Bare indeterminates in unconditionals
Ken Hiraiwa and Kimiko Nakanishi*

Abstract. Indeterminates in Japanese have been studied extensively since Kuroda (1965) and all the previous works share the descriptive generalization that indeterminates must co-occur with overt quantificational particles such as ka and (de)mo. We present novel data indicating that the Japanese indeterminates are licensed “bare” without the presence of an overt particle to associate with. Conversely, we also point out data in which the mere presence of mo fails to license an indeterminate. We argue that our long-standing understanding of indeterminates has been misguided and that what truly licenses a bare indeterminate is a covert Q-morpheme. Our analysis that a covert Q-morpheme is the licensor of bare indeterminates departs from the traditional view that indeterminates require the overt licensing particle ka or (de)mo.

Keywords. indeterminates; unconditionals; alternatives; quantificational particles; question

1. Introduction. As Haspelmath’s (1997) typological study on indefinite pronouns has shown, a number of languages possess a so-called indeterminate system. Indeterminates (or sometimes called wh-indefinites, less precisely) are words that may yield indefinite pronouns such as wh-pronouns, universal quantifiers, existential quantifiers, negative polarity items (NPI), and free choice items. The indeterminate system can be divided into two types: a system in which (some) indeterminates are morphologically unmarked and change their meanings depending on linguistic environments (e.g., Mandarin Chinese, Lakhota, Hopi, Dyirbal; see Haspelmath 1997, 170), and a system in which indeterminates need to combine with particular morphemes to express different meanings (e.g., Japanese, Hungarian, Basque, Latvian, Russian). The latter system is illustrated in Table 1 with indeterminates that refer to humans.

<table>
<thead>
<tr>
<th>Wh ‘wh X’</th>
<th>Universal ‘every X’</th>
<th>Existential ‘some X’</th>
<th>NPI ‘any X’</th>
<th>Free Choice ‘any X’</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japanese</td>
<td>dare ... ka</td>
<td>da’re-mo</td>
<td>da’re-ka</td>
<td>dare-mo</td>
</tr>
<tr>
<td>Hungarian</td>
<td>ki</td>
<td>vala-ki</td>
<td>sen-ki</td>
<td>minde-ki</td>
</tr>
<tr>
<td>Basque</td>
<td>nor</td>
<td>nor-bait</td>
<td>i-nor</td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Indeterminate systems

Indeterminates in Japanese have been studied extensively since Kuroda (1965) and all the previous works share the descriptive generalization in (1) that indeterminates must co-occur with

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(1) The Indeterminate-Particle Generalization in Japanese (informal)

In Japanese, indeterminates must be licensed by c-commanding quantificational particles such as *ka* and *(de)*mo, and c-commanding quantificational particles license indeterminates.

For example, in Japanese, a wh-pronoun and an existential quantifier are built with the particle *ka*. A (strong) NPI (or a negative concord item) and a universal quantifier are built with the particle *mo*, while a free choice item is built with the particle *demo*. In all of these cases, the particles are required, and their absence leads to ungrammaticality.1

(2) a. Wh-pronoun: [Dare-ga ki-ta *(ka)*] wakara-na-i.
   who-NOM come-PST Q know-NEG-PRS
   ‘I don’t know who came.’

b. Existential quantifier: Dare-*(*ka)*-ga ki-ta.
   who-KA-NOM come-PST
   ‘Someone came.’

c. Negative polarity item: Dare-*(*mo)* ko-nakat-ta.
   who-MO come-NEG-PST
   ‘No one came.’

d. Universal quantifier: Dare-*(*mo)*-ga ki-ta.
   who-MO-NOM come-PST
   ‘Everyone came.’

e. Free choice item: Dare-*(*demo)* kiteii yo.
   who-DEMO come.may SFP
   ‘Anyone may come.’

Kuroda (1965, 43), based on this observation, argued that an indeterminate itself does not have any quantificational force and it is a logical variable that must be bound by a quantificational meaning of *ka* or *(de)*mo. On the other hand, Saito (2017) proposed that an indeterminate in Japanese is an operator. Common to these approaches is the idea that an indeterminate lacks a quantificational force and is uninterpretable without a quantificational particle. In other words, indeterminates in Japanese, unlike those in Mandarin Chinese and other languages, do not change their meaning simply depending on their environments (see Cheng 1991, Li 1992, Lin 1996, 1998, for Mandarin Chinese).

In this article, by showing the data where indeterminates in Japanese show up bare without any particle, we cast doubt on the long-standing descriptive generalization in (1) and the analyses based on it. Conversely, we also provide data where indeterminates are illicit even when they are c-commanded by quantificational particles. We argue that at least in the cases we discuss below,

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indeterminates are not licensed by overt particles but by an invisible Q-morpheme syntactically, which functions as a question operator semantically.

2. Bare indeterminates in Japanese. As we have pointed out above, there has been a long-standing descriptive generalization that indeterminates in Japanese require the presence of a c-commanding overt particle ka or (de)mo. But as we show momentarily, there are in fact cases where indeterminates appear “bare” without any particle. In what follows, we refer to indeterminates that are licensed without the presence of an overt particle as bare indeterminates.

2.1. BARE INDETERMINATES IN UNCONDITIONALS. In this article, we focus on bare indeterminates that occur in so-called unconditionals (or concessive conditional clauses), different morpho-syntactic forms of which exist. The following data in (3)–(5) correspond to wh-ever and no matter wh- constructions in English. Consider example (3).

(3) Dare-ga {ki-(tatosi)te-*(mo)/kuru-nisite-*(mo)/kuru-tosite-*(mo)},
   who-NOM come-COND-MO/come-COND-MO/come-COND-MO
   Taro-wa yorokob-u daroo.
   Taro-TOP please-PRS will
   ‘Whoever comes, Taro will be pleased.’

This example of unconditionals conforms to the descriptive generalization in (1), because the particle mo is attached to the unconditional clause and its presence is obligatory.

As (4) shows, however, there are types of unconditionals where indeterminates appear without ka or (de)mo. The same observation is made by Shimoyama (2006, fn. 27). What is noteworthy about the bare indeterminate in (4) is the fact that an overt particle ka or (de)mo cannot attach anywhere and the indeterminate is nevertheless well-formed, contrary to (1).

(4) Dare-ga {ko-yooga/ki-tatte/kuru-nisitatte/kuru-tositatte/kuru-nisiro/
   who-NOM come-SBJV/come-COND/come-COND/come-SBJV/
   kuru-niseyo/kuru-nodeare}(-*mo/*ka),
   Taro-wa yorokob-u daroo.
   Taro-TOP please-PRS will
   ‘Whoever comes, Taro will be pleased.’

Furthermore, there are also other types of unconditionals where a particle mo is optional.

(5) Dare-ga ko-yooto(-mo), Taro-wa yorokob-u daroo.
   who-NOM come-SBJV-MO Taro-TOP please-PRS will
   ‘Whoever comes, Taro will be pleased.’

These facts lead us to the observation in (6).

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2 Even though it is not the case that the data in which indeterminates show up without ka or (de)mo have been ignored entirely in the literature, they have only been observed sporadically, often as an exception or a peripheral phenomenon. For example, Shimoyama (2006) claims that an indeterminate in Japanese must co-occur with ka or mo, but in footnote 27, she points out examples where an indeterminate appears without a particle or it does so optionally (see example (4) and (5) below), which she dismisses without any account.

3 As Rawlins (2008, Section 1.2) points out, researchers diverge regarding how the construction in (3)-(5) is called. Rawlins, following Zaefferer (1990, 1991), calls it an unconditional. On the other hand, Haspelmath & König (1998) calls it a universal concessive conditional. In this article, we use the term unconditional.

4 In this article, for expository purposes, we will refer to adjunct clauses that express concessive conditional meaning as unconditional (see Rawlins 2008), while we call the entire sentence consisting of an unconditional clause and its consequent clause an unconditional construction.
In Japanese, licensing of indeterminates does not require overt particles (contra (1)).

One may maintain the observation in (1) and claim that the bare indeterminates in (4) and (5) are licensed by an invisible counterpart of particle \((de)mo\). Such a possibility is not untenable, given that the Q-complementizer \(ka\) is optional (or prohibited sometimes) in root \(wh\)-question, whereas question rising prosody is obligatory (see Yoshida & Yoshida 1997, Hiraiwa & Kobayashi 2019).

\[(7)\]

<table>
<thead>
<tr>
<th>a.</th>
<th>Dare-ga kimasu <strong>(ka)</strong>↑?</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>who-NOM come Q</td>
</tr>
<tr>
<td></td>
<td>‘Who will come?’</td>
</tr>
<tr>
<td>b.</td>
<td>Dare-ga kuru no <strong>(*ka)</strong>↑?</td>
</tr>
<tr>
<td></td>
<td>who-NOM come C Q</td>
</tr>
<tr>
<td></td>
<td>‘Who (is it that) will come?’</td>
</tr>
</tbody>
</table>

The particle \(ka\) is also optional in some exclamative and rhetorical question sentences.

\[(8)\]

<table>
<thead>
<tr>
<th>a.</th>
<th>Konna samui hi-ni dare-ga kuru n da yo <strong>(*ka)</strong>!</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>this cold day-on who-NOM come C COP SFP Q</td>
</tr>
<tr>
<td></td>
<td>‘Who would come on such a cold day like today!’</td>
</tr>
<tr>
<td>b.</td>
<td>Nanto/Nante/Nantoiu samui hi da <strong>(ka)</strong>!</td>
</tr>
<tr>
<td></td>
<td>what/what/what cold day COP Q</td>
</tr>
<tr>
<td></td>
<td>‘What a cold day it is today!’</td>
</tr>
</tbody>
</table>

Nevertheless, it is problematic to assume an invisible counterpart of \((de)mo\) for bare indeterminates. An indeterminate \(naze\) ‘why’ differs from other indeterminates in that it cannot be licensed by the particle \(mo\) and can only be used with the particle \(ka\).

\[(9)\]

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td></td>
<td>Taro-NOM why angry-PST person-MO objection-do-PST</td>
</tr>
<tr>
<td></td>
<td>‘Everyone with whom Taro got angry why objected.’</td>
</tr>
<tr>
<td>b.</td>
<td>Negative polarity item:*Taro-ga okot-ta riyuu-ga naze-(mo) wakara-na-i.</td>
</tr>
<tr>
<td></td>
<td>Taro-NOM angry-PST reason-NOM why-MO know-NEG-PRS</td>
</tr>
<tr>
<td></td>
<td>‘I don’t know the reason why Taro got angry at all.’</td>
</tr>
<tr>
<td>c.</td>
<td>Free choice item:        * Taro-wa naze-(demo) okor-u.</td>
</tr>
<tr>
<td></td>
<td>Taro-TOP why-DEMO angry-PRS</td>
</tr>
<tr>
<td></td>
<td>‘Taro gets angry for any reason.’</td>
</tr>
</tbody>
</table>

\[(10)\]

<table>
<thead>
<tr>
<th>a.</th>
<th>(Wh)-pronoun: Taro-wa naze okorimasi-ta <strong>(ka)</strong>?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Taro-TOP why angry-PST Q</td>
</tr>
<tr>
<td></td>
<td>‘Why did Taro get angry?’</td>
</tr>
<tr>
<td>b.</td>
<td>Existential quantifier: Taro-wa naze-<strong>(ka)</strong> okot-ta.</td>
</tr>
<tr>
<td></td>
<td>Taro-TOP why-KA angry-PST</td>
</tr>
<tr>
<td></td>
<td>‘Taro got angry somehow.’</td>
</tr>
</tbody>
</table>

Now, note that \(naze\) can appear bare in unconditionals, as shown in (11) and (12). The fact that examples (9) are ungrammatical while examples (10)–(12) are grammatical cannot be explained even if we assume the presence of an invisible counterpart of \((de)mo\) for bare indeterminates.
(11) Taro-ga naze {okor-ooga/okot-tatte/okoru-nisitatte/okoru-tositatte/
Taro-NOM why angry-SBJV/angry-COND/angry-COND/angry-COND/
okoru-nisiro/okoru-niseyo/okoru-nodeare}, boku-ni-wa kankee na-i.
angry-SBJV/angry-SBJV/angry-SBJV 1SG-DAT-TOP matter NEG-PRS
‘Whatever the reason why Taro got angry, I don’t care.’

(12) Taro-ga naze {okor-(tatosi)te-mo/okoru-nisite-mo/okoru-tosite-mo/
Taro-NOM why angry-COND-MO/angry-COND-MO/angry-COND-MO/
okor-ooto(-mo)}, boku-ni-wa kankee na-i.
come-SBJV-MO 1SG-DAT-TOP matter NEG-PRS
‘Whatever the reason why Taro got angry, I don’t care.’

2.2. UNCONDITIONALS, CONDITIONALS, AND CONCESSIVE CLAUSES. Based on the observations so far, it is clear that the licensing mechanism of bare indeterminates in unconditionals is different from that of NPIs and universal indeterminates. Unconditionals or concessive conditional clauses, as their name stands for, refer to clauses that possess both “conditional” and “concessive” meanings. In this section, we compare unconditionals with conditionals and concessive clauses, and show that only unconditionals permit bare indeterminates.

Unconditionals and concessive clauses are similar, but not identical. Examples (13) illustrate unconditionals, while examples (14) are mere concessive clauses.

(13) a. Taro-ga {ki-(tatosi)te-*mo/kuru-nisite-*mo/kuru-tosite-*mo},
Taro-NOM come-COND-MO/come-COND-MO/come-COND-MO
Hanako-wa yorokoba-na-i.
Hanako-TOP please-NEG-PRS
‘Whether Taro comes or not, Hanako won’t be pleased.’
b. Taro-ga {ko-yooga/ki-tatte/kuru-nisitatte/kuru-nisiro/
Taro-NOM come-SBJV/come-COND/come-COND/come-SBJV/
kuru-niseyo/kuru-nodeare}(-mo*ka), Hanako-wa yorokoba-na-i.
come-SBJV/come-SBJV/MO/KA Hanako-TOP please-NEG-PRS
‘Whether Taro comes or not, Hanako won’t be pleased.’
c. Taro-ga ko-yooto-(mo) Hanako-wa yorokoba-na-i.
Taro-NOM come-SBJV-MO Hanako-TOP please-NEG-PRS
‘Whether Taro comes or not, Hanako won’t be pleased.’

(14) a. Taro-ga okurete kuru-*mo, Hanako-wa yorokoba-nakat-ta.
Taro-NOM late come-MO Hanako-TOP please-NEG-PST
‘Although Taro came late, Hanako wasn’t pleased.’
b. Taro-ga kuru-{noni/ga}*(-mo), Hanako-wa yorokoba-na-i.
c. Taro-ga ki-ta-{keredo/kedo}*(-mo), Hanako-wa yorokoba-nakat-ta.
Taro-NOM come-PST-though-MO Hanako-TOP please-NEG-PST
‘Although Taro came, Hanako wasn’t pleased.

Unconditionals and concessive clauses are different in that the proposition that the antecedent denotes is only presented as a possibility in the unconditionals in (13), but it is assumed to be true in the concessive clauses in (14). However, they are similar in that they both have three patterns: mo is required, mo is disallowed, and mo is optional. One may wonder, then, if mo in (13)
and (14), which conveys concessiveness, is what licenses indeterminates.\(^5\) As the examples of a concessive clause in (15) show, however, mere concessiveness is insufficient for licensing indeterminates.

(15) a. * Dare-ga okurete kuru-\textit{mo}, boku-ni-wa kankee nakat-ta.  
\hspace{1cm} who-NOM late come-MO 1SG-DAT-TOP matter NEG-PST  
\hspace{1cm} *(lit.) Although who came late, I didn’t care.’

b. * Dare-ga ki-ta \{noni/ga\}, boku-ni-wa kankee na-i.  
\hspace{1cm} who-NOM come-PST though/but 1SG-DAT-TOP matter NEG-PRS  
\hspace{1cm} *(lit.) Although who came, I don’t care.’

c. * Dare-ga ki-ta \{keredo/kedo\}(-\textit{mo}), boku-ni-wa kankee nakat-ta.  
\hspace{1cm} who-NOM come-PST though-MO 1SG-DAT-TOP matter NEG-PST  
\hspace{1cm} *(lit.) Although who came, I didn’t care.’

It is equally important to note that bare indeterminates are disallowed in examples (15a) and (15c) despite the presence of the particle \textit{mo}. This can be taken as counter-evidence against the descriptive generalization in (1).

Unconditionals are also different from mere conditionals. The consequent is entailed in the unconditional sentences in (13), but not in the conditional sentences in (16).

(16) (Mosi) Taro-ga \{ki-ta-ra/kuru-nara/ku-reba/kuru-to\},  
\hspace{1cm} if Taro-NOM come-PST-COND/come-COND/come-COND/come-COND  
Hanako-wa yorokob-u daroo.  
Hanako-TOP please-PRS will  
‘If Taro comes, Hanako will be pleased.’

Nonetheless, in both sentences the antecedent is presented merely as a possibility, and one may assume that this common property plays a role in making bare indeterminates licit. As example (17) shows, however, that this shared property does not license bare indeterminates.

(17) *(Mosi) dare-ga \{ki-ta-ra/kuru-nara/ku-reba/kuru-to\},  
\hspace{1cm} if who-NOM come-PST-COND/come-COND/come-COND/come-COND  
Hanako-wa yorokob-u daroo.  
Hanako-TOP please-PRS will  
‘If who comes, Hanako will be pleased.’

In this section, we have demonstrated that Japanese allows bare indeterminates, contrary to the previous descriptive generalization. At least in unconditionals, an indeterminate does not require an overt particle such as \textit{ka} or \textit{(de)mo}. Furthermore, a bare indeterminate is not licensed in mere concessive or conditional clauses. On the contrary, we have shown that there are even cases where an indeterminate is illicit despite the presence of an overt particle \textit{ka} or \textit{(de)mo}. In the next section, we examine a licensing mechanism of bare indeterminates in detail.


\(^5\) As for the meaning of \textit{mo} in the -\textit{temo} unconditional in (14a), see Matsui (2009).
instance, the indeterminate \textit{dare} `who' in (18) denotes a set of humans, as in (19a). In a Hamblin semantics, most of other lexical items denote singleton sets; for instance, the verb \textit{kimasita} `came' denotes a singleton set `x came'. (19a) and (19b) are composed by applying functional application in a pointwise manner. As a result, we obtain a set of propositions of the form `a came', `b came', etc., as in (19c).

(18) \textit{Dare-ga kimasita ka?} \\
who-NOM come-PST Q \\
`Who came?'

(19) a. $[[\text{dare}]^w,g] = \{x \in D_e: \text{human}(x)(w)\}$ \\
b. $[[\text{kimasita}]^w,g] = \{\lambda x \lambda w'. \text{come}(x)(w')\}$ \\
c. $[[\text{dare-ga kimasita}]^w,g] = \{p: \exists x[\text{human}(x)(w) \land p = \lambda w'. \text{come}(x)(w')]\}$

In Hamblin’s system, a set introduced by an indeterminate keeps expanding until it meets an operator that takes it as its argument. In (18), the question operator (hereafter Q-operator) takes (19c) as its argument. Kratzer & Shimoyama (2002) provides the following two denotations for the Q-operator.

(20) a. $[[\text{Q} \alpha]^w,g] = [[\alpha]^w,g]$ \\
b. $[[\text{Q} \alpha]^w,g] = \{\lambda w'. \forall p[p \in [[\alpha]^w,g] \rightarrow [p(w)=1 \leftrightarrow p(w')=1]]\}$ \\
\hspace{1cm} (Kratzer and Shimoyama 2002: section 3)

The Q-operator in (20a) is a trivial function that simply lets the alternatives through. In contrast, the Q-operator in (20b), which is based on Groenendijk and Stokhof (1984), returns a singleton set whose sole member is a question denotation. Shimoyama (2006, fn. 21) seems to opt for (20b), claiming that \textit{ka} and \textit{(de)mo} are the only lexical items that select Hamblin alternatives and return singletons. Her claim is based on the long-standing observation that indeterminates must co-occur with \textit{ka} or \textit{(de)mo}. If \textit{ka} and \textit{(de)mo} are the only alternative-selecting operators, we would predict that indeterminates always appear in the scope of \textit{ka} or \textit{(de)mo}. However, the existence of bare indeterminates casts doubt on Shimoyama’s claim, and thus there is no reason of choosing (20b) over (20a). Indeed, as we will see shortly, we will adopt the denotation in (20a), following Rawlins (2008, 2013).

3.2. UNCONDITIONALS: RAWLINS (2008, 2013). Rawlins (2008, 2013) provides a Hamblin analysis of unconditionals in English, exemplified in (21). He claims that the unconditionals in (21) can be paraphrased as a list of conditionals such as (22).

(21) a. Whatever Alfonso has, he should stay home. \\
b. No matter what Alfonso has, he should stay home. \hspace{1cm} (Rawlins 2013, 146)

(22) If Alfonso has a cold, he should stay home, and if Alfonso has the measles, he should stay home, and if Alfonso has the flu, he should stay home, and …

Rawlins derives the meaning in (22) by analyzing an unconditional clause as a question, hence it denotes a set of propositions (see Jayaseelan 2001, 87 for a similar idea). On the surface, the unconditional clause in (21) looks like a free relative. Rawlins, however, points out the contrast in (23) as a piece of evidence against it (see Rawlins 2008, 2013 for other differences between

\hspace{1cm} See Nakanishi & Hiraiwa (to appear) for more detailed comparison of the two denotations of the Q-operator.
the two). Unconditional clauses, like questions, allow for multiple wh-phrases, but free relatives do not.

(23) a. Alfonso knows who said what.  
   b. * Alfonso talked to who(ever) said what.  
   c. Whoever buys whoever’s property, the town council will still grant a building permit.  
   (Rawlins 2013, 150)

According to Rawlins, unconditional clauses as well as if-conditional clauses provide domain restrictions in a pointwise manner to an operator in the main clause such as a modal (see Kratzer 1981, 1986 on if- conditionals). But they differ in that while an if-conditional clause expresses a single proposition (or a singleton set of propositions in Hamblin’s system), an unconditional clause denotes multiple propositions (or a set of propositions). In (21), the wh-phrase denotes the set of individuals in (24a) and the unconditional clause denotes the set of propositions in (24b) such as \{Alfonso has a cold, Alfonso has the measles, Alfonso has the flu, \ldots\}.

(24) a. $[[\text{what}]]^{w,g} = [[\text{whatever}]]^{w,g} = \{x \in D_e: \text{non-human}(x)(w)\}$
   b. $[[\text{whatever Alfonso has}]]^{w,g} = \{p: \exists x[\text{non-human}(x)(w) \land p = \lambda w'. Al has x in w']\}$

Recall Rawlins’s claim that an unconditional clause is a question. Thus, he assumes that the Q-operator in (20a) scopes over the entire unconditional. This Q-operator lets through the set of alternatives provided by an indeterminate and hence the meaning of (24b) remains unchanged even after (24b) combines with the Q-operator, as in (25).

(25) $[[\mathbf{Q}]]^{w,g} ([[\text{whatever Alfonso has}]]^{w,g}) = (24b)$

Rawlins further claims that each proposition in (25) provides a domain restriction to the modal in the main clause. Putting the details aside, the denotation of the entire unconditional construction is provided in (26), where each alternative has a conditional paraphrase (e.g., If Alfonso has that disease, he should stay home).

(26) \{in all the closest worlds where Alfonso has a cold, he stays home,  
in all the closest worlds where Alfonso has the measles, he stays home,  
in all the closest worlds where Alfonso has the flu, he stays home,  \ldots\}

(26) cannot be the final meaning of the sentences in (21), however, because in Hamblin’s system, a declarative sentence must denote a single proposition. To solve this issue, Rawlins claims that a singleton obtains from (26) with the help of the universal operator in (27).\[9\] The LF representation of unconditional is given in (28).

(27) $[[\forall \alpha]]^{w,g} = \{\lambda w'. \forall p[p \in [[\alpha]]^{w,g} \rightarrow p(w')=1]\}$  
   (Kratzer & Shimoyama 2002, Section 3)

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7 Rawlins initially presents the compositional analysis of unconditionals without considering the contribution of -ever. See Rawlins (2013: section 4.3) for the meaning of -ever (as well as no matter), where he claims that it introduces an ignorance presupposition.

8 Rawlins (2013, Section 2.4) later modifies the denotation of the Q-operator, and argues that it comes with two presuppositions, namely, exhaustivity and mutual exclusivity. In this respect, it is too strong to say that the Q-operator does not contribute any meaning. However, we maintain the denotation (20a) as these presuppositions are not relevant to our discussion below.

9 Rawlins suggests that an assertion operator is present in the matrix clause in unconditional constructions and that it requires a singleton set, which triggers the insertion of the universal operator. In this sense, the universal operator is inserted only when it is required (see also Menéndez-Benito 2006). In contrast, questions come with the Q-operator in (20a), which allow non-singletons, hence no insertion of the universal operator.
The universal operator in (27) combines with the alternative set and yields a singleton set that only contains propositions that are true if and only if every proposition in the set is true. With the case at hand, we obtain a singleton that contains the conjunction of the propositions in (26), which is exactly what the sentences in (21) mean.

3.3. SEMANTICS OF BARE INDETERMINATES IN UNCONDITIONALS. Having introduced Rawlins’s analysis of unconditionals, let us now turn to Japanese. As stated above, indeterminates lack their own quantificational force, and thus they require the presence of quantificational operators. This view we share with Shimoyama. However, we diverge from her analysis and argue that the quantificational operators that indeterminates associate with need not be overt. More specifically, extending Rawlins’s analysis of English unconditionals, we claim that bare indeterminates in Japanese unconditionals are licit because of the covert Q-operator. In syntax, this Q-operator takes the form of Q-morpheme (Cable 2010) and licenses a bare indeterminate. This means that an operator that combines with a set of individuals introduced by an indeterminate does not have to be overtly realized as a particle and that an indeterminate can be licensed without any particle—as a bare indeterminate, if an environment allows for an invisible operator (see Cable 2010 for a hypothesis that Q-morphemes are not externalized in many languages).

As we have seen above, the meaning of unconditionals with indeterminates is analogous to unconditionals with wh-ever or no matter wh-. If we assume that an indeterminate in Japanese introduces a set of alternatives, just as a wh-phrase in English does, then Rawlins’s analysis easily extends to the Japanese unconditionals (3)–(5), and in the end we obtain the truth conditions in (29).

(29) If Alan comes, Taro will be pleased, and if Bill comes, Taro will be pleased, and if Conan comes, Taro will be pleased, and …

In order to extend Rawlins’s analysis to Japanese unconditionals, however, we need to show that unconditional clauses in Japanese are questions. On the surface, the complementizer ka does not show up in an unconditional clause, unlike in a root wh-question such as Dare-ga kimasi-ta ka? ‘Who came?’ in (18). However, recall that naze ‘why’, which is only licensed in a question (and its kins), is also licit in unconditionals (see (11)−(12)). This serves as a piece of evidence that an unconditional is syntactically a question.

This is further corroborated by another piece of evidence from the sentential disjunctive connective soretomo ‘or’. It can disjoin questions in (30), but cannot disjoin declarative sentences in (31). This is expected because in Hamblin’s system, a question denotes a set of alternative propositions and soretomo is a sentential disjunctive connective that is compatible with alternative propositions (see also Larson 1985 for the availability of the disjunctive connective or in English questions).

   Taro-TOP Jiro-NOM come-PST C Q whether ask-PST
   ‘Taro asked whether Jiro came or not.’

   Taro-TOP Jiro-NOM come-PST C Q or Hanako-NOM come-PST C Q ask-PST
   ‘Taro asked whether Jiro came or Hanako came.’
(31) *Jiro-ga ki-ta soretomo Hanako-ga ki-ta.
   Jiro-NOM come-PST or Hanako-NOM come-PST
   ‘Jiro came or Hanako came.’

What is crucial here is the fact that this disjunctive connective is perfectly fine in unconditionals, as in (32).

   Jiro-NOM come-SBJV or come-NEG-SBJV Taro-TOP please-PRS will
   ‘Whether Jiro comes or not, Taro will be pleased.’

b. [Jiro-ga ko-yooga (soretomo) Hanako-ga ko-yooga]
   Jiro-NOM come-SBJV or Hanako-NOM come-SBJV
   Taro-wa yorokob-u daroo.
   Taro-TOP please-PRS will
   ‘Whether Jiro comes or Hanako comes, Taro will be pleased.

In contrast, the concessive clause in (33) and the conditional in (34) do not accept soretomo.

(33) a. * [Taro-ga ki-ta-ke(re)do (soretomo) Hanako-ga ki-ta-ke(re)do]
   Taro-NOM come-PST-though or Hanako-NOM come-PST-though
   boku-ni-wa kankei na-i.
   1SG-DAT-TOP matter NEG-PRS
   ‘Although Taro comes or Hanako comes, I don’t care.’

b. * [Taro-ga okurete ku-ru-mo (soretomo) Hanako-ga okurete
   ku-ru-mo] boku-ni-wa kankei na-i.
   Taro-NOM late come-PRS-though or Hanako-NOM late
   come-PRS-though 1SG-DAT-TOP matter NEG-PRS
   ‘Although Taro comes late or Hanako comes late, I don’t care.’

(34) a. * [Mosi Jiro-ga ki-ta-ra (soretomo) Hanako-ga ki-ta-ra]
   if Jiro-NOM come-PST-COND or Hanako-NOM come-PST-COND
   Taro-wa yorokob-u daroo.
   Taro-TOP please-PRS will
   ‘If Jiro comes or Hanako comes, Taro will be pleased.’

b. * [Mosi Jiro-ga ku-ru-nara (soretomo) Hanako-ga ku-ru-nara]
   if Jiro-NOM come-PRS-COND or Hanako-NOM come-PRS-COND
   Taro-wa yorokob-u daroo.
   Taro-TOP please-PRS will
   ‘If Jiro comes or Hanako comes, Taro will be pleased.’

Thus, we can safely conclude that unconditionals in Japanese is syntactically a question. In contrast, concessive clauses and conditionals are not a question and hence do not license bare indeterminates (see (15) and (17)).

Extending Rawlins’s analysis, we assume that Japanese unconditionals such as (3)–(5) have the LF representation in (35).

(35) [[[ ... indeterminate ... ] Q ] [ matrix clause ] ] ∀]

10 In Section 3.4, we will consider a licensing mechanism of indeterminates from the viewpoint of syntax. Because we assume that the operator is syntactically a head, the schematic structure here reflects the head parameter, although word order is immaterial.
The indeterminate *dare* ‘who’ expresses a set of humans as in (36a). It combines with the predicate, and we obtain the set of propositions in (36b), i.e., a set of propositions of the form ‘Alan comes’, ‘Bill comes’, ‘Conan comes’, etc.\(^{11}\) Then (36b) combines with the Q-operator in (20a), as in (36c). Each proposition in (36c) provides a domain restriction to the main clause modal operator, as in (37).

\[(36)\]
\[\begin{align*}
\text{a. } & \left[ \text{dare} \right]^{w,g} = \{ x \in D_c : \text{human}(x)(w) \} \\
\text{b. } & \left[ \text{dare-ga ko-yooga/kite-mo/ko-yooto-(mo)} \right]^{w,g} \\
& = \{ p : \exists x [ \text{human}(x)(w) \land p = \lambda w'. \text{come}(x)(w')] \} \\
\text{c. } & \left[ [Q] \right]^{w,g} (\left[ \text{dare-ga ko-yooga/kite-mo/ko-yooto-(mo)} \right]^{w,g}) = (36b)
\end{align*}\]

\[(37)\] {If Alan comes, Taro will be pleased, if Bill comes, Taro will be pleased, if Conan comes, Taro will be pleased…}

The set of propositions in (37) then combine with the universal operator in (27), yielding a singleton that contains the conjunction of the alternatives, which amounts to (29).

We have shown that a bare indeterminate is well-formed in unconditionals. Our analysis demonstrates that an indeterminate does not require an overt operator such as *ka* or *(de)mo*, contrary to the long-standing view. Instead, we have argued that an indeterminate associates with an invisible Q-operator. The facts that the particle *mo* often appears in unconditionals and that unconditionals are semantically universally quantified has misled us in the previous literature. In fact, it should be emphasized that the particle *mo* may appear in the unconditionals, irrespective of whether or not they contain an indeterminate, as shown in examples (13).

It follows then that syntactically, a bare indeterminate is licensed by a Q-morpheme with a [Q]-feature, as in (38).

\[(38)\] \[
\left[ \left[ \ldots \text{indeterminate} \ldots \right] X_{+[Q]} \right]
\]

The licensing mechanism in (38) is evidenced by the fact that the Q-morpheme is optionally overt in root questions (see (7)) and that a bare indeterminate is also licit in such questions.

### 3.4. Kuroda (1965) and Syntactic Licensing Mechanism of Indeterminates

We have so far argued that what allows for a bare indeterminate is neither *ka* nor *(de)mo*, but a covert Q-operator. We now address the question of where the Q-operator appears in syntax.

In answering this question, Kuroda’s (1965) analysis of the topic marker *wa* and focus particles such as *(de)mo* is quite insightful. Kuroda (1965) proposed that particles such as *wa* and *(de)mo*, even when they are syntactically adjoined to a noun (39b) or a verb (39c), are underlingly attached to a clause, as shown in (39a), from where they undergo attachment transformation and show up in their surface positions (see also Kuroda 1992, Chapter 9).

\(^{11}\) The verbs in the unconditionals in (3)–(5) take a subjunctive or conditional form. However, we do not have a commitment to the distinction between the two forms as the task is not straightforward.

A subjunctive form is also used in unconditionals in English.

(i) a. Rain or shine, we’re having our party outside today.
    = Whether it rains or shines, ...
    (Quirk et al. 1985:156, 1101–2)

Space precludes the consideration of why this is the case, and we put aside its semantic contribution. That is, in (3)–(5), we simply assume that the indeterminate combine with the predicate *kuru* ‘come’.
Our analysis of bare indeterminates reconfirms Kuroda’s attachment analysis, which was proposed in the 1960’s. Even though we cannot accept his hypothesis that particles themselves move through attachment transformation, his insight lies in the idea that a morpheme that has a particular meaning is underlyingly attached to a clause. In other words, we propose that the Q-morpheme that semantically binds an indeterminate is syntactically a complementizer C and it is exactly this morpheme that licenses bare indeterminates syntactically in Japanese (see Watanabe 1991 for the syntax of question in Japanese).

(40) \[
\text{[CP [ CP Taro-ga \ \text{ki-ta}] \ \text{ci-ta}] \quad \text{(S-Structure)}}
\]

This operator is interpreted in this position at LF, but it is not externalized at PF because it does not have any phonetic feature in unconditionals. Often times, an indeterminate co-occurs with a particle such as ka and (de)mo and this gives us an impression that it has an operator-like meaning, but it is due to the fallacy that we often link a particular meaning to an overt morpheme.12 This is the reason why bare indeterminates has not attracted attention or received a fair description in the literature.

4. Conclusion. In this article, we have investigated the syntax and semantics of bare indeterminates and reconsidered the Indeterminate-Particle Generalization. Indeterminates in unconditionals are licensed by a covert Q-operator, regardless of whether the particle mo appears in unconditional clauses. Bare indeterminates have rarely been noted in the literature, but they may be more ubiquitous than we think. In addition to Shimoyama (2006, fn. 27), Watanabe (2006, 247) and Kuno, Kato, & Narita (2012, 126–127) note examples of bare indeterminates outside unconditionals. See Nakanishi & Hiraiwa (2019) for a comprehensive list of environments where bare indeterminates are allowed.

Our analysis has many important ramifications. One is intervention effects. Indeterminates in unconditionals show intervention effects even though they do not associate with the particle mo. See Nakanishi & Hiraiwa (2019, to appear) for a detailed analysis. Another is a reconsideration of free choice and existential indeterminates. Readers are referred to Hiraiwa & Nakanishi (to appear) and Hiraiwa (2020) for evidence from Japanese and Okinawan that their internal structures are an unconditional clause and a question clause, respectively.

12 It is not a trivial question what role the particles such as ka and (de)mo play, if our proposal that an indeterminate is actually licensed by an invisible operator is correct. For example, Kuroda (1965) assumes that an indeterminate is a logical variable and the particles ka and (de)mo have a function of implying a set of alternatives. See Hiraiwa & Nakanishi (to appear) on the particle ka.
References


