

# The Explicated Addressee: A (mainly) pragmatic account of Japanese *ka*-questions

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**Abstract.** Japanese *ka*-questions have been described in the literature as always requesting honorific markers, unless they are used as self-addressed questions. Self-addressed questions are marked with the evidential modal *daroo*. This evidential has a polite counterpart *desyoo* which is used in declaratives and questions if the addressee is of higher rank or addressed formally. This is surprising at first sight, as the notion of addressing another person with a self-addressed question seems paradox. We argue that (a) *daroo* questions are not just questions to oneself, and that (b) *ka*-questions are not just polite questions. Instead, we propose that *ka* introduces a requirement that the addressee of the utterance must be explicated, i.e., explicitly mentioned in the utterance, and that honorific morphemes are one way of explicating the addressee. This correctly predicts that anti-honorific pronouns can also license *ka*-questions. Finally, we show how the grammatical marking of *ka*-questions coheres with the question prosody (final fall or rise).

**Keywords:** self-addressed question, evidentials, honorification, antihonorifics, explicated addressee, prosody

## 1 Introduction

Questions are typically directed to an addressee as requests for information. Yet, interrogatives can also be used in non-canonical questions, such as rhetorical questions, self-addressed questions or exam questions. Independently, many languages use honorification to express the social relation between speaker and addressee. In Japanese *ka*-questions, however, these two pragmatic phenomena are interrelated in a complex system of question type and addressee honorification. Japanese is a *wh-in-situ* language where questions are marked by sentence final particles. The particle *ka* marks polar and constituent interrogative clauses. Miyagawa (2012) draws attention to the fact that information seeking questions require honorification (HON) marking.

- (1) Taro-wa sushi-o tabe-mas-u ka  
Taro-TOP sushi-ACC eat.HON.PRES ka  
'Does Taro eat sushi?' Information seeking question (ISQ)
- (2) \*Taro-wa sushi-o taberu ka  
Taro-TOP sushi-ACC eat.PRES ka

unavailable: 'Does Taro eat sushi?' (ISQ)

The verbal morpheme *mas* conveys that the speaker and addressee are engaged in distanced discourse or that the addressee is socially superior to the speaker.<sup>3</sup> While the "polite" information seeking question in (1) is acceptable, leaving out the honorific *mas* renders the question ungrammatical.

Yokoyama (2013) points out that *ka*-interrogatives without HON marking is felicitous in non-information-seeking utterances, for example in rhetorical or self-addressed questions. His example (3) shows a rhetorical *ka*-question without HON marker.

- (3) (Konna tokoro-ni) dare-ga kuru ka  
like.this place-to who-NOM come ka  
'Who would come (to a place like this)?' (= 'Nobody would come.')

Sentence (3) is a felicitous rhetorical question in a context where the speaker can assume that all interlocutors agree on the answer. Lacking *mas*, it is unacceptable as an information seeking question. Yokoyama lists seven possible interpretations for *ka*-interrogatives without honorification, which he labels as +assertive, as opposed to information seeking questions (ISQ) which he labels -assertive.

Oguro (2017) focuses on self-addressed questions marked with the evidential modal *daroo* and its polite counterpart *desyoo*. The following questions can be interpreted as self-addressed questions.

- (4) Taro-wa sushi-o taberu daroo ka  
Taro-TOP sushi-ACC eat.PRES daroo ka  
'I wonder whether Taro eats sushi.' (talking to oneself)
- (5) Taro-wa sushi-o taberu desyoo ka  
Taro-TOP sushi-ACC eat.PRES daroo-HON ka  
'I wonder whether Taro eats sushi.' (conjecturing in the presence of a higher person)

Example (4) confirms the observation that self-addressed *ka*-questions do not require honorification, but (5) demonstrates that self-addressed questions can still acknowledge the presence of higher-ranked interlocutors. Moreover, Oguro diagnoses a second, ISQ interpretation for (5) but not for (4). In sum, Japanese *ka*-questions exhibit complex correlations of syntactic and pragmatic factors that we aim to analyse. Specifically, we want to model how *ka* triggers HON-marking in ISQ but not in other speech acts, how *daroo* forces questions to be interpreted as self-addressed questions, and how the two factors interact in the uses of *desyoo*.

In earlier literature, Miyagawa, Yokoyama and Oguro pursue an analysis of these data in syntactic terms, building on the extended speech act phrase (SAP) (Speas and Tenny, 2003). While their idea – that a question in the absence of an addressee must be self-addressed – has some plausibility, the semantic underpinnings remain unclear. The present paper aims to cast the basic ideas in a semantic/pragmatic account. We

<sup>3</sup> We use the terms 'socially inferior' and 'superior' and 'distanced' vs. 'informal' discourse to refer to the social relations triggering the use of honorifics. See McCready (2019) for the complex social facts mirrored by the use of honorifics in Japanese.

agree with earlier authors that the presence of HON marking makes the addressee ‘visible’ in the sentence, but argue that this visibility can be captured in semantic terms. Specifically, we claim that the property of being an *explicated addressee* is crucial in understanding the nature of information seeking and self-addressed *ka*-questions.

The paper is structured as follows: Section 2 presents the data, and section 3 briefly recapitulates earlier theories. Section 4 presents our analysis, and section 5 concludes.

## 2 The data

### 2.1 Japanese *ka*-questions and honorification

Japanese questions with the question marker *ka* can express information-seeking questions (ISQs), as in the following example. In this speech act type, they require the presence of a honorification marker.

- (6) Taro-wa sushi-o tabe-mas-u ka  
 Taro-TOP sushi-ACC eat.HON.PRES ka  
 ‘Does Taro eat sushi?’ Information seeking question (ISQ)
- (7) \*Taro-wa sushi-o taberu ka  
 Taro-TOP sushi-ACC eat.PRES ka  
 unavailable: ‘Does Taro eat sushi?’ (ISQ)

While (6) is HON-marked by the verbal morpheme *mas*, (7) lacks HON marking. As a consequence, native speakers judge (7) as unacceptable in the ISQ reading (Miyagawa 2012: 87). The requirement is dismissed when the question is intended as a rhetorical question, as (8-a) illustrates.

- (8) Context: Some Japanese teens agree that Italian style food is better than anything else, in particular better than traditional Japanese dishes. One of them says:
- a. Dare-ga sushi-o taberu ka  
 who-NOM sushi-ACC eat.PRES ka  
 ‘Who eats sushi, after all?’ (implied: Nobody does.)

(8) can be interpreted as a rhetorical question, whereas an ISQ interpretation is unavailable.<sup>4</sup>

Yokoyama (2013) lists seven possible interpretations for *ka*-interrogatives without honorification: rhetorical questions, conjectural questions (marked with *ka naa* or *da-roo*, often also with a nominalizer *-no*), wh-exclamatives, polar interrogatives as self-addressed confirmatives, polar interrogatives as strong resistives (‘I will not do X’), polar imperatives and embedded questions (see section 2.2). He moreover points out that **prosody** correlates with question type: While ISQ are pronounced with a final rise as *ka*↗, all other question types require a final fall *ka*↘. Yokoyama therefore proposes two homonyms *ka*: In ISQ we find *ka*↗, which he terms -assertive, as opposed to *ka*↘ in all other interrogatives, which he terms +assertive. His findings cohere with

<sup>4</sup> More restrictions obtain for felicitous rhetorical questions, and we observe that not every *mas*-free *ka*-question can be used in a rhetorical sense. This deserves further investigation.

the prosodic study in Hara (2012), where she demonstrates a correlation between ISQs and final rising accent, as opposed to self-addressed questions and falling accent (see section 2.3.). We adopt Yokoyama's homonyms and annotate examples with rise/fall in the following. We leave aside for now the question whether a general theory of final rise and fall can be given for Japanese. Likewise, we will focus on *ka*-questions with *daroo desyoo*, disregarding Yokoyama's full range of non-questioning acts with unspecified *ka*.<sup>5</sup>

Oguro (2017) finally observes that *ka*-questions can be ISQs without a HON marker if the addressee is expressed elsewhere in the sentence, for instance by using a pronoun.

- (9) Omae-wa sushi-o taberu ka ↗  
 You-TOP sushi-ACC eat ka  
 'Do you eat sushi?' possible ISQ
- (10) Omae-wa nani(-o) taberu ka ↗  
 you-TOP what(-ACC) eat ka  
 'what do you eat?' possible ISQ

The pronoun *omae* is an anti-honorific form of 'you', used for instance by school teachers to pupils, pet owners to their pets, male adults to kids, and also by boyfriends to girlfriends, husbands to wives. The examples suggest that *ka* in ISQs cannot be a politeness marker, as *omae* is only used in very informal, colloquial register. The use of *omae* alone suffices to satisfy the requirement imposed by *ka* that the addressee must be visible. If the informal pronoun *omae* is replaced by formal *anata* 'you', HON marking is also required on the verb. Yokoyama (2013: 7) offers the following example.

- (11) Anata-wa shutubasi-mas-u ka ↗  
 you.HON-TOP run.for.election-HON ka  
 'Will you run for the election?', ISQ

While the doubly HON marked question (11) is acceptable, the sentence without *mas* is ungrammatical. This shows that the formal *anata* 'you' imposes its own independent requirement that the verb must be HON marked. The correlation is confirmed by the use of copula *des-u* vs. *da* ('be'). (12-a) repeats Yokoyama's (2017, ex.20).<sup>6</sup>

- (12) a. Anata-wa isha des-u ka ↗  
 you.HON-TOP doctor Cpl.HON ka  
 'Are you a doctor?' ISQ
- b. \*Omae-wa isha des-u ka  
 you-TOP doctor Cpl.HON ka
- c. \*Omae-wa isha da ka  
 you-TOP doctor Cpl ka  
 unavailable: 'Are you a doctor?'

<sup>5</sup> As each of these speech act types is marked by further cues, we conclude that *ka* alone doesn't suffice to specify the intended sense of a non-HON clause.

<sup>6</sup> We don't annotate prosody whenever either version of the question would be ungrammatical.

Formal *anata* requires the use of the formal copula *desu*, which would be incompatible with *omae*. The neutral copula *da* imposes its own restrictions on the kind of speech acts in which it can be used – the ISQ (12-b) cannot be rendered grammatical by replacing *des-u* by *da*. We have to leave this part of the data to be investigated in the future. Yet, we take (9) and (10) as evidence that the requirements of ISQ *ka* – that the addressee be visible in the sentence – can be satisfied by the use of a second person pronoun without honorification.

## 2.2 Honorification is a root clause phenomenon

Languages with a *tu/vous* system use pronouns as carrier of social information. For example, German *Du* is used to address friends or family, whereas *Sie* is chosen in many workplace contexts, between interlocutors of social distance or in official discourse. Formal pronouns can (and indeed must) be used in all syntactic positions. Japanese exhibits a different system, in that the use of honorific morphemes on the verb is restricted to root clauses. This restriction includes embedded *ka*-questions.

- (13) Hanako-wa Taro-ga nani-o taberu ka(-o) shitteiru.  
 Hanako-TOP Taro-NOM what-ACC eat ka(-ACC) know  
 'Hanako knows what Taro eats'
- (14) \*Hanako-wa Taro-ga nani-o tabe-mas-u ka shitteiru.  
 Hanako-TOP [Taro-NOM what-ACC eat-HON ka] know  
 ungrammatical: 'Hanako knows what Taro eats'
- (15) Hanako-wa Taro-ga sushi-o taberu ka shitteiru.  
 Hanako-TOP [Taro-NOM sushi-ACC eat ka] know  
 'Hanako knows whether Taro eats sushi'
- (16) \*Hanako-wa Taro-ga sushi-o tabe-mas-u ka shitteiru.  
 Hanako-TOP [Taro-NOM sushi-ACC eat-HON ka] know  
 ungrammatical: 'Hanako knows whether Taro eats sushi'

As (14) and (16) show, HON marking in embedded clauses is prohibited for any matrix predicate and independently of whether the embedded clause is case marked with *-o* (ACC). It is also independent of the pragmatic point of the utterance: indirect questions or directives cannot use *mas* in embedded contexts even if the speaker intends to request information from the addressee. This is shown in (17)–(19).

- (17) [Dare-ga race-ni ka-tta(\*-mas)-ka] mite-mi-yoo!  
 [who-NOM race-OBJ win-PST-KA] find.out-try.to.MOD  
 Let's find out who won the race!
- (18) [Dare-ga race-ni ka-tta(\*-mas)-ka] oshie-te!  
 [who-NOM race-OBJ win-PST-KA] tell-IMP  
 Tell me who won the race!
- (19) [Dare-ga race-ni ka-tta(\*-mas)-ka] gimon-ni-omou/shiri-tai.  
 [who-NOM race-OBJ win-PST-KA] question-DAT-think/know-want.to  
 I wonder / want to know who won the race

These data challenge Oguro’s judgement that *-mas-* is sometimes possible in embedded contexts, illustrated by (20) (Oguro 2017:195, (18a)).

- (20) Dare-ga ki-masu ka sirabemasyoo  
 who-NOM come-HON ka check.let’s  
 ‘Let’s check who will come.’

Without aiming at a comprehensive syntactic discussion of this type of example, we conjecture that (20) might be a bi-clausal structure, consisting of a matrix *ka* question (‘Who comes?’) and a subjectless second clause (‘let’s check.’). The prosodic structure remains to be investigated, including the issue whether the rising accent on *ka* in (20) might be missing for phonological reasons, thus leading Oguro to assume a mono-clausal structure.

We follow earlier syntactic analyses of root clause phenomena and assume that the prohibition of HON morphemes in embedded clauses is regulated in syntax. A minimal way to implement root clause restrictions has been proposed in Bayer and Obenauer (2011) who assume that the highest CP level is dominated by ForceP. Honorific morphemes must be sufficiently syntactically close to ForceP to be licensed. We do not assume that ForceP makes an independent contribution to meaning. In section 4, we assume that *ka* takes highest scope at LF, which is compatible with the assumption that it gets interpreted in ForceP at LF.

### 2.3 *daroo/desyoo* in declaratives and questions

The evidential modal *daroo/desyoo* can be used both in declaratives and interrogatives. *Ka*-interrogatives with *daroo* or its +HON counterpart *desyoo* are one important type of self-addressed questions in Japanese. In order to understand the interaction of question type and honorification, we first illustrate the use of *daroo/desyoo* in declaratives.

- (21) Taro-wa sushi-o taberu daroo.  
 Taro.wa sushi.acc eat daroo  
 decl: ‘I assume that Taro eats sushi.’ (in informal discourse)
- (22) Taro-wa sushi-o taberu desyoo.  
 Taro.wa sushi.acc eat desyoo  
 decl: ‘I assume that Taro eats sushi.’ (in formal discourse)

*Daroo* combines with a proposition *p* and indicates that the speaker believes *p* but doesn’t have first-hand knowledge. Oguro (2017); Uegaki and Roelofsen (2018) use *ASSUME(x,p)* to paraphrase the contribution of *daroo* and we use their paraphrase in the translations above. Hara and Davis (2013) delineate the semantic content of *daroo* more precisely. *daroo p* conveys that speaker *x* infers *p* from general expectations about the world. The authors contrast this to *youda p* which expresses that the speaker has direct evidence which leads her to infer *p*. To give an example, *Taro-wa sushi-o taberu daroo* is appropriate when the speaker believes that Taro generally loves sushi so much that he almost always eats sushi. *Taro-wa sushi-o taberu youda*, in contrast, expresses that the speaker has specific direct evidence that suggests Taro eating sushi – e.g., a sushi delivery box in front of Taro’s door.

These observations align *daroolyouda* with evidentials in other languages (Aikhenvald, 2004; Faller, 2006; Korotkova, 2017; SanRoque et al, 2017). In particular, *daroo*, like other evidentials, is oriented to the speaker: the assertion  $p$  is justified by the speaker's beliefs and inferences. We use  $ASSUME(x,p)$  as a suitable cover term for the content of *daroo*, as it explicates speaker orientedness.

*Daroo* in questions triggers a reading as self-addressed question. Speakers report the intuition that the question is uttered in the absence of an addressee (Oguro, 2017; Hara, 2012) and observe that the question doesn't request an answer or is conjectural. The question is uttered with a fall accent on sentence-final *ka*.

- (23) Taro-wa sushi-o taberu daroo ka ↘  
 Taro-TOP sushi-ACC eat daroo ka  
 'I wonder whether Taro eats sushi.' (SAQ)
- (24) Dare-ga sushi-o taberu daroo ka ↘.  
 who-NOM sushi-ACC eat daroo ka  
 'I wonder who eats sushi.' (SAQ)
- (25) Taro-wa nani-o taberu daroo ka ↘.  
 Taro-TOP what-ACC eat daroo ka  
 'I wonder what Taro eats.' (SAQ)

*Daroo* can be used in polar and constituent questions with the same pragmatic effect, as illustrated in (25) – (25). The same questions can also be used with honorific *desyoo*. At first sight, this seems at odds with the fact that (25) – (25) are self-addressed questions. Yokoyama diagnoses that such questions indeed have two readings, while their *daroo* counterpart is unambiguous.

- (26) Taro-wa sushi-o taberu desyoo ka ↘.  
 Taro-TOP sushi-ACC eat desyoo ka  
 a. 'I wonder whether Taro eats sushi.' (SAQ)  
 b. 'Does Taro eat sushi? What do you think?' (FlipQ)

Uttering (26), the speaker could ask a self-addressed question and at the same time acknowledge the presence of a socially superior interlocutor. Alternatively, she can pose the question to a socially superior interlocutor, granting them that the answer may rest on assumptions instead of secure knowledge. The (b) interpretation corresponds to the 'flip-reading' of evidentials in questions that has been described for many other languages (SanRoque et al, 2017; Eckardt, 2020). We abbreviate it as FlipQ. The ambiguity also arises in constituent questions.

- (27) Dare-ga sushi-o taberu desyoo ka ↘.  
 who-NOM sushi-ACC eat desyoo ka  
 a. 'I wonder who eats sushi.' (SAQ)  
 b. 'Who eats sushi? What do you think?' (FlipQ)

The speaker in (27) can either wonder who eats sushi, at the same time indicating that she is aware of the presence of an interlocutor. Or she can intend the FlipQ reading and invite the interlocutor to volunteer their assumptions about Q.

In summary, we see that *ka*-questions can be true questions iff some morpheme explicates the addressee – be it a honorific, or an anti-honorific. According to our informant, vocatives can also serve this purpose. ISQ *ka* carries a rising accent. Questions with *ka* that lack an explicated addressee can be self-addressed or code other speech acts. In this case, *ka* carries a falling accent. *Daroo-ka* questions are always self-addressed, and *desyoo-ka* questions can be self-addressed or ask for the addressee’s opinion. These are the data we aim to account for.

### 3 Earlier theories

**Syntax based accounts.** Miyagawa, Yokoyama and Oguro pursue an analysis of these data in syntactic terms, building on the extended speech act phrase (SAP) first proposed in Speas and Tenny (2003). The presence or absence of a SpeakerPhrase as part of the SAP is assumed to correspond to the presence or absence of HON marking. This structural contrast is proposed to have repercussions on the grammaticality of *ka* in questions (in an ISQ sense), the interpretation of *daroo/desyoo* and the choice of *ka* in the +assertive sense (Yokoyama, 2013).

While we grant that the authors can correctly predict the data in question, this type of approach leaves several foundational issues unaddressed. For one, the connection between speech act type and honorification seems essentially a pragmatic phenomenon which should be treated in terms of a pragmatic theory. While there are excellent general accounts of honorification in Japanese and other Asian languages (McCready, 2014, 2019; Potts and Kawahara, 2004), the link between question type and honorification has so far only been discussed in Korean (Jang, 1999; Eckardt and Disselkamp, 2019). Eckardt and Disselkamp show that the Korean data can be captured in a purely pragmatic analysis. While Japanese poses a more complex case, it would still be interesting to see whether a pragmatic analysis is also possible.<sup>7</sup>

Speas and Tenny suggest that the presence or absence of Speaker Phrase and Hearer Phrase is somehow rooted in pragmatics, or corresponds somehow to facts about the utterance context. Jang (1999) assumes that the absence of a Hearer Phrase “leads to” the interpretation as self-addressed question. Yokoyama (2013) stipulates in passing that the use of a second person pronoun in the clause triggers the presence of a Hearer Phrase in syntactic structure. Oguro presupposes that Hearer Phrase is semantically interpreted, referring to the addressee in context. Yet, while the idea that a question in the absence of an addressee must be self-addressed certainly has some plausibility, it is by no means trivial to put these remarks on solid semantic ground.

**An interface theory.** Portner et al (2019) propose a treatment of Korean honorifics at the syntax-semantics interface, which potentially extends to Japanese. Their account codes speaker-addressee relations in two ways. For one, they represent sentence meanings by centered propositions, i.e., sets of tuples of speaker, addressee, time and possible world, as illustrated below.

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<sup>7</sup> We acknowledge that HON marking can have syntactic repercussions, such as subj-verb agreement or restrictions to root clauses.

$$(28) \quad \begin{aligned} & [[ \text{I love you} ]]^u \\ & = \{ \langle x, y, t, w \rangle : x = sp(u) \wedge y = ad(u) \wedge t = time(u) \wedge x \text{ loves } y \text{ in } w \}. \end{aligned}$$

This replaces the standard set of possible worlds, and allows to track speaker and addressee as part of the meaning of the sentence. Secondly, sentence and discourse meanings include a participant structure to code honorification. In a discourse between two interlocutors P1,P2, the participant structure contains the tuple  $\langle P1,P2 \rangle$  of interlocutors, an ordered set  $\langle M, \leq \rangle$  and a function  $h$  that maps  $\{P1,P2\}$  into  $M$ . In each utterance, honorifics specify the function  $h_u$  in  $u$ . For instance, if  $u$  includes a honorific to express that P1 is socially higher than P2, then  $h_u$  maps  $\{P1,P2\}$  into  $M$  accordingly ( $h_u(P2) \leq h_u(P1)$ ). The function  $h$  can change from utterance to utterance when speakers in Korean re-calibrate the social signals over discourse.

As we saw in section 2, *ka*-questions are not just "polite" questions but questions that require an explicated addressee. Portner et al.'s account keeps a record of HON marking but doesn't trace whether the addressee is explicated in the present utterance  $u$ . If there are no new HON morphemes, the participant structure of the previous utterance is maintained. Therefore, the account does not extend to the case of *ka*-questions straightforwardly.

**Semantic theories.** Starting with Hara (2006), Yurie Hara explores various semantic/pragmatic accounts for *daroo*. Closest to our analysis is Hara and Davis (2013), which we will apply below. Her most recent approach in Hara (2018) treats the data in terms of inquisitive semantics. She assumes that 'daroo T' expresses that the speaker entertains issue T, which can be a question or an assertion. For questions T, this predicts the SAQ interpretation, but fails to leave room for the Flip interpretation we see in honorific *desyoo* questions like (26). Building on her work, the present paper aims to fill this gap. Another attractive feature of Hara (2012) is the independent pragmatic contribution of a final rise accent, which is treated as a meaningful unit in its own right. We however do not fully understand how final rise can be blocked for *desyoo* questions (which can address a second person), nor whether the ideal analysis should predict this blocking. We comment on relevant data at the end of section 4.4.

## 4 Analysis

Our analysis rests on the idea that *ka*-questions can only request an answer if the addressee is explicitly mentioned in the clause. And this is the case iff a honorific marker, or a pronoun have been used. Self-addressed *ka* questions are not requesting this. In particular *daroo*-questions are necessarily interpreted as self-addressed for this reason, while *desyoo*-question, with an explicated addressee, allow for more readings.

### 4.1 The explicated addressee

We assume that honorifics and pronouns have the effect that the addressee of utterance  $u$ , made in context  $c$ , is explicitly mentioned. This is part of the denotations of *omae(-wa)* and HON in (29), which introduce the non-at-issue meaning  $EXPAD(ad(c), u)$ . We use  $\bullet$  to notate two-dimensional meaning as  $\langle \text{at-issue content} \bullet \text{non-at-issue content} \rangle$

(Potts 2005). We moreover use  $x < y$  as a shorthand for "x is in a socially lower or distanced relation to y", in the sense that warrants the use of HON, and inverse anti-honorifics.

- (29) a. If interpreted as part of utterance  $u$  in context  $c$ ,  
 $[[\text{HON } p]]^c = \langle p \bullet \text{EXPAD}(ad(c), u) \rangle$ . Presupposition:  $sp(c) < ad(c)$ .  
 b. If interpreted as part of utterance  $u$  in context  $c$ ,  
 $[[\text{omae}]]^c = \langle ad(c) \bullet \text{EXPAD}(ad(c), u) \rangle$ .  
 Presupposition:  $ad(c) < sp(c)$ .

We build on Potts' immediacy property for expressive content (Potts 2007). He observes that expressive content is not "asserted" in the sense that the assertion could also be false. Instead, saying so makes it so (Austin 1959), and the use of honorifics or anti-honorifics suffices to make the non-at-issue content true, as repeated in (30).

- (30)  $\text{EXPAD}(x, u)$  is true iff there is at least one morpheme in the sentence uttered in  $u$  that contributes the non-at-issue content  $\text{EXPAD}(x, u)$ .

The EXPAD relation is thus a meta-linguistic relation between persons and utterance events in the real world. If Mizuki asks question (1) to Yuzu, then Yuzu acquires a new property  $\text{EXPAD}(\text{Yuzu}, u)$ , in addition to the properties that she had before. If Mizuki didn't ask the question, Yuzu would not have this property. Likewise if Mizuki asks the rhetorical question (3) instead, Yuzu does not have the property of being an explicated addressee. Given that EXPAD relates persons to specific utterances  $u$ , we predict that the property of being explicated in  $u$  is short-lived and must be re-established in every new assertion or question  $u$ . This also seems correct. The next subsection spells out how information seeking questions with  $ka \nearrow$  rely on an explicated addressee, and in what respect non-information-seeking questions  $ka \searrow$  are different.

## 4.2 Asking a $ka$ question

We propose that the morpheme  $ka \nearrow$  takes highest scope over questions  $Q$ . If the question is uttered  $u$  in context  $c$ ,  $ka \nearrow$  expresses the speaker intention that  $sp(c)$  requests  $ad(c)$  to give an answer.  $ka \nearrow$  presupposes that the addressee is an explicated addressee in the ongoing utterance  $u$ . If used in utterance  $u$ , uttered in context  $c$ :

- (31) If used in utterance  $u$ , uttered in context  $c$ :  
 $[[ka \nearrow]]^c = \lambda Q. \langle Q \bullet sp(c) \text{ requests } x \text{ to answer } Q \rangle$ .  
 Presupposition:  $\text{EXPAD}(x, u)$ .

The presupposition of  $ka \nearrow$  cannot be accommodated. This is a reasonable assumption, as the presupposition is about the linguistic form of the question uttered. If the question does not contain HON, a pronoun or a vocative, the hearer cannot be requested to accommodate that it did.<sup>8</sup> This entry (31) thus ensures that the use of  $ka \nearrow$  is only semantically warranted in a sentence where the addressee is explicated. Given the short-livedness of 'being EXPAD', we make sure that explicated addressees of previous

<sup>8</sup> Similarly strict presuppositions have been described e.g. for additive markers *too*, *also*

utterances are not available. We follow Yokoyama in assuming that  $ka$  in embedded questions does not convey a request for an answer. Given that  $ka \nearrow$  must take highest scope over the sentence (e.g. by interpreted in ForceP at LF), syntactic structure prohibits the use of  $ka \nearrow$  in embedded sentences.

We propose that the counterpart  $ka \searrow$  is a question marker that does not contribute further pragmatic or semantic content.

(32)  $[[ka \searrow]]^c = \lambda Q. \langle Q \bullet \phi \rangle$  where  $\phi$  are the speaker intentions that are contributed by other cues.

We leave the possibility unexplored whether  $ka \searrow$  together with other cues can be a complex pragmatic marker and might contribute speaker intentions, as described in Yokoyama (2013).

### 4.3 *Daroo*: Orientation and Honorification

We propose that *daroo* takes scope over the prejacent  $S$  and contributes the non-at-issue meaning that  $x$  assumes  $S$ . In declaratives,  $x$  must be the speaker, as well as in self-addressed questions. And we must ensure that *desyoo*-questions allow for the second, FLIP interpretation. This second reading is obviously triggered by the explicated addressee (i.e. an utterance  $u$  with  $\text{EXPAD}(ad(c), S, w)$ ) but unavailable otherwise. This is captured by the following definitions.

(33) If used in utterance  $u$  and context  $c$   
 $[[daroo]]^c = \lambda p. \langle p \bullet \text{ASSUME}(x, p, w) \rangle$   
 Presupposition:  $x = sp(c) \vee \text{EXPAD}(x, u)$ .  
 The value of  $x$  is determined by anaphor resolution. It must either be the speaker or an explicated addressee in the ongoing utterance.

Moreover, we adopt Korotkova (2014)'s AUTHORITY PRINCIPLE for evidential *daroo*. Korotkova uses the principle for reports of taste experiences, building on Kaufmann's Authority principle in the semantics of imperatives.

(34) AUTHORITY PRINCIPLE for the evidential ASSUME: Only the holder of the attitude  $A$  has the authority to assert the relation  $\text{ASSUME}(A, p, w)$ .

In declarative sentences  $S$ , *daroo* composes with  $[[S]]^c$ . The subject of ASSUME must be the speaker  $sp(c)$ , as the speaker would not be authorized to make assertions about the addressee's mental attitudes.

For questions  $Q$  we adopt a Hamblin semantics and assume the standard point-wise composition of *daroo* with the propositions in  $[[Q]]$ . In questions, then, the instantiation of  $A$  in  $\text{ASSUME}(A, p, w)$  depends on (a) whether the question is self-addressed and (b) whether the addressee has been explicated (*desyoo*), the pronoun *omae*, other pronouns, vocatives) or not. The predicted readings are listed in the next subsection.

#### 4.4 Predictions

Firstly, we predict the contrast in (6)/(7). In a question with HON marking the addressee has the property  $\text{EXPAD}(ad(c), u)$  presupposed by  $ka \nearrow$  and the question is well-formed. Due to  $ka$ , it requests an answer. Alternatively, the presuppositions of  $ka \nearrow$  can be satisfied by the use of *omae* (9)(10) or a vocative. Without any item to explicate the addressee,  $ka \nearrow$ -questions are ill-formed due to presupposition failure as in (7).

We did not spell out a full analysis of rhetorical questions like (3), (8-a). Yet we do predict that  $ka \searrow$  does not impose a presupposition that the addressee be explicated. Hence the analysis is open to be extended by cues that mark rhetorical  $ka$  questions.

Next let us turn to the predictions for *daroo*. In declaratives *daroo S*, like (21), the evidential modal adds the non-at-issue content  $\text{ASSUME}(x, p, w)$ , where  $x$  remains to be specified. In a declarative, we must choose the speaker, and the overall sentence in context  $c$  denotes:  $\langle [[S]]^c \bullet \text{ASSUME}(sp(c), [[S]]^c, w) \rangle$ . We cannot choose  $ad(c)$ , as this would violate the authority principle. The same holds true for *desyoo* in declaratives, as in (22).

What happens if *daroo* is used in a  $ka \searrow$ -question as in (23),(24)? For one, there is no presupposition that the addressee be explicated, so the question is not ruled out due to presupposition failure. We first compute the Hamblin semantics of question  $Q$  and then combine point-wise with the evidential modal.

$$(35) \quad [[daroo Q ka \searrow]]^c = \{ \langle p \bullet \text{ASSUME}(sp(c), p, w) \rangle : p \in [[Q]]^c \}.$$

We predict that the only choice for the subject of ASSUME is  $sp(c)$ . The lexical entry for *daroo* requests that any subject  $x$  of ASSUME that is not the speaker can only be an explicated addressee. In result, then, the questions in (35) put up a set of possible answers  $p$ , each one with the non-at-issue comment that the speaker  $sp(c)$  assumes that  $p$  be true. But only the speaker is authorized to provide that specific non-at-issue comment, due to the authority principle. We argue that this entails that the speaker can only pose this question to herself. It would be irrational to request answers from addressees that they are not authorized to give.<sup>9</sup>

We finally turn to *desyoo* in questions  $Q$  with  $ka \searrow$ , as in (26), (27). We assume that *desyoo* is composed of *daroo* and the HON morpheme, which compose with  $Q$  in turn. We thus get the following question denotation in utterance  $u$  and context  $c$ .

$$(36) \quad [[daroo HON Q ka \searrow]]^c = \{ \langle p \bullet \text{ASSUME}(x, p, w), sp(c) < ad(c), \text{EXPAD}(ad(c), u) \rangle : p \in [[Q]]^c \}.$$

Note that the subject of ASSUME,  $x$  has to be instantiated yet. In the present case, there are two possible choices. We can have  $\text{ASSUME}(sp(c), p, w)$  by default, or else we can choose  $\text{ASSUME}(ad(c), p, w)$ , as the addressee is explicated in (36). This leads us to the following two readings for (26), (27).

$$(37) \quad [[daroo HON Q ka \searrow]]^c = \{ \langle p \bullet \text{ASSUME}(sp(c), p, w), sp(c) < ad(c), \text{EXPAD}(ad(c), u) \rangle : p \in [[Q]]^c \}.$$

<sup>9</sup> We leave it open for now whether  $ad(c)$  is not a possible source for a self-oriented speech act of  $sp(c)$ , or whether we should, more conservatively, class it as assertions without authority.

$$(38) \quad [[\text{daroo HON } Q \text{ ka } \searrow]]^c = \{ \langle p \bullet \text{ASSUME}(ad(x), p, w), sp(c) < ad(c), \text{EXPAD}(ad(c), u) \rangle : p \in [[Q]]^c \}.$$

The denotation in (37) expresses a self-addressed question, by the same reasoning as the denotation in (35). The denotation in (38), however, puts up a set of possible answers which only the addressee is authorized to answer. Only the addressee can felicitously put up the non-at-issue content that s/he has evidence to assume  $p$ , for any of the possible answers  $p$  to  $Q$ . The content of this kind of question can therefore be felicitously paraphrased as "what is the answer to  $Q$ , what do you think?", which matches with the paraphrases for the second reading provided by Oguro (2017). This reading moreover corresponds to the Flip-question interpretation for questions with evidentials described elsewhere in the literature (SanRoque et al, 2017). We observe that questions like (26), (27) invite the addressee to answer, even though they are marked with  $ka \searrow$ , the non-demanding version of  $ka$ . We assume that its unspecific content is compatible with a speech act that invites an answer, but does not force one.

Interestingly, some authors mention that the use of  $ka \nearrow$  in *daroo*-questions is possible, if they are intended as quiz questions, exam questions or socratic questions (Hara, 2012; Oguro, 2017). In discussions with native speakers, we got mixed comments on these. Some agree that *desyoo-ka* questions with a final rise can be used in these kinds of context. Others object that the rise in quiz questions differs prosodically from the rise in ISQs. We therefore have to leave these data aside for the moment. Yet our theory predicts that a question *desyoo*  $Q$  with  $ka \nearrow$  should instantiate the subject  $x$  in  $\text{ASSUME}(x, p, w)$  with  $ad(c)$  – given that  $ka \nearrow$  requests the addressee to answer, and the addressee is an authority only on her own assumptions. Indeed it would be adequate to nuance quiz, Socratic and exam questions as "questions about the belief of the addressee". In contexts of this kind, the speaker knows the answer already and wants to find out whether the addressee maintains the correct belief. Using a Flip question is therefore rational. Admittedly, however, the pattern is in part arbitrary as not all speakers necessarily answer every exam or quiz question on basis of their inferential evidence. We thus conjecture that quiz questions exhibit a conventionalized pattern rather than being fully compositional.

## 5 Summary

We propose an analysis of Japanese *ka* ISQ and SAQ in terms of semantics and pragmatics. We assume that HON morphemes make the addressee of the utterance visible, which we capture with the relation EXPAD. Answer-requesting  $ka \nearrow$  requires an explicated addressee, whereas neutral  $ka \searrow$  does not. Neutral  $ka \searrow$  is however compatible with an explicated addressee, which can pave the way for additional readings. Specifically, we predict that *desyoo-ka* questions can have a reading that invites the addressee to answer (Flip-reading) whereas *daroo-ka* questions cannot. Thus, linking the orientation of the modal evidential to speaker or explicated addressee, we successfully predict the data reported in the literature. Given that our lexical entries make heavy use of indexicals and non-at-issue meaning, we label the analysis as "pragmatic". We hedge it as "mainly" pragmatic, as we must leave some aspects of honorifics in questions to syntax (Section 2.2.). However, our account shows how the syntactic stipulation of Speaker

Phrase and Hearer Phrase as part of the Speech Act Phrase Speas and Tenny (2003) can be replaced by the semantic/pragmatic property of being an explicated addressee.

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