Indeterminates in comparatives as free choice items
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Abstract. Japanese indeterminate pronouns have different interpretations depending on a particle that they appear with. Indeterminates may appear “bare” in the yori comparative, which leads to questions of whether they are existential quantifiers, negative polarity items (NPIs), universal quantifiers, or free choice items (FCIs), and of how they are licensed. We examine each possibility and argue that they are FCIs. We then provide novel evidence that the yori comparative has some properties of unconditional clauses, which corroborates our previous claim that indeterminate-based FCIs in Japanese are unconditional clauses.

Keywords. comparatives; bare indeterminates; unconditionals; free choice; negative polarity; existential quantifiers; universal quantifiers

1. Bare indeterminates and unconditionals. Japanese indeterminate pronouns such as dare ‘who’ and nani ‘what’ are known to give rise to different interpretations depending on a particle that they appear with, as illustrated in (1) (Kuroda 1965).1

(1) a. Existential quantifier
   Da’re-*(ka)-ga ki-ta.
   who-ka-NOM come-PST
   ‘Someone came.’

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

c. Universal quantifier
   Da’re-*(mo)-ga ki-ta.
   who-mo-NOM come-PST
   ‘Everyone came.’

d. Free choice item (FCI)
   Dare-*(demo) ki-teii.
   who-demo come-can
   ‘Anyone can come.’

A general consensus in the literature is that indeterminates in Japanese must co-occur with an overt quantificational particle ka or (de)mo. However, there are cases where indeterminates are licensed without the presence of an overt particle. In what follows, we refer to such indeterminates as bare indeterminates. In a series of our previous work (Nakanishi & Hiraiwa 2019, 2020, Hiraiwa & Nakanishi 2020a,b), we have shown that bare indeterminates can be observed in unconditional clauses. For instance, da’re in (2) is licensed in the absence of ka or (de)mo.2

* We would like to thank Tomohiro Fujii, Satoshi Oku, Osamu Sawada, Akira Watanabe, and the participants of LSA 2022 and the symposium held at the annual meeting of The English Literary Society of Japan, Hokkaido Branch (November 7, 2021) for their helpful comments and discussion. This research has been funded by the JSPS Grant-in-Aid for Scientific Research (C) (No.20K00661 for the first author and No.20K00554 for the second author). Abbreviations used in this article are as follows: ACC=accusative, C=complementizer, COND=conditional, COP=copula, DAT=dative, DECL=declarative, NEG=negation, NOM=nominative, PROG=progressive, PST=past tense, PRS=present tense, Q=question particle, SBJV=subjunctive, SG=singular, TOP=topic. Authors: Kimiko Nakanishi, Meiji Gakuin University (kimiko@ltr.meijigakuin.ac.jp) & Ken Hiraiwa, Meiji Gakuin University (hiraiwa@ltr.meijigakuin.ac.jp).


2 In the literature, constructions such as Whoever comes, Taro will be pleased are referred to in different terms (see Rawlins 2008, Section 1.2). Following Zaefferer (1990, 1991), we use the term unconditionals to refer to such constructions and the corresponding Japanese constructions like (2).
In Hiraiwa & Nakanishi (2020b), we extended our analysis of bare indeterminates in unconditional-based FCIs. The FCI 
\textit{dare-demo} ‘anyone’ in (1d) can be paraphrased to the forms in (3), where the indeterminate appears bare without \textit{ka} or \textit{(de)mo}.

(3) Da’re{-da-tte/-ni-si-ta-tte/-da-to-si-ta-tte/-da-rooga/nii-ro/}
\textit{who-COP-COND/-DAT-do-PST-COND/-COP-C-do-PST-COND/-COP-SBJV/-DAT-do-SBJV/}
\textit{ni-se-yo/-de-are}\{(*-mo/*ka)\} \textit{ki-teii.}
\textit{come-can ‘Anyone can come.’}

Note that the forms in (3) are parallel to the unconditional clauses in (2). The observation here leads us to claim that Japanese indeterminate-based FCIs are not syntactically nominals, but they are unconditional clauses. In particular, we argued that they are composed of a copula verb \textit{de}, an existential verb \textit{ar}, and the particle \textit{mo}. The existential verb \textit{ar} undergoes ellipsis, yielding a seemingly nominal phrase \textit{dare-demo}, as shown in (4) (see also Nakanishi 2021).

(4) \textit{dare de ar-te mo}
\textit{who COP exist-COND MO ‘whoever (he) is, …’}

Adopting Rawlins’s (2008, 2013) analysis of unconditionals, we argued that unconditional clauses such as (1d), (2), and (3) are question-denoting, and (bare) indeterminates in the unconditional clauses are licensed by a question operator (see section 7 for further discussion).

Another case of bare indeterminates can be observed in the \textit{yori} comparative such as (5a-b), as noted by Shimoyama (2006:fn.27).

(5) a. Phrasal: \textit{Al-wa [da’re]-yori hayaku hasit-ta.4}
\textit{Al-TOP who-than fast run-PST ‘Al ran faster than anyone.’}

b. Clausal: \textit{Al-wa [da’re-ga hasit-ta]-yori hayaku hasit-ta.}
\textit{Al-TOP who-NOM run-PST-than fast run-PST ‘Al ran faster than anyone did.’}

Given the semantic variation in (1), questions arise as to the status of the bare indeterminates in (5). First, are they existential quantifiers, NPIs, universal quantifiers, or FCIs? Second, why are they licensed in comparatives? In this paper, we consider each possibility, and claim in the end

\textsuperscript{3} Oda (2021) also claims that \textit{dare-demo} is clausal, and presents a compositional analysis based on a clausal structure. Space precludes detailed discussion, but we simply point out here that his analysis is specific to FCIs followed by \textit{demo}, and hence fails to capture a connection to other cases of (bare) indeterminates. In contrast, our analysis is aimed to uniformly account for seemingly different cases of indeterminates, including FCIs, bare indeterminates in unconditional and comparatives, and existential quantifiers (see section 7).

\textsuperscript{4} \textit{Yori} may be optionally followed by the morpheme \textit{mo}. We will come back to this point in section 4, and argue that this \textit{mo} does not serve as a licenser of indeterminates. For this reason, we do not include \textit{mo} in our examples to avoid unnecessary complications.
that they are interpreted as FCIs. Under Hiraiwa & Nakanishi’s (2020a, 2020b) analysis introduced above, this means that an unconditional structure has to exist in the complement of yori. We indeed provide two novel observations that corroborate this implication. In particular, we demonstrate that the yori comparative has some properties of unconditional clauses.

The organization of the article is as follows. In section 2, we briefly consider the possibility that bare indeterminates in comparatives are existential quantifiers. Section 3 discusses whether they can be interpreted as NPIs. In section 4, we examine whether they are universal quantifiers. In section 5, we argue that they are interpreted as FCIs by applying a test using hotondo ‘almost’. Section 6 provides two pieces of supporting evidence for our claim. Section 7 concludes the paper by comparing with other cases of bare indeterminates.

2. Bare indeterminates in comparatives are not existential quantifiers. Examples (6) show that the existential quantifier da’re-ka ‘someone’ can appear in the complement of yori.

(6) a. Al-wa [da’re-ka]-yori hayaku hasit-ta.
   Al-TOP who-KA-than fast run-PST
   ‘Al ran faster than someone.’

b. Al-wa [da’re-ka-ga hasit-ta]-yori hayaku hasit-ta.
   Al-TOP who-KA-NOM run-PST-than fast run-PST
   ‘Al ran faster than someone did.’

In (6), da’re-ka and someone receive an existential interpretation. This is clearly different from (5), where the bare indeterminate dare receives a universal interpretation. Thus, we conclude that bare indeterminates in comparatives are not existential quantifiers.

3. Bare indeterminates in comparatives are not NPIs. It has been observed that NPIs in English can appear in comparatives, as in (7) (Hoeksema 1983, von Stechow 1984, Schwarzschild & Wilkinson 2002, Heim 2006).

(7) a. I am busier than I ever was before.
   b. He stole more than he has confessed yet. (Heim 2006)

Based on data from different languages (Greek, English, Korean, Dutch, and American Sign Language), Giannakidou & Yoon (2010, 2017) claim that not all NPIs are licensed in comparatives. More specifically, only certain weak NPIs and FCIs are acceptable in comparatives, and strong NPIs are never acceptable. Examples (8) demonstrate that ever is a weak NPI, while examples (9) show that either is a strong NPI. As exemplified in (10), either, being a strong NPI, cannot appear in comparatives, which is in contrast with weak NPIs in (7).

(8) a. Positive: *Al ever saw Bill.
   c. Question: Have you ever seen Bill?
   d. Conditional: If you ever see Bill, ...

b. Negative: Al didn’t ever see Bill.

(9) a. Positive: *Al saw Bill, either.
   c. Question: *Did Al see Bill, either?
   d. Conditional: *If you see Bill either, ...

(10) *Al is taller than Bill (is) either. (Giannakidou & Yoon 2017)

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5 The fact that anyone and someone have different interpretations in the than clause is known to be problematic to various analyses of comparatives (von Stechow 1984, Larson 1988, Rullmann 1995, Schwarzschild & Wilkinson 2002, Heim 2006, Schwarzschild 2008, van Rooij 2008, Beck 2010; see also Aloni & Roelofsen 2014 for a comparison of different analyses). This issue is left out our consideration in this paper.

6 We put off the discussion of any in comparatives such as the one in Al ran faster than anyone (did) until section 5.
Turning now to Japanese, indeterminate-based NPIs are known to be strong NPIs, licensed only by clausemate negation, as shown in (11) (Watanabe 2004, among others). If Giannakidou & Yoon’s analysis is on the right track, we expect the indeterminate-based NPIs to be infelicitous in comparatives. This prediction is borne out, as demonstrated in (12a-b).

    Al-TOP who-MO see-PST           Al-TOP who-MO see-NEG-PST
    ‘Al saw anyone.’                ‘Al didn’t see anyone.’
c. *Al-wa  dare-mo mimasi-ta ka? d. *(Mosi) Al-ga  dare-mo mi-tara ...
    Al-TOP who-MO see-PST Q         if    Al-NOM who-MO see-COND
    ‘Did Al see anyone?’ if        ‘If Al sees anyone, ...’

    Al-TOP who-MO-than fast run-PST
    ‘Al ran faster than anyone.’
    Al-TOP who-MO run-PST-than fast run-PST
    ‘Al ran faster than anyone did.’

It follows from the contrast between (12) and (5) that the bare indeterminates in (5) cannot be strong NPIs.

Note that in Japanese, even weak NPIs are not licensed in the complement of yori. Although indeterminate-based NPIs are all strong NPIs, Japanese has a few weak NPIs such as sonnani ‘so much’, sokomade ‘that far’, and sorehodo ‘that much’. As shown in (13), sonnani (and also sokomade, sorehodo) has the same distribution as ever in (8). As demonstrated in (14), these weak NPIs are infelicitous in the yori comparative.

    Al-TOP so much eat-PST            Al-TOP so much eat-NEG-PST
    ‘Al ate so much.’                ‘Al didn’t eat so much.’
c. Al-wa sonnani tabemasi-ta ka? d. *(Mosi) Al-ga sonnani tabe-tara ...
    Al-TOP so much eat-PST Q         if    Al-NOM so much eat-COND
    ‘Did Al eat so much?’ if        ‘If Al eats so much, ...’

(14) *Al-wa  [Bill-ga  {sonnani / sokomade / sorehodo} tabe-ta]-yori motto tabe-ta.
    Al-TOP Bill-NOM so much / that far / that much eat-PST-than more eat-PST
    ‘Al ate more than Bill ate {so much / that far / that much}.’

Summing up, the data in this section show that no NPIs are licensed in the yori comparative, which leads us to conclude that bare indeterminates in the yori phrase cannot be NPIs.

4. Bare indeterminates in comparatives are not universal quantifiers. Let us now examine whether bare indeterminates in the comparative are interpreted as universal quantifiers. Indeterminates serve as universal quantifiers when followed by mo, as in (15a), and mo can appear away from the indeterminate that it associates with, as in (15b) (Nishigauchi 1990, Shimoyama 2006). We have so far disregarded the fact that the particle mo may be optionally used after yori, as shown in (16) (see footnote 4). The presence of mo may suggest that bare indeterminates in comparatives are universal quantifiers. Indeed, mo in (16) may be local or non-local to the indeterminate (ignoring the presence of yori).
(15)  a. Da’re-mo-ga ki-ta.  b. [Da’re-ga yon-da hito]-mo ki-ta.
    who-MO-NOM come-PST who-NOM invite-PST person-MO come-PST
    ‘Everyone came.’  ‘For every x, the person that x had invited came.’

(16)  a. Phrasal:  Al-wa [da’re]-yori(-mo) hayaku hasit-ta.
    Al-TOP who-than-MO fast run-PST
    ‘Al ran faster than anyone (did).’
   b. Clausal:  Al-wa [da’re-ga hasit-ta]-yori(-mo) hayaku hasit-ta.
    Al-TOP who-NOM run-PST-than-MO fast run-PST
    ‘Al ran faster than anyone did.’

Furthermore, examples (16) have the same interpretation as (17) (namely, the maximum reading in (18); Larson 1988, Rullmann 1995, Schwarzschild & Wilkinson 2002 for this reading).

(17)  a. Al-wa [{zennin / subete-no gakusei}]-yori(-mo) hayaku hasit-ta.
    Al-TOP everyone / all-GEN student-than-MO fast run-PST
    ‘Al ran faster than {everyone / all of the students}.’
   b. Al-wa [{zennin / subete-no gakusei}-ga hasit-ta]-yori(-mo) hayaku hasit-ta.
    Al-TOP everyone / all-GEN student-NOM run-PST-than-MO fast run-PST
    ‘Al ran faster than {everyone / all of the students} did.’

(18)  Al’s running speed exceeded the speed of the fastest person.

However, we submit that mo attached to yori cannot be the universal particle. For one thing, it is only optional and its absence does not seem to have any semantic effect. In contrast, mo is never optional with universal quantifiers in (15), and thus the contrast indicates that mo in comparatives is distinct from the universal mo. Moreover, mo can be used in comparatives regardless of the presence of indeterminates, as exemplified in (19).

(19)  a. Al-wa [Bill]-yori(-mo) hayaku hasit-ta.
    Al-TOP Bill-than-MO fast run-PST
    ‘Al ran faster than Bill.’
   b. Al-wa [Bill-ga hasit-ta]-yori(-mo) hayaku hasit-ta.
    Al-TOP Bill-NOM run-PST-than-MO fast run-PST
    ‘Al ran faster than Bill did.’

The fact that mo is optional even in the absence of indeterminates suggests that mo in (16) does not play a role in licensing indeterminates, i.e., mo in the yori comparative is different in nature from the universal mo in (15) that licenses indeterminates.7

7 Oda (2008:100) presents an example that has the same configuration as (16b), where yori is followed by an overt mo. Without presenting independent evidence, she simply assumes that mo used with indeterminates such as in (16b) is a universal quantifier (in the sense of Kratzer & Shimoyama (2002)), whereas mo used without indeterminates as in (19b) is a non-quantificational morpheme. This leads her to claim that indeterminates in the yori clause receive a universal interpretation, not an NPI interpretation. However, there does not seem to be any independent argument for the claim that the two mo’s in (16b) and (19b) are different. If they indeed are different, we would expect them to be able to appear in a single sentence, as in (i), contrary to the fact.

(i) *Al-wa [da’re-ga hasit-ta]-yori-mo-mo hayaku hasit-ta.
    Al-TOP who-NOM run-PST-than-MO-MO fast run-PST
    ‘Al ran faster than anyone did.’

Similarly, Oda (2021:286-287) also assumes that mo in (ii) is a universal quantifier without providing any argument.
Moreover, while universal quantifiers in (17) can be licensed in comparatives, indeterminate-based universal quantifiers in (20) cannot.

(20) a. *Al-wa [da’re-mo]-yori(-mo) hayaku hasit-ta.
    Al-TOP who-MO-than-MO fast run-PST
    ‘Al ran faster than everyone.’

b. *Al-wa [da’re-mo-ga hasit-ta]-yori(-mo) hayaku hasit-ta.
    Al-TOP who-MO-NOM run-PST-than-MO fast run-PST
    ‘Al ran faster than everyone did.’

Thus, we conclude that bare indeterminates in comparatives in (16) are not interpreted as universal quantifiers.

5. Bare indeterminates in comparatives are FCIs. We are left with the possibility that indeterminates in comparatives are FCIs. Giannakidou & Yoon (2010, 2017) observe that FCIs in Greek and Korean are licensed in comparatives (see also Giannakidou 1997, 2001). For example, Giannakidou & Yoon’s Korean example in (21) shows that FCI nwukwuna, but not NPIs amwuto and nwukwuto, is felicitous in the comparative.

(21) Mary-nun {nwukwuna/*amwuto/*nwukwuto} ttwinkes-pota cal ttwiess-ta.
    Mary-TOP anyone-FCI/anyone-NPI/anyone-NPI run-than fast ran-DECL
    ‘Mary ran faster than anybody.’ (Giannakidou & Yoon 2010)

Turning now to English, universal quantifiers, but not existential quantifiers or indefinites, can be modified by almost, as in (22). Thus, modification by almost serves as a diagnostics to distinguish between FCI any and weak NPI any, where only the former can take almost as a modifier, as in (23) (Horn 1972, Carlson 1981, Kadmon & Landman 1993, Dayal 1998). As exemplified in (24), any in the comparative is fine with almost, which suggests that this any is an FCI rather than a weak NPI (Hoeksema 1983, Heim 2006, Giannakidou & Yoon 2010, 2017).

(22) a. Almost every friend came.
    b. *Almost a / some friend came.

(23) a. Almost any lawyer could answer that question.
    b. *I don’t have almost any potatoes. (Kadmon & Landman 1993:355)

(24) Al is smarter than almost anyone (imagined).

(ii) Taro-wa (hoka-no) [da’re]-yori-mo hayaku hashiru.
    Taro-TOP else-GEN who-than-MO fast run
    ‘Taro runs faster than anyone else.’ (Oda 2021:287)

8 Various problems of the almost test have been presented in the literature (Giannakidou 2001, Partee 2004, Horn 2005, Penka 2006). Alternatively, we may use other diagnostics for universal quantification, that is, exceptive phrases introduced with but (von Fintel 1993, Dayal 1998, Szabolcsi 2004). As shown in (i)-(iii), the but-phrase is compatible with a universal quantifier and an FCI, but not with an existential quantifier. The fact that (iv) is acceptable suggests that any in comparatives is an FCI. However, it has been claimed that this test is also not without problems (Hoeksema 1990, Horn 2000, 2005, Giannakidou 2001).

(i) Every student but John attended the meeting.
    (von Fintel 1993:123)

(ii)*Some student but John attended the meeting.

(iii) I’d vote for anyone but Arnold.
    (Horn 2005:190)

(iv) Al is smarter than anyone but Bill.

Regardless of potential problems of the tests using almost and exceptives, of our importance here is the fact that any in comparatives behaves on a par with FCI any.
Indeed, it has been pointed out that a comparative clause is not a downward-entailing context, and thus it is not expected to license NPIs to begin with (Schwarzschild & Wilkinson 2002, Heim 2006). Thus, it is fair to assume that any in comparatives is an FCI.

Just like almost, hotondo ‘almost’ in Japanese is used as a test to distinguish between universal and existential quantifiers, as demonstrated in (25) (Watanabe 2004). However, unlike in English, dare-mo, being a strong NPI, can be modified by hotondo, as in (26a). In contrast, (26b) shows that FCI dare-demo is not compatible with hotondo. Other forms of FCIs given in (3) are also infelicitous when modified by hotondo, as demonstrated in (27).

   almost {who-MO/everyone}-NOM come-PST almost who-KA-NOM come-PST
   ‘Almost everyone came.’ ‘Almost someone came.’

   almost who-MO come-NEG-PST almost who-DEMO come-can
   (lit.) ‘Almost anyone didn’t come.’ ‘Almost anyone can come.’

(27) *Hotondo da’re{-da-tte/-ni-si-ta-tte/-da-to-si-ta-tte/-da-rooga/}
   almost who-COP-COND/-DAT-do-PST-COND/-COP-C-do-PST-COND/-COP-SBJV/-
   -ni-si-ro/-ni-se-yo/-de-are}{(*-mo/*ka) ki-teii.
   -DAT-do-SBJV/-DAT-do-SBJV/-COP-SBJV-MO/KA come-can
   ‘Anyone can come.’

Turning now to comparatives, the bare indeterminates in (28a-b) cannot be modified by hotondo. Thus, bare indeterminates in comparatives behave in the same way as FCIs.

(28) a. *Al-wa [hotondo da’re]-yori hayaku hasit-ta.
   Al-TOP almost who-than fast run-PST
   ‘Al ran faster than almost anyone.’

   b. *Al-wa [hotondo da’re-ga hasit-ta]-yori hayaku hasit-ta.
   Al-TOP almost who-NOM run-PST-than fast run-PST
   ‘Al ran faster than almost anyone did.’

Note that universal quantifiers in comparatives can be modified by hotondo, as exemplified in (29). This confirms the claim that bare indeterminates in comparatives behave in the same way as indeterminate-based FCIs.

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9 Given that negative concord items can be modified by expressions like almost (Vallduví 1994), Watanabe (2004) takes this to mean that dare-mo ‘anyone’ in (26) is a negative concord item.

10 Oda (2013, 2021) provides examples like (i), claiming that hotondo is felicitous with FCIs. However, (i) as well as his other examples sounds odd to our ears. We feel that the oddity lies in the fact that intuitively, it is not clear what hotondo modifies. More specifically, under his analysis (and also under Hiraiwa &Nakanishi’s), (ii) is the intuitive meaning of (i) without hotondo, and in this unconditional constructure, there does not seem to be any appropriate place for almost.

(i) Hotondo dono gakusei-demo sono mondai-ga tok-eru.
   almost which student-DEMO that problem-NOM solve-can
   ‘Almost any student can solve the problem.’ (Oda 2013:80)

(ii) Whichever student it is, s/he can solve the problem. (cf. Oda 2021:(54))
(29)  a. Al-wa [hotondo {zenin / subete-no gakusei}-yori hayaku hasit-ta.  
Al-TOP almost everyone all-GEN student-than fast run-PST  
‘Al ran faster than almost {everyone / all the students}.’

b. Al-wa [hotondo {zenin / subete-no gakusei}-ga hasit-ta]-yori hayaku hasit-ta.  
Al-TOP almost everyone all-GEN student-NOM run-PST-than fast run-PST  
‘Al ran faster than almost {everyone / all the students} did.’

A question remains as to why FCIs in Japanese cannot be modified by hotondo even though the modification by almost is possible with FCIs in English. Nonetheless, what is crucial for us here is the fact that with respect to modification by hotondo, bare indeterminates in comparatives behave on a par with FCIs, and not with universals or NPIs.

6. Two arguments for FCIs in comparatives. So far, we have shown that bare indeterminates in comparatives such as (30) are interpreted as FCIs. However, indeterminate-based FCIs such as dare-demo ‘anyone’ cannot appear in the complement of yori, as exemplified in (31).

Al-TOP who-than fast run-PST  
‘Al ran faster than anyone.’

Al-TOP who-NOM run-PST-than fast run-PST  
‘Al ran faster than anyone did.’ (= (5))

Al-TOP who-DEMO-than fast run-can  
‘Al can run faster than anyone.’

b. * Al-wa [dare{-da-tte/-da-rooga/ni-si-ro/-de-are}]-yori hayaku hasir-eru.  
Al-TOP who-COP-COND/-COP-SBJV/-DAT-do-SBJV/-COP-SBJV-than fast run-can  
‘Al can run faster than anyone.’

Oda (2021) also points out that FCIs are infelicitous in comparatives, providing an example like (31a). Under his analysis (as well as Hiraiwa & Nakanishi’s 2020b), FCIs involve a clausal structure, and he claims that this is the reason why examples like (31a) are unacceptable. More specifically, assuming that yori only takes a nominal complement, as claimed by Beck et al. (2004), Kennedy (2007), and Sudo (2015), dare-demo in (31a), having a clausal structure, cannot be in the complement of yori. Example (31b) is infelicitous for the same reason.11 However, it is still controversial whether the complement of yori can never have a clausal structure. For instance, Shimoyama (2012) presents a number of examples that can be straightforwardly accounted for by assuming that yori takes a clausal complement (see also Kikuchi 1987, Ishii 1991, Hayashishita 2009, Bhatt & Takahashi 2011). Thus, although we agree with Oda in that FCIs have a clausal structure, we do not commit ourselves to the view that yori only takes a nominal complement.

As we have seen in section 1, under Hiraiwa & Nakanishi’s (2020a, 2020b) analysis, Japanese indeterminate-based FCIs like dare-demo are unconditional clauses (see (4), in particular).

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11 Oda’s (2021) account for (31a) cannot handle examples like (i), where the FCI is not the direct nominal complement of yori.

(i) * Al-wa [dare-demo hasir-eru]-yori hayaku hasir-eru.  
Al-TOP who-DEMO run-can-than fast run-can  
‘Al can run faster than anyone can.’
Our claim in the previous section that the bare indeterminates in (30) are FCIs suggests then that there exists an unconditional clause in the *yorī* comparative. Note, however, that *yorī* cannot directly take an unconditional clause as a complement, as shown in (31). We take this to mean that the complement of *yorī* has a complex syntactic structure which contains (or at least has some relevance to) an unconditional clause that has bare indeterminates as its part. Although we are not in the position to offer the exact structure of the *yorī* comparative, we provide two novel observations that support our claim that bare indeterminates in comparatives are FCIs, which are analyzed as unconditional.

First, there is a piece of evidence that indicates the existence of an unconditional clause in the complement of *yorī*. The adverb *tatoe* ‘even if’ can attach to a concessive conditional clause, as in (32), but not to a mere conditional or a concessive clause, as in (33).

fall-SBJ/fall-DAT-DO-SBJV/fall-DAT-DO-SBJV/fall-C-COP-SBJV    go out 
‘Even if it rains, I’ll go out.’

(33) a. (*Tatoe) ame-ga {hut-tara/hur-eba/huru-nara} dekake-nai.    
even.if rain-NOM fall-COND/fall-COND/fall-COND go out-NEG    ‘If it rains, I won’t go out.’  
b. (*Tatoe) ame-ga {hut-teiru-ga/hu-teiru-keredo(-mo)} dekakeru.    
even.if rain-NOM fall-PROG-though/fall-PROG-though-(MO) go out    ‘Although it will rain tomorrow, I’ll plan to go out.’

An unconditional is a type of concessive conditionals (as evident from the fact that Haspelmath & König 1998 call it a *universal concessive conditional*), and thus it can be used with *tatoe*, as shown in (34).


It is worth mentioning that example (35a) demonstrates that *tatoe* is felicitous in the *yorī* comparative. Crucially, *tatoe* can appear even when there is a bare indeterminate, as in (35b). This is apparently puzzling because in the *yorī* comparatives in (35), there is no concessive conditional or unconditional clauses. Thus, it corroborates our claims that bare indeterminates in comparatives are FCIs and that indeterminate-based FCIs are (part of) unconditional clauses. In (35b), the bare indeterminate *donnani* ‘how’ is interpreted as an FCI, and as such, it is analyzed to be in the unconditional clause.

(35) a. Ima kaihatutyuu-no supercomputer-wa [(tatoe) genzai saisoku-no now development-GEN supercomputer-TOP even.if current fastest-GEN supercomputer zyuu-dai-ga keiansuru]-yorī hayaku keisan-dekiru. supercomputer ten-CL-NOM calculate-than fast calculate-can
'The supercomputer currently under development can calculate faster than the ten currently fastest supercomputers can.'

b. Al-ga kita koto-wa [(tatoe) do’nani kookana purezento-o morau]-yori uresii.

Al-NOM came fact-TOP even.if how expensive gift-ACC receive-than happy

‘The fact that Al came makes me happier than however expensive a gift I receive.’

A second piece of evidence for the relevance of unconditionals to the yori comparative comes from the observation that they both can be conjoined. Example (36) shows that concessive conditional clauses can be listed multiple times. The sentence corresponds to an alternative concessive conditional like Whether Alan, Bill, or Conan comes, Taro will be pleased. In contrast, as exemplified in (37) and (38), conditional clauses and concessive clauses lack this property.


A.-NOM came-COND B.-NOM came-COND C.-NOM came-COND Taro-TOP please will
(lit.) ‘Even if A. comes, even if B. comes, and even if C. comes, Taro will be pleased.’

(37) *Al-ga kuru-nara Bill-ga kuru-nara Conan-ga kuru-nara Taro-wa yorokobu daroo.

A.-NOM come-COND B.-NOM come-COND C.-NOM come-COND Taro-TOP please will
(lit.) ‘If Al comes, if Bill comes, and if Conan comes, Taro will be pleased.’

(38) *Al-ga kuru-soni Bill-ga kuru-soni Conan-ga kuru-soni Taro-wa yorokoba-nai.

A.-NOM come-though B.-NOM come-though C.-NOM come-though Taro-TOP please-NEG
(lit.) ‘Though A. comes, though B. comes, and though C. comes, Taro will be pleased.’

Here again, the yori comparative patterns with concessive conditionals; as shown in (39), yori-phrases can be conjoined. These sentences semantically correspond to the English comparative Taro ran faster than Al, Bill, or Conan (did), where a disjunctive or has the meaning of and (for this interpretation of or, see Hoeksma 1983, von Stechow 1984, Schwarzschild & Wilkinson 2002).


Taro-TOP Al-than Bill-than Conan-than fast run-PST
(lit.) ‘Taro ran faster than Al, than Bill, and than Conan.’

b. Taro-wa [Al-ga hasit-ta-yori Bill-ga hasit-ta-yori Conan-ga

Taro-TOP Al-NOM run-PST-than Bill-NOM run-PST-than Conan-NOM

hasit-ta-yori] hayaku hasit-ta.

run-PST-than fast run-PST
(lit.) ‘Taro ran faster than Al did, than Bill did, and than Conan did.’

Given that an unconditional clause is a type of concessive conditional clause (Hapmelmath & König 1998, among others), it follows from the grammaticality of conjunction in (36) and (39) that a hidden unconditional clause exists in the yori comparative with bare indeterminates in (30).

Before concluding the section, we add another piece of intriguing evidence for the existence of hidden unconditionals in the yori comparative. That is, the yori comparative is the only degree construction that can license (bare) indeterminates. For example, (bare) indeterminates cannot

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12 All forms of concessive conditionals in (2) can be conjoined, but for lack of space, we only provide an example with kitatte, as in (36).
appear in the *izyoo-ni* comparative (40) or in the *gurai* equative (41) (see Hayashishita 2007, 2017, Kubota 2012, Nakanishi 2022 for these constructions).

(40)  

a. Al-wa [Bill(-ga hasit-ta)-izyoo-ni hayaku hasit-ta. 
   Al-TOP [Bill-NOM run-PST]-more-DAT fast run-PST 
   ‘Al ran faster than Bill (did).’

b. *Al-wa [da’re(-ga hasit-ta)]-izyoo-ni hayaku hasit-ta. 
   Al-TOP [who-NOM run-PST]-more-DAT fast run-PST 
   ‘Al ran faster than anyone (did).’

(41)  

a. Al-wa [Bill(-ga hasit-ta)]-gurai hayaku hasit-ta. 
   Al-TOP [Bill-NOM run-PST]-as fast run-PST 
   ‘Al ran as fast as Bill (did).’

b. *Al-wa [da’re(-ga hasit-ta)]-gurai hayaku hasit-ta. 
   Al-TOP [who-NOM run-PST]-as fast run-PST 
   ‘Al ran as fast as /anyone (did).’

Crucially, these two degree constructions lack the two properties raised above that the *yori* comparative has. In particular, *izyoo-ni* and *gurai* cannot have *tatoe* in the complement, as in (42), and the phrases formed with *izyoo-ni* or *gurai* cannot be conjoined, as in (43). What these examples show is that the *izyoo-ni* comparative and the *gurai* equative lack the properties of unconditionals that the *yori* comparative has. We submit that this is the reason why the former constructions are unable to license bare indefinites. Put differently, bare indefinites are licensed in the *yori* comparative, but not in other degree constructions, because in the former, they are in hidden unconditional clauses.

(42)  

Ima kaihatutyyu-no supercomputer-wa [(*tatoe) genzai saisoku-no 
now under.development-GEN supercomputer-TOP even.if current fastest-GEN 
supercomputer zyuu-dai-ga keisansuru]{-izyoo-ni/-gurai} hayaku keisan-dekiru. 
supercomputer ten-CL-NOM calculate-more-DAT/-as fast calculate-can 
‘The supercomputer currently under development can calculate {faster than/as fast as} the 
ten currently fastest supercomputers can.’

(43)  

   Taro-TOP Al-than-DAT Bill-than-DAT Conan-than-DAT fast run-PST 
   (lit.) ‘Taro ran faster than Al, than Bill, and than Conan.’ 
   (intended) ‘Taro ran faster than Al, Bill, and/or Conan.’

   Taro-TOP Al-as Bill-as Conan-as fast run-PST 
   (lit.) ‘Taro ran as fast as Al, as Bill, and as Conan.’ 
   (intended) ‘Taro ran as fast as Al, Bill, or Conan.’

7. Concluding remarks. Taking stock, we examined in this paper the status of bare indefinites in the *yori* comparative. We showed that they are not existential quantifiers, NPIs, or universal quantifiers, and argued for the view that they are FCIs. We further provided novel evidence that the *yori* comparative has some properties of unconditional clauses, which corroborates Hiraiwa & Nakanishi’s claim that FCIs are analyzed as unconditional clauses. One of the contributions of this paper is to bring seemingly unrelated cases of bare indefinites closer together. As mentioned in the introduction, Japanese indefinites have been claimed to require the presence of an overt particle *ka* or *(de)mo*. Although cases of “bare”
indeterminates are sporadically noted in the literature, they are generally treated as exceptions and no serious attempts have been made to provide an extensive analysis. As summarized in section 1, in our previous work, we examined bare indeterminates in unconditional clauses, and claimed that indeterminate-based FCIs can be analyzed in the same way. That is, both are question-denoting, and indeterminates are licensed by a question operator. We also extended the analysis to existential quantifiers, and argued that indeterminate-based existentials such as (44a) can be treated on a par with indeterminates in unconditionals and FCIs (Hiraiwa & Nakanishi 2020b, in particular). More specifically, da’re-ka in (44a) is derived from an embedded question by deletion and sluicing within the embedded question clause, as in (44b). Under this analysis, the indeterminate is licensed by a question operator just like in the case of unconditionals and FCIs.

(44) a. Da’re-ka-ga ki-ta.
   who-KA-NOM come-PST
   ‘Someone came.’
   (= (1a))

    b. [[[Cp Da’re {da / dat-ta} ka] sira-na-i ]-ga ki-ta.
        who COP / COP-PST Q know-NEG-PRS-NOM come-PST
   ‘Someone came. (Lit. Although I don’t know who it is/was, someone came.)’

        (Hiraiwa & Nakanishi 2020b:52)

In this paper, we added to this list bare indeterminates in the yori comparative. Our claim here is that they are in unconditional clauses, which enables us to treat them uniformly with other cases of indeterminates. Although our examples indicate that an unconditional clause exists in the yori comparative, we have seen that yori cannot directly combines with unconditional clauses (see section 6). A further investigation is needed to reach to an exact structure of this construction.

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