

Expressing Ignorance Beyond the Nominal Domain in Japanese: A Comparative View

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1 *Wh*-KA and the Ignorance Component

A line of research in modality focuses on indefinites that encode modal inferences, or *Epistemic Indefinites* (EIs, following Alonso-Ovalle and Menndez-Benito 2015, henceforth A&M). In particular, EIs are ‘indefinite determiners or indefinite pronouns that signal ignorance on the part of the speaker, thereby conveying information about her epistemic state.’ (A&M:2). In Japanese, EIs are realized in the form of *wh*-KA, where a *wh*-expression is followed by the particle KA (Kratzer & Shimoyama 2002, Sudo 2010, Kaneko 2011 and Alonso-Ovalle & Shimoyama 2014). (1) below gives an example (taken from Sudo 2010:4):

- (1) a. *John-wa kinou dare-ka-ni atteta yo*
John-TOP yesterday **who-KA-DAT** was.meeting PRT
‘John was meeting somebody yesterday.’
- b. #*dare datta?*
who was
‘Who was it?’

As is well-known, the string *wh*-KA is interpreted existentially in (1a), i.e. ‘someone’. In addition to the existential claim, it further conveys *the speaker’s ignorance* concerning the individual denoted by *wh*-KA. The speaker of (1a) indicates that s/he does not know the individual that John met yesterday. This is illustrated by the infelicity of a follow-up question as in (1b) which presupposes A’s knowledge of the individual at issue.

While EIs are attested cross-linguistically (see A&M and references therein), the focus is primarily on the nominal domain (i.e. determiners or pronouns that express speaker’s ignorance). It is, however, important to note that the speaker’s ignorance can also be expressed via *wh*-adverbials plus the -KA.

- (2) a. *Ken-wa* {*naze-ka/ douyatte-ka/ itsu-ka*} (*-*de/ *-ni*) *ie-ni*
 Ken-top **why-ka/ how-ka/ when-ka** by/ at home-to
kaetta
 returned
 Ken returned home for some reason/ by some way/ at some time.
- b. #*tsumari*, {*tsukareta-kara/ kuruma-de/ hachiji-ni*} *ie-ni*
 namely was.tired-because/ car-by/ 8pm-at home-to
kaetta
 returned
 That is, Ken returned home because (he) was tired/ by car/ at 8pm.

It is clear from (2b) that these *wh*-KA strings similarly express the speaker’s ignorance: (2b) is an infelicitous continuation of (2a) because *tsumari* ‘that is’ in (2b) encodes the speaker’s knowledge on the relevant matter, incompatible with the ignorance conveyed in (2a). Note that these *wh*-expressions cannot be followed by case markers (unlike the one in (1a)) and hence are not nominals. Their presence suggest that the speaker’s ignorance can be expressed in a similar way beyond the nominal domain.

By examining the less discussed variation of EIs, or Epistemic *wh*-Adverbials (EAs for short), this paper (i) provides support to Alsonso-Ovalle & Shimoyamas (2014) Ignorance Implicature Approach to derive the source of the ignorance component (section 2); and (ii) contrasts Japanese EAs with Cantonese EAs, pointing to a typological difference in the source of ignorance (section 3). Section 4 discusses some implications of the study.

2 Ignorance as a Conversational Implicature

2.1 Deriving the Speaker’s Ignorance

Among various language-specific properties associated with EIs, one prominent difference is the source of ignorance. A semantically interesting ques-

tion is how to derive the speaker's ignorance. There are at least two approaches: the 'Ignorance Implicature Approach' (e.g. Alonso-Ovalle & Shimoyama 2014, i.a.) and the 'Lack of Relevant Identification Approach' (Aloni & Port 2015, i.a.). The former relates the ignorance component to a type of conversational implicature, i.e. 'a quantity implicature that arises via competition with alternative domains of quantification' (Alonso-Ovalle & Menéndez-Benito 2013:106), whereas the latter relates it to 'a shift [imposed by EIs] on the method of identification' (*ibid.*: 106). Note that the two approaches are not mutually exclusive. Jayez and Tovena (2008, 2013) argue that the ignorance conveyed by EIs in French are indeed *conventional implicature*.

To narrow down the scope of discussion, I focus on the issue of whether the ignorance component conveyed in EAs can be treated as a conversational implicature. I give an affirmative answer and suggest that the conversational implicature approach to Japanese EIs suggested in Alonso-Ovalle & Shimoyama (2014) receives further support from EAs, contra Sudo (2010).

The proposal of Alonso-Ovalle & Shimoyama suggests that the ignorance component is due to a quantity implicature, in a situation where 'there is no individual that satisfies the existential claim in all worlds compatible with what the speaker believes' (Alonso-Ovalle & Shimoyama 2014:11). I suggest that the same can be said for EAs in Japanese. I illustrate the proposal with (2a), on its *itsu*-KA reading: 'Ken returned home at some time.' Without specifying the exact time of Ken's return, it can be strengthened and gives a reading in (3a), a consequence of the Gricean quantity maxim. (3a) can further be strengthened to give (3b), i.e., the speaker could have specified the time if s/he knew about it (so as to be as informative as they could). The underspecification suggests that the speaker does not know the time, deriving the speaker's ignorance.

- (3) a. \square [[Ken returned home at 8pm] or [Ken returned home at 9pm] or [Ken returned home at 10pm] or ...]
- b. $\neg\square$ [Ken returned home at 8pm],
 $\neg\square$ [Ken returned home at 9pm],
 $\neg\square$ [Ken returned home at 10pm],
 ... and so on.

The above shows that the ignorance of EAs *can* be derived via a conversational implicature approach. Indeed, this approach naturally accounts for various properties of EAs, as we will see in the next section.

2.2 Properties of Epistemic *wh*-Adverbials in Japanese

First, if the speaker's ignorance associated with EAs in Japanese is derived from a quantity implicature, we expect to see that it can be canceled, similar to

other conversational implicatures.¹ This is borne out in (4), which is intended to be a continuation of (2a) above: the conversational implicature is canceled by *jitsu-wa* ‘in fact’, where the speaker strengthens a claim made previously.

(4) Canceling the ignorance component

jitsu-wa, itsu da-ka shitteiru yo
in.fact-TOP when be-KA know PRT

‘In fact, I know when (he returned to home).

[continuation to (2a), on its *itsu*-KA reading]

Second, EAs also show interaction with other operators. The speaker’s ignorance is suppressed if they take a narrow scope with regard to the other operators. (5) involves a downward-entailing environment, where *itsu-ka* scopes under negation. The speaker’s ignorance is unavailable. Suppression is made possible because the alternatives denoted by the *wh*-adverbials are under the scope of negation and hence the inference pattern as in (3) is no longer possible.

(5) Downward-entailing environments

Ken-wa itsu-ka modotte kuru nodewanai
Ken-TOP **when**-KA return come it.is.not.the.case

Lit.: It is not that Ken will be back at some time.

≈ Ken will not be back anymore.

This is similar for an upward-entailing environment, modeled on Alonso-Ovalle & Shimoyama (2014:13). In the scenario depicted in (6), the speaker can felicitously utter (7), although s/he is fully aware of the returning dates of all the teachers. The felicity of (7) suggests that speaker’s ignorance is absent. The wide scope universal operator scopes over the EA in (7), suspending the inference pattern as in (3).

(6) Scenario for (7)

The speaker is a secretary of a school and is looking at the schedule which clearly states the (different) returning dates of all the teachers.

¹ The properties of EAs discussed in this section are exclusively illustrated with *itsu-ka* ‘some time’. Other members of EAs may or may not pattern in an identical way, potentially due to the inherent scope of *wh*-adverbials or pragmatic issues.

(7) Upward-entailing environments

dono-sensei-mo itsu-ka gakkou-ni modotte kuru
 which-teacher-MO **when-ka** school-to return come

Every teacher will return to school at some (different) time(s).

Third, as we have seen in (3), the alternatives denoted by the *wh*-expressions are crucial to the conversational implicature. We then expect to see EAs are incompatible with singleton sets (i.e. anti-singleton constraint, Alonso-Ovalle & Menendez-Benito 2010). In (8), *ichiban atsui toki* ‘the hottest period’ denotes a singleton set, eliminating other alternatives required for deriving conversational implicature and hence infelicity.

(8) Anti-singleton constraint

#*Ken-wa itsu-ka ichiban atsui toki-ni Karuizawa-ni ryokoushita*
 Ken-TOP **when-ka** most hot time-at Karuizawa-to travelled

Intended: ‘Ken travelled to Karuizawa at some hottest period.’

The above properties of EAs are no different from those of EIs in Japanese, as discussed in Alonso-Ovalle & Shimoyama (2014), which provide further support to their Ignorance Implicature Approach. In the next section, I provide indirect evidence for this approach, by contrasting the Japanese EAs with Cantonese EAs. In particular, I suggest that the properties of Cantonese EAs mirror those of Japanese EAs, indicating a genuine departure from the Ignorance Implicature Approach (cf. Sudo 2010)

3 A Comparative View from Cantonese

Morphologically, Cantonese EIs and EAs are similar to Japanese ones. Both of them involve the use of *wh*-expressions. Precisely, they are in the form of M-ZI-*wh* ‘not know *wh*’ (see Lee & Wong, to appear, for an extensive discussion). Consider the example in (9), the Cantonese counterpart of (2):

- (9) a. *Aaming* {M-ZI-*dimgai*/ *m-zi-dimjoeng*/ *m-zi-geisi*} *faan-zo*
 Aaming M-ZI-**why**/ **m-zi-how**/ **m-zi-when** returned
ukkei
 home

Aaming returned home for some reason/ in some way/ at some time.

- b. #*zikhaiwaa*, {*janwai gui*/ *zaace*/ *baatdim*} *faan-zo ukkei*
 namely because tired/ drive.car/ 8pm returned home

That is, Ken returned home because (he) was tired/ by car/ at 8pm.

Similarly, the infelicity of (9b) is due to the incompatibility between the speaker's ignorance in (9a) and the speaker's knowledge in (9b). This confirms the status of the string *M-ZI-wh* as an EA.

However, Cantonese EAs display distinct properties with regard to the above properties of Japanese EAs, suggesting the ignorance cannot be derived under the Ignorance Implicature Approach. For example, in (10), the speaker's ignorance in (9a) cannot be canceled by *keisak* 'in fact':

(10) Canceling the ignorance component

#*keisak*, *ngo zi geisi*
in.fact I know when

In fact, I know when (he returned to home).

[continuation to (9a), on its *m-zi-geisi* reading]

Furthermore, the ignorance does not seem to interact with other operators. It cannot be suppressed in downward-entailing or upward-entailing environments. With the presence of negation in (11), the ignorance component does not disappear as in Japanese. The EA in (11) appears to take wide scope over negation, where the speaker suggests that there is a time that Aaming will not come back, but s/he does not know which time it is (e.g. Christmas, because Aaming is busiest during that period).

(11) Downward-entailing environments

Aaming m-wui m-zi-geisi faanlai
Aaming not-will **m-zi-when** come.back

'Aaming will not come back at some time (I dont know when).'

Also, in the scenario depicted in (6) above, (12) is infelicitous, which indicates the presence of the speaker's ignorance: the speaker obviously knows about the returning dates of all the teachers, incompatible with EAs in Cantonese. Instead, it gives a reading where the speaker does not know the particular returning time of every teacher. Again, it seems that the EA outscopes the universal quantifier.

(12) Upward-entailing environments

#*bingo lousi dou wui m-zi-geisi faan-faan hokhaau*
which teacher all will **m-zi-when** return-back school

'Every teacher will all return to school at some time (unknown to me).

Lastly, Cantonese EAs are compatible with singleton sets, i.e., they do not conform to the anti-singleton constraint. In (13), while the alternative set

denoted by *geisi* 'when' is restricted to one member (i.e. 'the hottest period'), the use of EAs is still felicitous. It suggests that the speaker does not know the time in a relevant way (e.g., the speaker cannot recall the month).²

(13) (Absence of) anti-singleton constraint

Aaming **m-zi-geisi** zeoi jit gozan heoi-zo Hingzenzak leoihan
 Aaming **m-zi-when** most hot that.time went Karuizawa travel
 'Aaming travelled to Karuizawa at some hottest period.'

While characterizing the source of ignorance of Cantonese EAs is beyond the scope of this paper, a possibility suggested in Lee & Wong (to appear) is that it is derived from *conventional implicature*, such that the ignorance component is conventionally expressed via M-ZI-*wh*. This may explain why the speaker's ignorance cannot be canceled or suppressed. The crucial point here is that the ignorance in Japanese EAs is best captured under the Ignorance Implicature Approach, given the properties discussed in Section 2 and their absence of properties that are illustrated by Cantonese EAs.

4 Discussions and Concluding Remarks

The above discussion on Japanese and Cantonese EAs may shed light on the study of ignorance in natural languages. First, the source of ignorance may have a typological difference: while it is a *conversational implicature* in Japanese *wh*-KA (Alonso-Ovalle & Shimoyama 2014) and Spanish *algn* (Alonso-Ovalle & Menndez-Benito 2010), it is a *conventional implicature* in Cantonese M-ZI-*wh* (Lee & Wong, to appear) and French *quelque* (Jayez & Tovena 2008, 2013). Furthermore, a hybrid approach may also be needed for German *irgendein* (Aloni & Port 2015).

Secondly, as far as morphology is concerned, it is clear from the discussion above that the ignorance component is not exclusively expressed via determiners or quantifiers, as in many European languages. In languages where articles are unavailable, Japanese adopts the question particle KA, whereas Cantonese adopts the sequence of negation plus *zi* know. The morphological difference may explain the difference in the source: KA merely expresses existential quantification, whereas M-ZI comes with some lexical meaning rooted in the predicate 'not know'.

Third, EAs in the sense of this paper are unattested in the article-languages, probably for a morphological reason: articles do not usually go with adverbials. However, there is no *a priori* reason to confine the study of ignorance to the nominal domain. Further research on other article-less languages and

²This is reminiscent of the Lack of Relevant Identification Approach suggested in Aloni & Port (2015). I leave the exploration of this possibility to future research.

on the semantics of EAs may serve as another window to look into the ways of expressing ignorance in natural languages.

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