 concludes the paper with remaining questions and further directions.

2. *Kana*-questions in Japanese. In the literature, *kana*-questions are classified as *utagai-no gimonbun* ('questions of doubt') (Nihongo Kizyutu Bunpo Kenkyukai 2003). Specifically, it is argued that *kana*-Qs do not pose a question to an addressee. As a result, *kana*-Qs in (2)[1] can

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[1] The following abbreviations are used in the glosses: ACC = accusative, NEG = negation, NOM = nominative, Q = question marker, SFP = sentence final particle, TOP = topic

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be used even in the absence of an addressee.[2] *Kana*-Qs can be either polar questions or *wh*-questions. Furthermore, they can accompany both rising intonation and falling intonation.[3]

(2) a. Taroo-wa kuru ka na ↑/↓
Taro-TOP come Q SFP
'I wonder if Taro will come.'
b. Dare-ga kuru ka na ↑/↓
who-NOM come Q SFP
'I wonder who will come.'

The English translations given to sentences in (2) using the English *wonder* merely illustrate one of the possible interpretations of *kana*-Qs. Depending on contexts, the question could be used as criticism or a rhetorical question, as shown in (3a). With an outer negation (cf. Sudo 2013; Ito & Oshima 2014; Hirayama 2017), a *kana*-question can express the speaker's desire,[4] as exemplified in (3b) (e.g., Nakanishi 2015; Takanashi 2022).

(3) a. Taroo-wa sonna-ni yasasii ka na ↑/↓
Taro-TOP to that extent kind Q SFP
'I wonder if Taro is kind to that extent.'
'Do you think Taro is kind to that extent? (I believe he isn't.)'
b. Takarakuzi atara-nai ka na $^{\#}$↑/^{OK}↓
lottery win-NEG Q SFP
'I hope I can win lottery.'

The interpretations of (3) suggest the possibility that they are not questions, especially when they accompany falling intonation. Nevertheless, this paper regards all instances of *kana*-Qs regardless of intonation contours, as at least semantically interrogative sentences. This is supported by the possible co-occurrence of *sonna-ni* 'to that extent' in *kana*-Qs, as illustrated in (3a). This phrase is considered a weak NPI in Japanese, which is licensed in an interrogative environment (cf. Matsui 2011).

Novel data points provide a new insight into the analysis of this non-canonical question: This question type can be used for the addressee to agree to wonder about the issue together. As shown in (4b), *kana*-Qs with falling intonation can be used to respond to questions, or as "answers" to them. When *kana*-Qs are used that way, the speaker signals that they agree to ponder the question together. Note that rising intonation is infelicitous in this specific use of *kana*-Qs.

[2] As mentioned below, this property does not exclude the possibility that there is a potential discourse participant answering the question.

[3] The intonation contours discussed in this paper are simplified. ↑ indicates the *na* part ends with rising intonation, while ↓ does the opposite. Although this paper only discusses these two intonation contours, there can be other variations. It should be noted that when a question mark is used in the example sentences other than *kana*-Qs, it intends to indicate rising intonation, while a period is used for falling intonation.

[4] As indicated by $^{\#}$ attached to ↑ in (3b), when this *kana*-Q is interpreted as expressing the speaker's desire, rising intonation cannot be used. For the explanation of this unavailable combination, see Hirayama (2024).

(4) a. A: Taroo-wa kuru? / Taroo-wa kuru ka na # ↑/↓
Taro-TOP come Taro-TOP come Q SFP
'Will Taro come?'/ 'I wonder if Taro will come.'

b. B: Taroo-wa kuru ka na # ↑/↓
Taro-TOP come Q SFP
'I wonder if Taro will come.'

Not all question types can be answered with *kana*-Qs. In (4a) above, the questions are without sentence-final particles associated with biased questions. In other words, they have neither contextual evidence nor private bias (Ito & Oshima 2014; Sudo 2013; Hirayama 2017). When a question is marked (i.e., biased) as shown in (5), it is not possible to use *kana*-Qs to agree to wonder about the issue.

(5) a. A: Taroo-wa kuru no?
Taro-TOP come SFP
'Will Taro come?' [With bias (contextual evidence)]

b. A: Taroo-wa ko-nai?
Taro-TOP come-NEG
'Won't Taro come?' [With bias (private bias)]

There are largely two aspects to be explained. One is a general characterization of *kana*-Qs as marked or non-canonical questions. The other, which is the main focus of this paper, is why this marked question is used to agree to wonder about issues, only if they are posed by unbiased questions. In both cases, intonation contour plays a pivot role in affecting the discourse effects of this particular question type.

3. Non-canonical questions and discourse effects. This section provides the background of non-canonical questions and their discourse effects. Semantics and pragmatics of non-canonical or marked questions have attracted attention in the field. One example is the biased questions mentioned in (5). They accompany something extra compared to vanilla polar questions. As a result, they have special discourse effects that are unavailable to unmarked questions. First, I will introduce non-intrusive questions, of which I argue that *kana*-Qs in Japanese are a subtype, citing examples in Romanian. I also argue that *kana*-Qs are not to be categorized as conjectural questions, which are similar to non-intrusive questions in that they both weaken default assumptions of the speech act.

3.1. NON-INTRUSIVE QUESTIONS: *Oare*-QUESTIONS IN ROMANIAN. Farkas (2022) argues that interrogative sentences marked by *oare* in Romanian are non-canonical questions, which she dubs 'non-intrusive questions.' and have special discourse effects. As shown in (6), the particle *oare* can appear in both polar questions and *wh*-questions.[5]

[5] Despite apparent similarities between *oare*-questions and *kana*-Qs, there are grammatical differences between them. Although this paper sheds light on sensitivity to intonation contour, different syntactical properties (e.g., the position of *oare* not limited to the sentence-final position) are left for future research.

(6) a. (Oare) ce a spus Amalia?
oare what has said Amalia
'What did Amalia say, I wonder.'
b. (Oare) e acasă Amalia?
oare is home Amalia
'Is Amalia home, (I wonder).'

Farkas (2022) points out that *oare*-questions are infelicitous in an 'interrogation' context, where the addressee must answer the question, as in (7). The unavailability of *oare* in such a context indicates that *oare* signals that the addressee does not have to answer the question.

(7) *Context: Policeman to driver he stopped*
Oare cu ce viteză ai mers?
oare with what speed have gone.2SG
'What was your speed, I wonder.'

Farkas (2022) terms questions such as *oare*-questions 'non-intrusive questions.' They weaken one of the default assumptions of questioning acts, *Addressee's compliance*, defined as in (8).

(8) *Addressee's compliance*
The speaker assumes that the addressee will provide this information in the immediate future of the conversation as a result of the speaker's speech act.
[Farkas (2022:297)]

In (7), it is not usually assumed that the police officer weakens the assumption (8). Consequently, *oare*-questions cannot be used.

We can observe that *kana*-Qs are also infelicitous in interrogation contexts. (9) shows that in the same context as (7), *kana*-Qs are infelicitous with both intonation contours.

(9) *Context: Policeman to driver he stopped*
Anata-wa nan-kiro dasiteta ka na #↑/#↓
you-TOP what-kilometer speed Q SFP
'(Intended:) How fast do you think you drove?'

In contexts where (9) is felicitous, if any, the police officer does not expect the driver to answer the question to begin with. That is, the purpose of asking a question is not information-seeking, but just ridiculing the driver.[6] In a context where it is normal for the addressee to be unable to answer, this question is completely felicitous. One such example is when a pediatrician asks a question of a small child, as shown in (10). In this context, it is reasonable to assume that the patient (child) does not have full capacity to answer the question, and therefore, the context lifts the addressee's compliance.[7]

[6] It is possible that this ridiculing effect is due to the casualness *kana*-Qs have. Politer varieties such as *desu-kana* are grammatically available, but they are not used in the same way. In this paper, I argue that the infelicity of (9) comes from lifting the addressee's compliance, not from (inappropriate) casualness of *kana*-Qs.
[7] The question with falling intonation sounds infelicitous, and this is due to its contribution to set the anchor to the discourse commitment to the speaker, as discussed below.

(10) Kyoo-wa doko-ga itai ka na ↑/$^{??}$ ↓
today-TOP where-NOM hurt Q SFP
'Where do you feel the pain?'

3.2. COMPARISON WITH CONJECTURAL QUESTIONS. Non-intrusive questions are not the only type of non-canonical questions. As another type of non-canonical question, conjectural questions discussed by Eckardt (2020) are similar to non-intrusive questions in that neither requires an addressee to answer the question. I argue that "non-intrusive question" is the appropriate label for *kana*-Qs. An example of a German conjectural question, which involves *wohl* and special syntax, is shown below as (11).

(11) Wo wohl der Schlüssel ist?
where wohl the key is
'Where might the key be, I wonder.' [Eckardt (2020:2)]

As the English translation with *wonder* also indicates, the interpretation of this question is similar to *oare* or *kana* questions. However, as Farkas (2022) points out, they weaken different default assumptions for the questioning act. Conjectural questions weaken the assumption of addressee competence. That is, the speaker does not assume the addressee is capable of giving the answer to the question. Accordingly, conjectural questions are used to come up with the answer to the question by pooling knowledge of the speaker and the addressee. The question in (11) is, therefore, infelicitous in a context where the speaker believes the addressee knows where the key is.

Farkas (2022) uses the example in (12) to illustrate a difference between non-intrusive questions and conjectural questions. In (12), the addressee is expected to be competent to resolve the issue, because the issue is about the addressee's own mental state. This is the context where *wohl*-questions are unavailable, but *oare*-questions are fully functional.

(12) Paul, oare te mai gânde sti la mine?
Paul, oare you still think.2 at me
'Paul, are you still thinking of me, I wonder.' [Farkas (2022:322)]

The Japanese counterpart of (12) with *kana* is available. This indicates that *kana*-Qs do not weaken the addressee's competence. Furthermore, *kana*-Qs can be used ironically, as shown in (13), where the speaker implicitly signals that the addressee should know the answer.

(13) Kimi-ni sonna koto dekiru ka na ↑/↓
you-DAT such thing can Q SFP
'Can you do that? (You know you can't, right?)'

The addressee's compliance might not be sought when the speaker already knows that the addressee does not know the answer, but that is not necessarily the case. As will be shown below, *kana*-Qs give freedom for discourse participants not to resolve the issue in the immediate context. The reason why such freedom is given can be that the answer to the question is obvious. The speaker or the addressee knows the answer.

In addition, recall that *kana*-Qs can be used to agree to wonder. If the *kana*-Q is a conjectural question, which invites the addressee to pool the knowledge together, using *kana*-Qs to respond to other questions would be infelicitous. This is because canonical questions assume that the speaker does not know the answer, and the addressee is capable of giving an answer. Using a conjectural question indicates that the answer can be found by pooling the knowledge together, which makes an incoherent discourse continuation when the conjectural question is used to agree to wonder. By contrast, non-intrusive questions just leave the issue in the air. As a result, *kana*-Qs can be used to agree to wonder or keep an issue under discussion as it is, as non-intrusive questions, as shown in the next section.

4. Analysis of *kana*-questions as intonation-sensitive non-intrusive questions. In this section, I provide how the discourse effects of *kana*-Qs are analyzed using the discourse model. The proposed analysis is based on the model of Farkas & Bruce (2010). After providing the basic background of the model, the analysis of *kana*-Qs as intonation-sensitive non-intrusive questions is given. In this paper, I have treated *kana* as a cluster, but as shown later, *kana* is a combination of the two particles: *ka* and *na*. This treatment is a methodological choice at this point. The limitations and possible future direction are stated in Section 6.

4.1. DISCOURSE MODEL OF FARKAS & BRUCE (2010). The discourse model used in this paper is a version of Farkas & Bruce (2010) with some modifications. Table 1 below shows the context structure after a polar question without special discourse effects is uttered by the speaker A. For the sake of simplicity, there are only two discourse participants, A and B. On Table, we can find what is under discussion. In this paper, the semantic content of the utterance is placed there. In the case of polar questions, it is a set of propositions with two members, p and $\neg p$.[8] DC stands for discourse commitment of each discourse participant, which are propositions that are publicly committed but not shared by the other participants. Common ground is knowledge shared among participants. The projected set (ps) here is modeled as future discourse moves. Following Meriçli (2016), we have a list of the addressee's DC by default. In this case, A asks a polar question, and the expected next move is for B to provide the answer p or $\neg p$. This is achieved by B's publicly committing to either of them. As a result, we have the union of DC_B in that context and $\{p\}$ or that of DC_B and $\{\neg p\}$.

A	**Table**	B
DC_A:	$\{p, \neg p\}$	DC_B:
Common Ground: s_1	ps:$\{\mathsf{DC}_B \cup \{p\}, \mathsf{DC}_B \cup \{\neg p\}\}$	

Table 1. Context structure after a polar question is uttered by A

Given the basic discourse effects of the question, when extra markers are added to it, and hence it is marked, special discourse effects associated with the markers are added to the output.

4.2. CONTEXT STRUCTURES PRODUCED BY *kana*-QS. For the sake of simplicity, we only focus on polar *kana*-Qs here. There are two aspects to consider as special effects associated with *kana*-Qs: the contribution of *kana* and intonation. In this paper, I assume the discourse effects

[8] When the question is a constituent question, I assume a set of possible answers is placed on Table.

are combined compositionally, following Hirayama (2019). That is, the total discourse effects are obtained by combining the effects brought by each discourse modifier. In what follows, the first aspect is explained with the same approach as Farkas (2022). The contribution of intonation contour is explained by the change to the anchor of the commitment. Each discourse effect is summarized as follows (14):

(14) a. The contribution *kana*: Adding a 'do nothing' option to the projected set

b. Marked intonation with the interrogative sentence (i.e., falling intonation): The anchor of the discourse commitment is changed to the speaker

As an interrogative sentence, I argue that the default intonation of *kana*-Qs is rising intonation. In other words, when *kana* is used with rising intonation without other sentence final particles or discourse effect modifiers, the difference between the *kana*-Q and that without is brought out by *kana*'s contribution: lifting the addressee's compliance. Following the analysis of *oare* by Farkas (2022), we can get the context structure in Table 2.

A	**Table**	B
DC_A:	$\{p, \neg p\}$	DC_B:
Common Ground: s_1	ps:$\{\mathsf{DC}_B \cup \{p\}, \mathsf{DC}_B \cup \{\neg p\}, s_1\}$	

Table 2. Context structure after a polar-*kana* question with rising intonation is uttered by A

The difference between Table 1 and Table 2 can be found in the projected set. s_1, which is the common ground in the context, is added as a possible discourse move. B can either answer the question, committing to one of the possible answers, or choose to do nothing. This is how the weakened addressee's compliance is expressed in the context structure. Note that even though B does not have to respond to the question, their presence is encoded in the structure.

Falling intonation is a marked intonation contour when it is used with interrogatives. As a result, it adds special discourse effects. I argue that it is a change to the anchor of the discourse commitment. By default, when A makes an utterance, the expected next move is B's response to it. In the case of the questioning act, this assumption is very important because of the nature of this speech act. The marked intonation signals that the default anchor of the discourse commitment is modified so that it is anchored to the speaker. Using the table model, we can express it as in Table 3.

A	**Table**	B
DC_A:	$\{p, \neg p\}$	DC_B:
Common Ground: s_1	ps:$\{\mathsf{DC}_A \cup \{p\}, \mathsf{DC}_A \cup \{\neg p\}, s_1\}$	

Table 3. Context structure after a polar-*kana* question with falling intonation is uttered by A

Table 3 indicates that this question is a self-addressed question, and also the speaker allows themselves the option of not pursuing the issue further. In this case, unlike what we observed in Table 2, the presence of B is not indicated here.

5. Discussion. This section demonstrates how the proposed analysis for *kana*-Qs accounts for how and why they are used to respond to a question from two perspectives: (i) restriction to the intonation contour and (ii) restriction to the preceding bias

5.1. RESTRICTION TO INTONATION CONTOUR. As shown in (4), only *kana*-Qs with falling intonation are felicitous when they are used to "answer" the question, agreeing to wonder about the issue. As schematically shown in (15), the continuation from (15a) to (15b) is possible, but not from (15a) to (15c).

(15) a. A: Will Taro come? ps:$\{\mathsf{DC}_B \cup \{p\}, \mathsf{DC}_B \cup \{\neg p\}\}$

b.✓ B: Will Taro come+*kana*↓ ps:$\{\mathsf{DC}_B \cup \{p\}, \mathsf{DC}_B \cup \{\neg p\}, s_1\}$

c. # B: Will Taro come+*kana*↑ ps:$\{\mathsf{DC}_A \cup \{p\}, \mathsf{DC}_A \cup \{\neg p\}, s_1\}$

The projected set is the crucial part to explain the contrast. When A asks the question (15a), B is supposed to resolve the issue. When B agrees to wonder about the same issue, (15b) is possible. With falling intonation, B can indicate that they acknowledge that they are expected to make the next move, while giving a choice not to do anything. With rising intonation (15c), the discourse participant expected to make the next move if possible is A, who has asked the question. The projected set is incoherent, and hence the *kana*-Q with rising intonation is infelicitous.

Why is it not possible to agree to the issue that is introduced by the *kana*-Q with rising intonation? When a pair of *kana*-Qs is used to introduce an issue and agree to wonder about it, both *kana*-Qs bear only falling intonation, as shown in (16).

(16) A: Will Taro come+*kana*? # ↑/↓ B: Will Taro come+*kana*? # ↑/↓

The reason why B's response *kana*-Q needs to bear falling intonation would be explained in the same way as (15). The *kana*-Q with rising intonation does not indicate that the speaker (=B) is wondering the same issue, because the discourse commitment is anchored with the addressee (=A). On the other hand, the *kana*-Q with falling intonation would place the issue on Table and anchor the discourse commitment to B. The proposed analysis would predict that it would be possible for B to show agreement with the same issue using the *kana*-Q.

I argue that placing the issue by the *kana*-Q with rising intonation by A is not allowed due to the pragmatic competition. As Table 2 shows, even though the issue: $\{p, \neg p\}$ is placed on the Table, the speaker signals that the next move would be made by the addressee. While the projected set indicates that there is room for the addressee not to make any commitment, it is not cooperative for the addressee to agree that they wonder about it. If the speaker thinks that the addressee might not be able to answer the question, they could have used *kana* with falling intonation or other questions to invite discourse participants to "ponder" over the issue together, not to "agree" about it. For instance, when the context suggests that the speaker wants the addressee to ponder over the same issue together, the *kana*-Q with rising intonation is not felicitous. In (17), because of the predicate *like*, only Taro himself can confidently answer the question. However, it is possible that people other than him ponder the issue together. With falling intonation, (17) can be pragmatically interpreted as *Do you think Taro liked the design?* An addressee can respond with their own opinion, which is possibly wrong. Note that they also have an option to say nothing or '*I don't care*.'

(17) Taro liked that design + *kana*$^{\#}$ ↑/↓

In sum, intonation plays a critical role in determining who is in charge of the next move. As a result, only falling intonation with *kana*-Qs is available to agree to wonder. On top of this, the presence of bias in the preceding question further constrains whether a participant can agree to wonder about the issue.

5.2. RESTRICTION TO THE PRECEDING BIAS. The other aspect to be accounted for is the fact that it is not felicitous to use *kana*-Qs to agree to wonder about the issue when the introduced issue is biased. This section accounts for the incompatibility of biased questions and "agreeing to wonder" by *kana*-Qs, incorporating private bias to the table model. Some examples of biased questions have already been introduced in (5). When a speaker uses them to introduce an issue, it is not possible for an addressee to use *kana*-Qs to agree to wonder about the issue, as shown in (18).

(18) a. A: Will Taro come+*no*? [With bias (contextual evidence)]
A: Will Taro come+*nai*? [With bias (private bias)]

b. $^{\#}$ B: Will Taro come+*kana*↓
Intended: I agree to wonder about the issue.

The nature of biased questions makes it impossible for discourse participants to agree to wonder about the issue. When a biased question is used, the context structure encodes the information about the bias. For instance, when *no* is used in Japanese, it is signaled that there is contextual evidence that supports the truth of the sentence radical. Contextual evidence is, by definition, available to every discourse participant. As a result, it should be available to the addressee. The addressee is expected to resolve the issue, taking the evidence into consideration. When they do not know or are unable to give an answer, they need to say, "I don't know." Leaving the question unanswered is uncooperative.

When the private bias is signaled by outer negation, in doing so, the speaker indicates a bias toward the truth of the proposition. The bias is given by evidence that is only available to the speaker themselves, by the definition of private bias. The addressee cannot access the speaker's private bias, so it is not possible to agree about the issue, involving the bias. In addition, the speaker's having private bias indicates they expect a positive (the truth of the prejacent) answer. Not answering the question, especially agreeing to wonder, is pragmatically uncooperative. If B chooses not to answer the question, '*I don't know.*' or '*It would be great if he would come.*' would be an appropriate response.

There is an apparent counterexample where a *kana*-Q is used to respond to a question with bias. When a *kana*-Q with outer negation (*nai-kana*↓) is used to express the speaker's desire, as shown in (3b), it is possible to "agree" to wonder, using a *kana*-Q. Note that the response by B with *kana* also accompanies outer negation. A possible dialogue is shown in (19).

(19) a. A: Won't it be sunny tomorrow + *kana*↓
Intended: I(=A) hope it will be sunny tomorrow.

b. B: (Yeah,) Won't it be sunny tomorrow + *kana*↓
Intended: I(=B) hope so, too.

Hirayama (2024) analyzes that this "speaker's desire" interpretation comes from the combination of private bias, weakened addressee's compliance, and the projected speaker's commitment (rather than the addressee's). The context structure of *nai-kana*↓ is shown in Table 4.

A	**Table**	B
DC_A:	$\{p, \neg p\}$	DC_B:
PB_A: p		PB_B:
Common Ground: s_1	ps: $\{\mathsf{DC}_A \cup \{p\}, \mathsf{DC}_A \cup \{\neg p\}, s_1\}$	

Table 4. Context structure after A utters *nai-kana*↓

A new row is added in Table 4. PB_X found there stands for the private bias of the discourse participant X. In this context, A has a bias that it will be sunny the next day (p), based on their private bias (e.g., there will be a person C who always brings the sun out when they are there). Still, they leave room not to pursue the issue further. In this case, when the addressee has the same desire, they can also use *nai-kana*↓. The private bias they rely on does not have to be the same. B can signal the same desire, based on their private bias, such that the next day is likely to be sunny according to the statistic data.

6. Conclusion and future direction. In this paper, I have argued that *kana*-Qs are intonation-sensitive non-intrusive questions. The contribution of *kana* is adding an option to do nothing with the discourse commitment in the future move. When marked intonation is used, it is used to change the anchor of the discourse commitment to the speaker. The combination of discourse effects of the particle and intonation contours gives rise to a unique behavior of *kana*-Qs.

This is still a work in progress, however. One limitation is the treatment of *kana*. In the analysis, while *kana* is treated as a cluster, it is formally a combination of the question particle *ka* and the sentence-final particle *na*. Intuitively, *ka* makes the sentence interrogative, and *na* contributes by adding an option to do nothing. A possibility is that this *na* is similar to *na* used in (20).

(20) Kimi, mae-ni atta koto aru na
you before meet.PAST experience SFP
'I have met you before, right?'

Even though the English translation has *right?*, this *na* does not have to have rising intonation. The interpretation is that the speaker seeks an agreement from the addressee, inviting a response.

This contribution of *na* is apparently similar to *ne*, but they are not identical. In fact, the combination of *ka* and *ne* can be used in most contexts where *kana*-Qs can be used. However, to my ears, with rising intonation, it sounds less natural, even when a pediatrician asks a question of a child. *Ne* is one of the most well-studied particles in Japanese and interacts with intonation (cf. Northrup 2014). Comparing *ne* and *na* would be the next step forward to understand the contribution of each particle fully.

The contribution of the intonation contour needs further examination. In this paper, the default anchor of the discourse commitment is set to the addressee's. This is based on Meriçli (2016) and the basic assumption of the questioning act. Falling intonation attached to *kana*-Qs swaps the anchor to the speaker, and hence the interpretation as a self-addressed question can be obtained. The same procedure can be applied to some other interrogative sentences with *ka*, as in (21).

(21) Taroo-ga kita (no) ka ↓
Taro-NOM came SFP Q
(Saying to oneself,) Taro came.

In this case, the speaker is not wondering about the issue. Rather, they ask a question of themselves and silently give the answer by themselves.

As for marked intonation, this paper only considered falling intonation used with interrogatives. Can we observe the opposite phenomenon? In other words, what happens when declaratives accompany rising intonation? There are such instances, but the discourse effects are not something that mirrors what we have observed in this paper. One example is what Hirayama (2022) '*rising declaratives*' in Japanese shown below, as (22).

(22) Taroo-ga kita yo ↑
Taro-NOM came SFP
Taro came.

Hirayama (2022) argues that rising intonation in rising declaratives does not add the speaker's commitment, following analyses on rising imperatives by Rudin (2018). That is, the declarative in (22) does not change the discourse commitment of the speaker. This is not a change to the projected set. Even with declaratives, the default anchor of the discourse commitment in the projected set is an addressee, given that the assertion needs to be accepted by them. If marked intonation is used in a declarative in the same way as in an interrogative, the next move is expected to be made by the speaker. However, that is not the effect available in (22). Why does marked intonation give different effects depending on the sentence type? Are the contributions of intonation contours sensitive to the force heads, as claimed in Davis (2009)? These are questions to be pursued.

Japanese *kana*-Qs exhibit a unique feature as a non-intrusive question: They are sensitive to intonation contour. The analysis does not account for why and how. *Oare*-questions in Romanian do not work in the same way. They only accompany rising intonation. This could be attributed to the linguistic parameter: In Romanian, polar interrogatives and declaratives are primarily distinguished by intonation (Farkas 2022:299). However, this is also the case in Japanese. The question marker is not obligatory. The puzzle is, if rising intonation itself marks interrogatives, adding *na* with rising intonation would be predicted to bring about the same effects as *kana*-Qs. The prediction is not borne out. In the future, more cross-linguistic investigation is needed in order to pin down what parameters are crucial to explain the varieties of non-canonical questions.

References

Davis, Christopher. 2009. Decisions, dynamics and the Japanese particle *yo*. *Journal of Semantics* 26. 329–366.

Eckardt, Regine. 2020. Conjectual questions: The case of German verb-final *wohl*-quesitons. *Semantics & Pragmatics* 13(9). 1–54.

Farkas, Donka F. 2022. Non-intrusive questions as a special type of non-canonical questions. *Journal of Semantics* 39(2). 295–337. https://doi.org/10.1093/jos/ffac001.

Farkas, Donka F. & Kim B. Bruce. 2010. On reacting to assertions and polar questions. *Journal of Semantics* 27(1). 81–118.

Farkas, Donka F. & Floris Roelofsen. 2017. Division of labor in the interpretation of declaratives and interrogatives. *Journal of Semantics* 34(2). 237–289.

Hirayama, Hitomi. 2017. On discourse effects of biased questions in Japanese. In Shin Fukuda, Mary Shin Kim & Mee-Jeong Park (eds.), *Online Proceeding of Japanese and Korean Linguistics 25*, CSLI.

Hirayama, Hitomi. 2019. *Asking and Answering Questions: Discourse Strategies in Japanese*: University of California, Santa Cruz PhD thesis.

Hirayama, Hitomi. 2022. Rising declaratives in japanese. In Kaoru Horie, Kimi Akita, Yusuke Kubota, Y. David Oshima & Akira Utsugi (eds.), *Japanese/korean linguistics*, vol. 29, 197–208.

Hirayama, Hitomi. 2024. Japanese *kana*-questions as non-intrusive questions. In Nathaniel Oco, Shirley N. Dita, Ariane Macalinga Borlongan & Jong-Bok Kim (eds.), *Proceedings of the 38th Pacific Asia Conference on Language, Information and Computation*, 1287–1294.

Ito, Satoshi & David Y. Oshima. 2014. On two varieties of negative polar interrogatives in Japanese. In Michael Kenstowicz, Ted Levin & Ryo Masuda (eds.), *Japanese/Korean Linguistics 23*, 229–243.

Matsui, Ai. 2011. On the licensing of understating NPIs: Manipulating the domain of degrees for Japanese *a(n)mari* and *sonnani*. In *Proceedings of SALT 21*, 752–769.

Meriçli, Benjamin. 2016. *Modeling indirect evidence*: University of California, Santa Cruz MA thesis.

Nakanishi, Kumiko. 2015. Shuujoshi *kana* no goyooronteki tokuchoo [pragmatic characteristics of a final particle *kana*]. *Musa* 22. 23–38.

Nihongo Kizyutu Bunpo Kenkyukai (ed.). 2003. *Gendai Nihongo Bunpo 4 Modaritii [Modern Japanese Grammar 4 Modality]*. Kuroshio Publishers.

Northrup, Oliver. 2014. *Grounds for commitment*: University of California, Santa Cruz dissertation.

Rudin, Deniz. 2018. Rising Imperatives. In *Proceedings of SALT 28*, 100–119.

Sudo, Yasutada. 2013. Biased polar questions in English and Japanese. In Daniel Gutzmann & Hans-Martin Gaertner (eds.), *Beyond Expressives: Explorations in Use-Conditional Meaning*, vol. Current Research in the Semantics/Pragmatics Interface (CRiSPI) 28, Brill.

Takanashi, Shino. 2022. "*Nai Kana*" ganboo hyoogen-no hookatsuteki kizyutu-ni mukete [*Nai kana* as a form that expresses the speaker's desire]. *Journal of Foreign Language Studies* 27. 15–31.