The Origin and Architecture of Existential Indeterminates in Okinawan

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Abstract. In a number of languages, an indeterminate is combined with various particles to yield different indefinite pronouns. This has been called an *indeterminate system* (Kuroda 1965, Cheng 1991, Haspelmath 1997, Jayaseelan 2001). As Haspelmath (1997) and Jayaseelan (2001) observe, existential indeterminates are often built with disjunction markers. On the other hand, a disjunction particle and a question particle are often morphologically identical cross-linguistically (see Hagstrom 1998, Jayaseelan 2001). Thus, a question that I ask here is whether the alleged homophony between a disjunction marker and a marker that forms an existential quantifier is principled (Jayaseelan 2001, Szabolcsi et al. 2014) or coincidental (Haspelmath 1997, Cable 2010). In this paper, I argue that the observation about homophony is misguided and hence support Haspelmath's hypothesis, based on the data obtained from my fieldwork on Okinawan, an endangered Ryukyuan language. I propose an analysis where existential indeterminates in Okinawan have a clausal structure of an embedded question and are derived by deletion.

Keywords. indeterminates; existential quantifiers; question; disjunction; deletion;

1. Introduction. In a number of languages, an indeterminate is combined with various particles to yield different indefinite pronouns. This has been called an *indeterminate system* (Kuroda 1965, Cheng 1991, Haspelmath 1997, Jayaseelan 2001). In Malayalam, Japanese, and Nanay, for example, an indeterminate 'who' is interpreted as existential 'someone', when combined with a disjunction particle (1b–3b). In Basque and Russian, an indeterminate 'who' receives a free choice interpretation when combined with a disjunction particle (4b-5b) (the data are cited from Haspelmath1997).

(1)	a.	aarǝ 'who'	b.	aar(ǝ)-**oo** 'someone'	(Malayalam)
(2)	a.	dare 'who'	b.	dare-**ka** 'someone'	(Japanese)
(3)	a.	uj 'who'	b.	uj-**nuu** 'someone'	(Nanay)
(4)	a.	nor 'who'	b.	**edo**-nor 'whoever'	(Basque)
(5)	a.	kto 'who'	b.	kto-**libo** 'whoever'	(Russian)

As Haspelmath (1997) and Jayaseelan (2001) observe, existential indeterminates and free choice indeterminates are often built with disjunction markers. On the other hand, a disjunction particle and a question particle are often morphologically identical cross-linguistically (see Hagstrom 1998, Jayaseelan 2001). Thus, a question that I ask here is whether the alleged homophony between a disjunction marker and a marker that forms an existential quantifier is principled

(Jayaseelan 2001, Szabolcsi et al. 2014) or coincidental (Haspelmath 1997). In this paper, I argue that the observation about homophony is misguided and hence support Haspelmath's hypothesis, based on the data obtained from my fieldwork on Okinawan, an endangered Ryukyuan language. I propose an analysis where existential indeterminates in Okinawan have a clausal structure of an embedded question and are derived by deletion.

2. Indeterminates in Okinawan. Japanese has an indeterminate system (Kuroda 1965, 2013, Shimoyama 2008, Hiraiwa 2015, 2017). Okinawan also has an indeterminate system, just as Japanese does (see Sugahara 1996 and Hiraiwa 2019; see Miyara 2000, 2015b, 2019 for a general grammatical description of Okinawan). Each of the five indefinite pronouns in Okinawan combines an indeterminate pronoun and one of the quantificational particles (∅/*n*/*gana*/*yatin*).[1]

	+nominal	+nominal	+nominal	-nominal	-nominal
	Wh 'wh X's	Universal 'every X'	Existential 'some X'	NPI 'any X'	Free Choice 'wh-ever'
who	taa-CASE	taa- CASE -**n**	taaˀ-**gana**- CASE	taa-**n**	taaˀ-**yatin**
what	nuu- CASE	nuu- CASE -**n**	nuuˀ-**gana**- CASE	nuu-**n**	nuuˀ-**yatin**
where	maa- CASE	maa- CASE -**n**	maaˀ-**gana**- CASE	maa-**n**	maaˀ-**yatin**

Table 1: indeterminate system in Okinawan (partial)

(1) Okinawan
    a. Taa-ga   choo-ta   ga?
       who-Nom   come-Past Q
       'Who came?'
    b. Taa-ga-**n**   chuu sa.
       who-Nom-N come Sfp
       'Everyone will come.'
    c. Taa-**gana**-ga   chan
       who-GANA-Nom   come.Past
       'Someone came.'
    d. Taa-**n**   kuu-n-tan.
       who-N   come-Neg-Past
       'No one came.'
    e. Taa-**yatin**   chuu sa.[2]
       who-YATIN   come Sfp
       'Anyone will come.'

3. Absence of a Disjunction Particle in Okinawan. In Japanese, universal/NPI indeterminates and existential indeterminates are built by combining an indeterminate pronoun and the particles

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[1] The [+nominal]/[-nominal] distinction is based on whether case-marking is possible. ˀ indicates the position of pitch accent. See Hiraiwa (2015, 2017) for a detailed analysis of Japanese indeterminates.

[2] Evidently, the morpheme *yatin* is complex, consisting of the copula *yati*, and the additive particle *n*. See Section 4 on its clausal status. A similar decompositional analysis will be proposed for *gana*, too. See also Hiraiwa and Nakanishi (to appear) for arguments that free choice indeterminates (e.g., *dare-demo* 'whoever') are syntactically an unconditional clause, exactly in the same way as *taa-yati-n* 'whoever' in Okinawan.

mo and *ka*, respectively (Nishigauchi 1990, Takahashi 2002, Watanabe 2006, Yatsushiro 2008, Uegaki 2018).

(2) Japanese
    a. dare   'who'
    b. dare-**mo**   'any/everyone
    c. Taro-**mo**   'Taro, too'

(3) Japanese
    a. dare   'who'
    b. dare-**ka**   'someone'
    c. Taro-**ka** Hanako-**ka**   'Taro or Hanako'

While it has an additive conjunction particle *n* (the cognate of *mo* 'also' in Japanese), which is used to build a universal quantifier and an NPI, Okinawan lacks a simple morpheme that expresses nominal disjunction and the morpheme *gana* used for building existential indeterminates does not have a disjunctive function.

(4) Okinawan
    a. taa   'who'
    b. taa-**n**   'any/everyone'
    c. Taraa-n   'Taraa, too'

(5) Okinawan
    a. taa   'who'
    b. taa-**gana**   'someone'
    c. *Taraa-**gana** Maziruu-**gana**   'Taraa or Maziruu

On the other hand, the language does have a sentence-final question particle *ga* (for wh-question) and *(m)i* (for yes-no question), as (6a) indicates. This question particle is distinct from the yes-no question particle *-mi* as shown in (6b). Importantly, however, these particles cannot build an existential indeterminates (or disjoin phrases), either, as shown in (7).

(6) Okinawan
    a. Taa-ga   ichu **ga**?
         who-Nom go   Q
         'Who will go?'
    b. Jiraa-ga ichu **mi**?
         Jiraa-Nom go   Q
         'Does Jiraa go?'

(7) Okinawan
    a. *Taa-**ga**-ga   chan.
          who-GA-Nom come.Past
         'Someone came.'
    b. *Taa-**mi**-ga   chan.

who-MI-Nom   come.Past
        'Someone came.'
    c. *Taraa-ga   Maziruu-ga
        Taraa-GA Maziruu-GA
        'Taraa or Maziruu'
    d. *Taraa-(m)i   Maziruu-(m)i
        Taraa-MI   Maziruu-MI
        'Taraa or Maziruu'

Clausal disjunction in alternative question in Okinawan does not employ any overt marker.

(8) Okinawan
     Shinshi-ya   Taraa-nkai   [ichu-**mi** ikan-**i**]   chichan.
     teacher-Top Taraa-Dat   go-Q   go.Neg-Q   ask.Past .
     'The teacher asked Taraa whether he would go or not go.'

	nominal disjunction	clausal disjunction	wh-question	yes-no question	existential
Japanese	*ka*	∅	*ka*	*ka*	*ka*
Okinawan	–	∅	*ga*	*mi*	*gana*

Table 2: disjunction, question, and existential markers in Japanese and Okinawan

These facts show that (i) Okinawan lacks a disjunction particle and hence that (ii) its question markers cannot build existential indeterminates, contrary to the languages listed in (1).

4. Existential Indeterminates in Okinawan as Clausal Questions. As noted in the previous sections, existential indeterminates in Okinawan employ the mysterious morpheme *gana*, which is not a disjunction particle.

(9) Okinawan
     Taa-**gana**-ga   chan.
     who-GANA-Nom   come.Past
     'Someone came.'

Although the morpheme *gana* is likely to be composed of the Q-particle *ga* and *na*, the status of the latter is not immediately clear. Putting aside *gana* for a moment, it is interesting to look at another form of existential indeterminate in Okinawan, as shown in (10).

(10) Okinawan
     Taa-**gayara**   chan.
     who-GAYARA   come.Past
     'Someone came.'

Importantly, this form is identical to an embedded self-question structure, as shown in (11).[3] Evidently, *gayara* in (11) is syntactically complex: *ga* is a Q-complementizer, *yara* is a conditional form of copula.

(11) Okinawan
  a. [Taa **ga ya-ra**]   wakara-n.
     who   Q Cop-RA   know.Neg
     'I don't know who it is.'
  b. Taa   **ga ya-ra.**
     who   Q Cop-RA
     '(I wonder/I don't know) Who it is.'

As described in detail in Miyara (2000, 2007, 2015a), Karimata and Shimabukuro (2007), Shinzato and Serafim (2013), van der Lubbe (2017), wh-question and self-question are syntactically distinct in Okinawan. The latter takes a form of focus-concord construction (called *kakari-musubi*).[4]

(12) Okinawan
  a. {Taa/*Taraa}-**ga**   choo-ta   **ga**?
     who/Tara-Nom   come-Past   Q
     'Who came? / *Did Tara come?'   (Wh-question)
  b. {Taa/Taraa}-**ga-ga**   choo-ta-**ra**?
     who/Tara-Nom-Q   come-Past-RA
     'I wonder who came. / I wonder if Tara came.'   (Focus-concord self-question)

Wh-question in (12a) is information-seeking. The Q-particle appears at the end of the clause as a Q-complementizer and requires a wh-phrase. In contrast, focus-concord question in (12b) is a self-question and hence not information-seeking. The Q-particle *ga* necessarily attaches to the focus of the sentence and the predicate takes the focus-concord suffix *-ra* (see Miyara 2000, 2007, 2015a for a detailed description). Thus, the existential indeterminate in (10) and the self-question in (11) are both derived from the focus-concord question construction in (12b).

Interestingly, Okinawan employs this self-question structure in (11) and (12b) to build the existential indeterminate in (10). More specifically, I propose that what looks like an existential indeterminate in (10) is derived from an embedded self-question 'I wonder / don't know wh- it is' by *dunno*-deletion and question-internal ellipsis (or pseudo-sluicing) inside the embedded question (Ross 1969; see, Inamine 2005, Miyara 2007, and Kurafuji 2009 on sluicing in Okinawan, and Saito 2007 and Hiraiwa and Ishihara 2010 on (pseudo)-sluicing in Japanese), as illustrated in (13)–(14).[5]

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[3] von Fintel and Iatridou (2019) discuss particles that make questions "unasked questions". It is interesting that existential indeterminates are derived from unasked question forms (or self-question forms) both in Okinawan and Japanese. See Section 5 (especially, examples (22)–(23)) and Hiraiwa and Nakanishi (to appear) on Japanese.

[4] While the sentence-final Q-complementizer *ga* in Okinawan in (12a) requires a wh-phrase, the Q-particle *ga* in (12b) does not.

[5] *gayara*, *yarawan*, and *yatin* are not always interchangeable, as the latter two are unconditional/free choice forms.

(i) Okinawan

(13) Okinawan

[Uree Taa **ga ya-ra**] wakara-n shiga, chuu ndi doo.
it.Top who Q Cop-RA know-Neg but come C.say Sfp
'I heard that someone would come.' (lit.) I don't know who it is, (I heard) (he/she) will come.'

(14) Okinawan

[~~Uree~~ Taa **ga ya-ra**] ~~wakara-n shiga~~, chuu ndi doo.
it.Top who Q Cop-RA know-Neg but come C.say Sfp
'I heard that someone would come.' (lit.) I don't know who it is, (I heard) (he/she) will come.'

The predicate *wakara-n (shiga)* 'I don't know', which takes the embedded self-question, is deleted. The embedded question has the following structure in (15). The topicalized nominal demonstrative, which refers to the antecedent clause, undergoes ellipsis. The Q-particle attaches to the wh-phrase *taa* 'who' and agrees with the sentence-final focus-suffix *-ra* (focus concord).

(15) ~~I don't know~~ who it is, ~~but~~ …
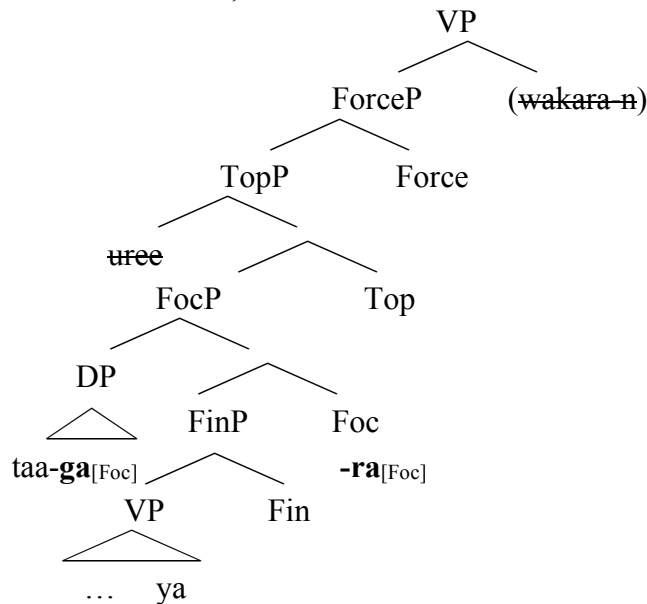
Haspelmath makes an important observation that existential quantifiers in some European languages have a sentential structure 'I don't know who', as their source. This is illustrated in (16).

(16) Haspelmath (1997, 131)[6]
   a. neizwer 'somebody' <ne weiz wer '(I) don't know who' (Middle High German)

  Koohii-{**yatin**/*gayara} ucha-{**yatin**/*gayara} kwimisooree.
  coffee-YATIN/GAYARA tea-YATIN/GAYARA give.me.please
  'Please give me some coffee or tea.'

[6] Another way to build an existential indeterminate is reduplication.

b. nāthwā 'somebody' <newāt hwā '(I) don't know who' (Old English)
c. nekkver 'somebody' <*ne wait ik hwarir 'I don't know who' (Old Norse)
d. neştine 'some' <Latin: nescio quis 'I don't know who' (Romanian (dialectal))
e. na(m)koj 'somebody' <ne znam koj 'I don't know who' (Bulgarian (dialectal))
f. někŭto 'somebody' <ne vě kŭto 'I don't know who' (Old Church Slavonic)
g. je ne sais quel 'some kind of' <cf. je ne sais (pas) quel 'I don't know which' (French)

Haspelmath refers to this type of grammaticalization path of existential quantifiers as *dunno-type* and observes that it is restricted to the European languages, but our analysis in (13)–(14) demonstrates that it is a general mechanism, observed outside the particular language family (see also Section 5 on Japanese).

I argue that the lack of a disjunction particle and the question-based existential indeterminates provide strong evidence against the homophony between a disjunction particle and a particle that forms existential indeterminates. Rather, it must be the Q-complementizer that plays a crucial role in deriving existential indeterminates in Okinawan.[7]

Finally, let us return to *gana*. As mentioned at the beginning of this section, *ga* should be a Q-particle of a focus-concord question. I propose that *gana* is derived from *ga ya-ra* in (17).

(17) Okinawan
ga ya -ra
Q Cop-RA

Suppose that the underlying structure of *taa-gana* 'someone' is *taa ga ya-ra* in (14). If deletion applies to the copula *ya* alone, leaving the focus-concord suffix intact, then we obtain the form **taa-gara* in (17b). Assuming that /r/ undergoes phonological change to /n/, we obtain the form *taa-gana* in (17c).

(18) a. taa **ga** **ya-ra** '(I wonder) who it is'
b. taa **ga** ~~ya-ra~~ copula deletion

(i) a. Taa-taa-ya kuu-n-tan.
who-who-Top come-Neg-Past
'(I don't know their name, but) a certain person/certain people didn't come.'
b. *Taa-**gana** taa-**gana**-ya kuu-n-tan.
who-GANA who-GANA-Top come-Neg-Past
'(I don't know their name, but) a certain person/certain people didn't come.'

As the translations indicate, it seems that reduplicated indeterminates is specific-unknown. Reduplicated indeterminates are also possible with universal indeterminates and NPIs. (e.g., *taa-ga-n ta-ga-n* 'everyone', *taa-n taa-n* 'anyone').

[7] Shimoji (2008) observes similar data, *wh-gagara* (or *wh-gara)*, from Irabu, a southern Ryukyuan language. If my analysis of Okinawan and Japanese is on the right track, then question-based existential indeterminates may well be a wide-spread feature of the languages across Japan. I suspect that the doubling *ga* in Irabu is due to non-complementary distribution of the Q-particle *ga* and the Q-complementizer *ga* in wh-focus-concord question in Irabu (see Shimoji 2008, 447–448).

(i) Irabu (Shimoji 2008, 242–243)
Tau-**gagara**-nu-du sïn-tar-ca.
who-GAGARA-Nom-Foc die-Past-HS
'Someone has died, they say.'

c. taa **ga** ~~yana~~   /r/→/n/

The phonological fortition rule in (18c) is common cross-linguistically (see Proctor 2009)[8]. van der Lubbe (2017) observes that the form *gara* in (18b) is indeed employed in an embedded (self)-question in Okinoerabu Ryukyuan (see also van der Lubbe and Tokunaga 2015).

(19) Okinoerabu Ryukyuan (Van der Lubbe 2017, 303)[9]
      Ichi   ki-n   gara   waka-ra-n.
      when   come-Ind GARA   know-Neg-Ind
      'I don't know when he will come.'

Furthermore, the analysis in (18) is also independently supported by the fact that the counterpart of *gana* in Irabu is *gagara* (see footnote 7).[10]

5. Japanese Existential Indeterminates as Embedded Question. The analysis of existential indeterminates as hidden embedded question is corroborated by Japanese. Nakanishi and Hiraiwa (2019) and Hiraiwa and Nakanishi (to appear) argue that there is indeed evidence that they are clausal in its origin and the particle *ka* is a Q-complementizer. The existential indeterminate *dare-ka* in example (20a) has long been considered to be an indeterminate combined with a nominal disjunction particle *ka*. However, we also find a semantically equivalent clausal expression (20b) in Japanese, just like in Okinawan. If we apply *dunno*-deletion, we obtain (20). If the copula is further deleted, we obtain the form (20d), which is identical to (20a).

(20) Japanese (Hiraiwa and Nakanishi to appear)
    a. [Dare-**ka**]-ga   kit-ta.
        who-KA-Nom   come-Past
        'Someone came.'
    b. [Dare dat-ta   **ka**] shira.nai-ga   ki-ta.

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[8] Thanks to Feng-Fan Hsieh for bringing this to my attention. The existence of glide-nasal alternation is also observed in Irabu (see Shimoji 2008, 448).
[9] Thanks to Chris Davis for bringing my attention to the dialectal data.
[10] Incidentally, this form, *ga ya-ra* can also convey disjunction.

(i) Kunu sumuchee, [Taraa mun **ga ya-ra**],   [Jiraa mun **ga ya-ra**],   ya   sa.
     this   book   Taraa thing Q Cop-RA   Jiraa   thing Q Cop-RA   Cop Sfp
     'This book is Taraa's or Jiraa's.' '(lit.) This book is, I wonder if it is Taraa's or if it is Jiraa's.'

Two other forms *yarawan* and *yatin* can also be used for expressing what amounts to disjunction. They are also concessive conditional (or unconditional) clauses and the latter is also used as free choice expression (see table 1). [10]

(ii) Okinawan
    a. Pan **ya-ra-wa-n**   kume **ya-ra-wa-n**   masiyasi kara   irabee.
        bread Cop-RA-Cond-also   rice- Cop-RA-Cond-also   better   from   choose.Imp
        'Choose what you like better, whether bread or rice.'

    b. Pan **yati-n**   kume **yati-n**   masiyasi kara   irabee.
        bread Cop.Cond-also   rice Cop.Cond-also   better   from   choose.Imp
        'Choose what you like better, whether bread or rice.'

<pre>
      who   Cop-Past Q   know.Neg-but come-Past
      'Someone (lit. I don't know who it was) came.'
   c. [Dare dat-ta   ka] ~~shira.nai~~-ga   ki-ta.
      who   Cop-Past Q   know.Neg-Nom come-Past
      'Someone (lit. I don't know who it was) came.'
   d. [Dare ~~dat-ta~~   ka] ~~shira.nai~~-ga   ki-ta.
      who   Cop-Past Q   know.Neg-Nom come-Past
      'Someone (lit. I don't know who it was) came.'
</pre>

Crucially, Japanese has another existential indeterminate expression (21), where only the sentential negation is elided from (20b) (with optional copula deletion).

<pre>
(21) Japanese
   a. [Dare ~~dat-ta~~   ka] shira-~~nai~~ ga   kita.
      who   Cop-Past Q   know.Neg Nom   came
      'Someone (lit. I don't know who) came.'
   b. [Dare dat-ta   ka] shira-~~nai~~ ga   kita.
      who   Cop-Past Q   know.Neg Nom   came
      'Someone (lit. I don't know who) came.'
</pre>

The forms in (21) cannot be explained if *ka* were a nominal disjunction particle, because then it would not be able to be selected by the verb 'know'.

From the perspective of the proposed analysis of existential indeterminates in Okinawan, the closest Japanese counterpart of the Okinawan example in (14) is (22).[11]

<pre>
(22) Japanese
   a. [Dare **yara**]   ki-ta.
      who   YARA   come-Past
      'Someone came.'
   b. [Nani **yara**]   ki-ta.
      what YARA   come.Past
      'Something came.'
</pre>

Just as the form *ga-ya-ra* in Okinawan is used as a self-question, the form *yara* is also used as a self-question in Japanese.

<pre>
(23) Japanese (Hiraiwa and Nakanishi to appear, footnote 12)
      Dare-ga   kuru no **yara**.
      who-Nom come C   YARA
      'I wonder/don't know who will come.'
</pre>

6. Conclusion. In this paper, I have demonstrated that existential indeterminates in Okinawan have a clausal structure. The morpheme *gana* in Okinawan is neither a disjunction particle nor a

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[11] This is another example of bare indeterminates discussed in Nakanishi and Hiraiwa (2019) and Hiraiwa and Nakanishi (2020).

Q-particle, lending support for the claim that the alleged morphological affinity between disjunction particles and morphemes building existential quantifiers is coincidental. Rather, I have argued that existential indeterminates in Okinawan are syntactically derived from an embedded focus-concord self-question *wh-ga...ya ra* through *dunno*-deletion. It is claimed, then, that the form *gana* has emerged from deletion of the copula *ya* and liquid-nasal alternation.

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