



1-1-2016

# The Repetitive Coordinator-ka in Japanese and either in English as Scope Indicators in Disjunction

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# The Repetitive Coordinator-*ka* in Japanese and *either* in English as Scope Indicators in Disjunction

## Abstract

This study aims to investigate the nature of clausal/phrasal disjunctions in Japanese and in English. Since Larson (1985), it has been observed that the distribution of *either* is taken to mirror the scopal properties of disjunction (Schwarz 1999). On the other hand, the Repetitive Coordinator-*ka* (**RC-*ka***) in Japanese has been assumed to be optional (Kishimoto 2013). I propose, however, that RC-*ka* functions in parallel with the correlative coordinators such as *either* in English. The paper is organized as follows. Section 2 overviews the parallelisms between *either* and RC-*ka* in terms of scopal interpretations. Section 3 argues against an alternative view that *either* and RC-*ka* are focus particles but not a part of coordinate structure. In Section 4, I propose a derivational mechanism that derives nominal disjunctions from clausal/phrasal disjunctions in the post-syntactic component (Halle and Marantz 1993, Fukui and Sakai 2003). Section 5 further investigates the connectivity of *ka* and *or*, which lends credence to the unified account of the clausal/phrasal disjunctions in Japanese and in English. Section 6 is a brief summary of the present paper.



‘*Mary is looking for a maid or Mary is looking for a cook.*’ Note that the *de dicto* WSR is always followed by the continuation ‘*but I don’t know which*’ (Larson 1985:218); hence generally interpreted as *exclusive-or*, in some ways.<sup>2</sup> Under the *Reductionist approach* (Schwarz 1999, among others), it has been widely accepted that *either* marks the left edge of the coordinate structure. When *either* is adjacent to nominals, as in (2b), the underlying structure is something like (3a), in which nominals are coordinated. On the other hand, (2c) is derived from phrasal disjunctions in (3b), in which identical elements are elided in the second conjunct.

- (3) a. Mary is looking for *either* [<sub>nominal</sub> a maid] or [<sub>nominal</sub> a cook].  
 cf. Mary is looking for *either* a maid or a cook. (=2b)
- b. Mary is *either* [<sub>vP/VP</sub> looking for a maid] or [<sub>vP/VP</sub> looking for a cook].  
 cf. Mary is *either* looking for a maid or a cook. (=2c)
- (4) Possible scopal interpretations in disjunction:<sup>3</sup>
- a. *de dicto* NSR: looking for > or
  - b. *de dicto* WSR: or > looking for
  - c. *de re* NSR (see Footnote 1.)

Let us now turn to *RC-ka* in Japanese. An anonymous reviewer pointed out to me that WSR disjunction is incompatible with a continuation, *demo dochira-demo ii-soo-da-yo* ‘but it doesn’t matter which.’ If *RC-ka* also influences the scopal interpretations of disjunction in a similar manner as *either*, then it should induce WSR disjunction when *RC-ka* appears displaced from nominals. The prediction is borne out that either (5a) or (5b), in which *RC-ka* marks the right edge of disjunctions cannot be followed by (5c).

- (5) Obligatory WSR (*RC-ka*):<sup>4</sup>
- a. Taro-wa ringo-o sagasitei-ru ka mikan-o sagasitei-ru **ka** da.  
 T.-TOP apple-ACC looking:for-PRES DJ orange-ACC looking:for-PRES **RC-ka** COP  
 ‘Taro is either looking for an apple or looking for an orange.’
  - b. Taro-wa ringo ka mikan-o sagasitei-ru **ka** da.<sup>5</sup>  
 T.-TOP apple DJ orange-ACC looking:for-PRES **RC-ka** COP  
 ‘Taro is either looking for an apple or an orange.’
  - c. # Demo dochira-demo ii-soo-da-yo.  
 but whichever okay-seem-COP-PRT  
 ‘But he doesn’t care which.’

<sup>2</sup>It is true when *either* is present, *exclusive-or* reading becomes more preferable (den Dikken 2006:702). However, ‘*either A or B*’ does not necessarily entail ‘but not *both A and B*.’ Consider (i) and (ii):

- (i) If you get 100 marks in either Math or Science, then you can have some snacks.
- (ii) If either A or non A is correct, then you can have some snacks.

While (i) allows *inclusive-or* interpretations, (ii) does not, since A and non A are simply incompatible with each other.

<sup>3</sup>Akira Ishikawa (p.c.) pointed out to me that predicates of intensional contexts make the distinctions between NSR and WSR clearer here. He also notes that coincidentally it is an intentional predicate *look for* that induces intensional contexts here.

<sup>4</sup>NSR disjunctions can readily be followed by *demo dochira-demo ii-soo-da-yo* ‘he doesn’t care which’ as in (i).

- (i) a. Taro-wa ringo ka mikan (ka)-o sagasitei-ru  
 T.-TOP apple DJ orange (*RC-ka*)-ACC looking:for-PRES  
 ‘Taro is looking for (either) an apple or an orange.’
- b. Demo dochira-demo ii-soo-da-yo.  
 but whichever okay-seem-COP-PRT  
 ‘But he doesn’t care which.’

<sup>5</sup>Note that for some speakers, a pause is needed after the first *ka*.

Exclusivity of RC-*ka* can be canceled, as illustrated in (6); hence it is pragmatic in nature. The *inclusive-or* reading is available when RC-*ka* is present in (6a): ‘It seems that Taro is looking for an apple, an orange or something else.’ However, this is not possible with WSR disjunctions.

- (6) Disjunction (A *ka* B (*ka*)):
- a. Taro-wa [ringo *ka* mikan (*ka*)]-o sagasitei-ru rasii  
 T.-TOP apple DJ orange (RC-*ka*)-ACC looking:for-PST seem  
 ‘It seems that Taro is looking for an apple or an orange.’
- b. Cancellation:  
 Jissai kare-wa ringo mo mikan mo sagasitei-ru-yo  
 actually he-TOP apple CONJ orange RC-mo looking:for-PRES-PRT  
 ‘Actually, he is looking for both of them.’
- (7) WSR disjunction:
- a. Taro-wa ringo-o sagasitei-ru *ka* mikan-o sagasitei-ru rasii  
 T.-TOP apple-ACC looking:for-PRES DJ orange-ACC looking:for-PRES seem  
 ‘It seems that Taro is either looking for an apple or an orange.’
- b. Cancellation:  
 #Jissai kare-wa ringo mo mikan mo sagasitei-ru-yo

To sum up, the exclusivity in disjunctions is not due to the presence of RC-*ka*, given that pragmatic cancellation is possible in (6b). In fact, it is rather WSR disjunction in Japanese that obligatorily obtains *exclusive-or* readings.<sup>6</sup>

### 3 On the Nature of Exhaustivity Expressed by RC-*ka*

Johannessen (1998) and Hendriks (2004) argue that *either* in *either-or* constructions is neither a coordinator nor a part of coordinate structure, but a focus particle that denotes exhaustivity in a similar manner as *only* (see Progovac 2003 and den Dikken 2006 for the opposing views). If Japanese RC-*ka* is also a focus particle, then its exhaustive nature may be explained. In order to examine it, I use following diagnostics: Nominative-Genitive conversion in (8), and a predicational copula clause in (9), which are incompatible with the exhaustivity of focus particles such as *dake* ‘only’ (Asada 2014).

- (8) [Taro *dake-ga*/\**dake-no* tanon-da] ryoori-wa esukarugo ryoori desi-ta.  
 T. only-NOM/only-GEN order-PST dish-TOP escargot dish COP<sub>polite</sub>-PST  
 ‘The dish that only Taro ordered was an escargot dish.’  
 (adapted from Horie and Saito 1996:142)
- (9) Taroto Ziro to Hanako-wa [<sub>pred</sub>satuzinhan to sono itimi (\**dake*) dat-ta].  
 T. CONJ Z. CONJ H.-TOP murderer CONJ his band only COP-PST  
 ‘Taro, Ziro and Hanako were only the murderer and his band.’  
 (Asada 2014:104)

<sup>6</sup>Satoshi Tomioka (p.c.) pointed out to me that syntactic exclusivity can be diagnosed by embedding a disjunction in conditionals.

- (i) Mosi Taro-ga ringo *ka* mikan (*ka*)-o kat-ta-ra osiete-hosi-i  
 if T.-NOM apple DJ orange (RC-*ka*)-ACC buy-PST-COND tell-want-PRES  
 ‘If Taro buys an apple or an orange, please tell me.’
- (ii) Mosi Taro-ga ringo-o kat-ta *ka* (kare-ga)mikan-o kat-ta-(*ka-na*)ra osiete-hosi-i  
 if T.-NOM apple-ACC buy-PST DJ he-NOM orange-ACC buy-PST-(RC-*ka*)-COND tell-want-PRES  
 ‘If Taro buys an apple or he buys an orange, please tell me.’

In (i), it does not matter whether Taro bought an orange, an apple or both of them. However, in (ii), it must be only one of the two that Taro bought. It means that disjunction is interpreted as *exclusive-or* when it obtains WSR.

If RC-*ka* is a focus particle that denotes exhaustivity, then it should also be incompatible with either (8) or (9). However, this prediction is not borne out, as in (10) and (11) below.

- (10) [Taro ka Hanako ka-ga/no tanon-da] ryoori-wa esukarugo ryoori desi-ta.  
 T. DJ H. RC-*ka*-NOM/GEN order-PST dish-TOP escargot dish COP<sub>polite</sub>-PST  
 ‘The dish that Taro or Hanako ordered was an escargot dish.’
- (11) Taro-wa [<sub>pred</sub> satuzinhan ka sono itimi ka da].  
 T.-TOP murderer DJ his band RC-*ka* COP  
 ‘Taro is the murderer or his band.’

Given these observations, I argue that Japanese RC-*ka* is not a focus particle that denotes exhaustivity. Advocates of the focus-particle analyses must explain why correlatives and RCs influence the scopal properties of disjunction by marking either the left or the right edge of the coordinate structure, as we have seen above. I conclude that RC-*ka* is not an exhaustive focus particle, but part of coordinate structure against Johannessen’s (1998) and Hendriks’ (2004) analyses.<sup>7</sup>

Based on the discussions so far, I argue that RC-*ka* in Japanese and *either* in English show parallelism illustrated in the table (12) below.

- (12) **Proposal:** RC-*ka* and *either* overtly indicate the scopal properties of disjunction.

Scope of DJ	English	Japanese
NSR/WSR	( <i>either</i> ) A or B [adjacent]	A ka B (RC- <i>ka</i> ) [adjacent]
NSR	base-generated nominal DJ	base-generated nominal DJ
WSR	clausal DJ/displaced <i>either</i>	clausal DJ/displaced RC- <i>ka</i>

As already noted, the *exclusive-or* interpretation is obligatory in WSR disjunctions, as illustrated below.

- (13) a. Mary-wa meido-o sagasite-iru ka kokku-o sagasitei-ru (ka da).  
 M.-TOP maid-ACC looking:for-PRES DJ cook-ACC looking:for-PRES RC-*ka* COP  
 ‘Mary is either looking for a maid or (she is) looking for a cook.’
- b. Mary-wa meido ka kokku-o sagasite-iru (ka da).  
 M.-TOP maid DJ cook-ACC looking:for-PRES RC-*ka* COP  
 ‘Mary is either looking for a maid or (she is) looking for a cook.’

In (13), sentences become false if Mary is looking for both a maid and a cook. A word of caution is necessary here, however. Miyama (2015:24) observes that examples such as (14) must be base generated as nominal coordination.

- (14) a. Taro-wa [koohii ka ocha (ka)](-no) dochira-ka-o non-da  
 T.-TOP coffee DJ tea RC-*ka*-GEN which-*ka*-ACC drink-PST  
 ‘Taro drank either coffee or tea.’
- b. \*Taro-wa [koohii-o non-da ka ocha-o non-da (ka)]-no dochira-ka-o non-da  
 T.-TOP coffee-ACC drink-PST DJ tea-ACC drink-PST RC-*ka*-GEN which-*ka*-ACC drink-PST  
 Intended reading: ‘Taro either drank coffee or (he) drank tea.’

The sentence (14b), from which (14a) is supposed to be derived, is totally unacceptable. She concludes that in Japanese, a unique derivation of nominal disjunction such as (14a) is independently guaranteed when *dochira-ka* ‘which-*ka*’ is present. I argue that the distinction is necessary between *dochiraka* and RC-*ka*. It is clear that *dochiraka* gains the *exclusive-or* reading in a different manner as in WSR, since it lexically means ‘*only one of the two*.’ Therefore, we should rather

<sup>7</sup>Size of disjunctions may be correlated with the exhaustivity. Anna Szabolcsi (p.c.) pointed out to me that similar observations are made in French and in Hungarian. Since it is beyond the scope of the present study, I leave the discussions for future research. See Szabolcsi (2015) for details.

compare clausal/phrasal disjunctions with RC-*ka* and the WSR disjunctions with *either*, excluding lexically derived *exclusive-or* interpretations.

#### 4 Syntax-Phonology Mapping in Japanese Disjunction

The proposal (12) faces a problem if we just apply the reductionist analysis to (15a). Previous studies have concluded that sentences like (15a) cannot have *Clausal Connective readings* in (15c) since the structure before deletion (15b) is not grammatical (cf. Miyama 2015).

- (15) a. Taro-wa ringo ka mikan ka-o sagashitei-ru  
 T.-TOP apple DJ orange RC-*ka*-ACC looking:for-PRES  
 ‘Taro is looking for either an apple or an orange.’  
 b. \*Taro-wa ringo-o sagashitei-ru ka mikan ka-o sagashitei-ru  
 T.-TOP apple-ACC looking:for-PRES DJ orange RC-*ka*-ACC looking:for-PRES  
 Intended reading: ‘Taro is looking for either an apple or (looking for) an orange.’  
 c. Taro-wa ringo-o sagashitei-ru ka (Taro-ga) mikan-o sagashitei-ru (ka da)  
 T.-TOP apple-ACC looking:for-PRES DJ T.-NOM orange-ACC looking:for-PRES (RC-*ka* COP)  
 ‘Taro is either looking for an apple or (looking for) an orange.’

Following Kuroda’s (1965) insight that disjunctions such as (15a) and (15c) are interrelated,<sup>8</sup> I argue that they are always derived from clausal/phrasal disjunctions when they obtain WSR, through *PF-reanalysis* (Fukui and Sakai 2003).

I propose that sentences such as (15a) are derived from clausal/phrasal disjunctive sentences like (15c) through PF-reanalysis. Fukui and Sakai (2003) analyzes that nominal coordinator *to* coordinates seemingly non-constituents that are originally VP/TP in Narrow Syntax, as in (16). They analyze that non-constituent coordination is derived through PF-reanalysis, which refers to some sort of operation that applies to the two or more morphological units in the post-syntactic component to create a single unit, which is independently proposed by Halle and Marantz (1993) as *Morphological Merger*.

- (16) The PF-reanalyzed constituents in non-constituent coordination (conjunction):  
 a. Narrow Syntax: Taro [[<sub>VP</sub>Hanako ringo 3-tu age] to [<sub>VP</sub>Kumiko banana 2-hon age]-ta]  
 T. H. apple 3-CL give CONJ K. banana 2-CL give-PST  
 b. Phonology:  
 Taro-wa [<sub>NP</sub>Hanako-ni ringo-o 3-tu age] to [<sub>NP</sub>Kumiko-ni banana-o 2-hon] age-ta.  
 T.-TOP H.-DAT apple-ACC 3-CL give CONJ K.-DAT banana-ACC 2-CL give-PST  
 ‘Taro gave three apples to Hanako and two bananas to Kumiko.’

<sup>8</sup>Kuroda (1965) provides descriptively rich observations on *ka*. He distinguishes disjunctive *ka* from other coordinating particles since he assumes that every occurrence of [[A *ka* B (*ka*)] V] is derived from larger coordinate structures such as [[<sub>VP</sub>A V] *ka* [<sub>VP</sub>B V] *ka*] (COP) as illustrated in (i).

- (i) a. John ka Bill-ga hon-o kat-ta.  
 J. DJ B.-NOM book-ACC buy-PST  
 ‘John or Bill bought books.’  
 b. John-ga hon-o kat-ta ka Bill-ga hon-o kat-ta  
 J.-NOM book-ACC buy-PST DJ B.-NOM book-ACC buy-PST  
 ‘John bought books or Bill bought books.’  
 c. John ka Bill ka-ga hon-o kat-ta  
 J. DJ B. RC-*ka*-NOM book-ACC buy-PST  
 ‘John or Bill bought books’  
 d. John-ga hon-o kat-ta ka Bill-ga hon-o kat-ta ka (desu)  
 J.-NOM book-ACC buy-PST DJ B.-NOM book-ACC buy-PST RC-*ka* (COP<sub>polite</sub>)  
 ‘John bought books or Bill bought books.’

(adapted from Kuroda 1965:85–86)

What Kuroda’s work on disjunctions means here is that the native speakers’ intuition also supports that nominal disjunctions are derived from clausal/phrasal disjunctions.

(adapted from Fukui and Sakai 2003:348–350)

The case assignment pattern in (17) further supports the PF-reanalysis account since case particles are only attached to nominals (Kuroda 1978, among others). The accusative case particle *-o* is attached to the entire string of elements coordinated by *ka*, which is optionally followed by *RC-ka* as illustrated above.

(17) The PF-reanalyzed constituents in non-constituent coordination (disjunction):

a. Narrow Syntax:

Taro [[<sub>VP</sub> Hanako ringo 3-tu ~~age~~] ka [<sub>VP</sub> Kumiko banana 2-hon age]-ta]  
 T. H. apple 3-CL give DJ K. banana 2-CL give-PST

b. Phonology:

Taro-wa [[<sub>NP</sub> Hanako-ni ringo 3-tu ~~age~~] ka  
 T.-TOP H.-DAT apple 3-CL give DJ  
 [<sub>NP</sub> Kumiko-ni banana 2-hon] (ka)-*o* age-ta.  
 K.-DAT banana 2-CL (RC-ka)-ACC give-PST

‘Taro either gave three apples to Hanako or two bananas to Kumiko.’

(cf. Fukui and Sakai 2003:350)

Since case particles are only assignable to nominals in Japanese, the reanalyzed PF constituents must be nominal.

Fukui and Sakai (2003) discusses that while *-to* can undergo PF-reanalysis, *-mo* ‘also’ cannot since it carries clear quantificational force and therefore must be present in the LF representation.

(18) a. Taro-ga [<sub>VP</sub> Hanako-ni ringo-o 3-tu age] mo  
 T.-NOM H.-DAT apple-ACC 3-CL give also  
 [<sub>VP</sub> Kumiko-ni banana-o 2-hon age] mo si-ta.  
 K.-DAT banana-ACC 2-CL give also do-PAST  
 ‘Taro gave three apples to Hanako and two bananas to Kumiko.’

b. \*Taro-ga [<sub>NP</sub> [ Hanako-ni ringo-o 3-tu] mo  
 T.-NOM H.-DAT apple-ACC 3-CL also  
 [Kumiko-ni banana-o 2-hon] mo] age-ta.  
 K.-DAT banana-ACC 2-CL also give-PAST

Intended reading: ‘Taro gave three apples to Hanako and also two bananas to Kumiko.’

(Fukui and Sakai 2003:344)

It seems that *ka* ‘or’ also carries quantificational force as illustrated in (19). The sentence (19a) can be described as (19b), which shows that *or* carries some quantificational force. This is the *de re* reading of disjunction (Partee and Rooth 1983). However, the *de dicto* reading always lacks quantificational force, as in (20).

(19) The *de re* reading:

a. Mary is looking for (either) a maid or a cook.

b.  $\exists x[(\text{maid}'(x) \vee \text{cook}'(x))] \wedge \text{look-for}'(\lambda P[P](x))(m)$  (=4c)

(20) The *de dicto* reading:

a. Mary is looking for (either) a maid or a cook.

b. look-for' ( $\lambda P \exists x[(\text{maid}'(x) \vee \text{cook}'(x)) \wedge [P](x)](m)$ ) (=4a–b)

(adapted from Partee and Rooth 1983)

When disjunctions are quantified in, the *de re* reading is yielded as in (19). On the other hand, when they are not quantified in, the *de dicto* reading is obtained (Partee and Rooth 1983). Clausal disjunctions gain WSR, which is obligatorily interpreted as *de dicto* reading followed by ‘...but I don't know which.’ Since WSR clausal disjunctions always lack quantificational force, there is no apparent reason to deny the PF-reanalysis approach on disjunction with *RC-ka*.

Based on these observations, I conclude that *RC-ka* is inserted during the process of PF-



reanalysis, as in (17). Disjunctions with RC-*ka* adjacent to nominals are derived from clausal ones when they obtain WSR. After the string adjacent elements are reanalyzed as PF-constituents, RC-*ka* is allowed to be inserted in the PF-component. It follows that PF-reanalysis is also available in such cases as (21).

(21) PF-reanalysis for clausal disjunction:

a. Narrow Syntax:

Taro [VP/TP ringo sagashitei-ru] ka [VP/TP mikan sagashitei-ru].  
T. apple looking:for-PRES DJ orange looking:for-PRES

→ b. Phonology:

Taro-wa [VP/TP [nominal ringo-sagashitei-ru-ka mikan (ka)]-o sagashitei-ru].  
T.-TOP apple DJ orange-RC-ka-ACC looking:for-PRES  
'Taro is either looking for an apple or an orange.'

(22) Base-generated nominal disjunction:

[Taro-wa [NP ringo ka mikan]-o sagashitei-ru].  
T.-TOP apple DJ orange-ACC looking:for-PRES  
'Taro is looking for an apple or an orange.'

As in (21a), *ringo-o sagashitei-ru/mikan-o sagashitei-ru* compose constituents in Narrow Syntax. Therefore, after the gapping of *sagashitei-ru* in the first conjunct, the surface form becomes identical to the nominal disjunction in (22),<sup>9</sup> which, I assume, is the source of ambiguity between NSR and WSR. In this section, we have seen several properties of RC-*ka* in disjunction. We observed that the surface form *A ka B ka* is derivable from clausal disjunction through PF-reanalysis. In the next section, I further investigate the connectivity of *ka* in Japanese, which supports the unified account of clausal/phrasal disjunction in Japanese and in English.

## 5 Connectivity of a Disjunctive Coordinator-*ka*

*Or* in English is used for connecting various types of categories, which includes CP.<sup>10</sup> Kishimoto (2013), on the other hand, argues that *ka* 'or' in Japanese coordinates only up to the TP domain. In order to propose a unified account of disjunctions in Japanese and English, here we seek for an alternative, which can capture *ka* in Japanese and *or* in English in parallel. Kishimoto (2013) observes the distribution of the adverbs and topic-marked NPs in disjunction.

(23) The contrast between VP/CP adverb placements:

a. [Ken-ga asu/kenmei-ni hasir-u] ka [Mari-ga asu/kenmei-ni hasir-u] (ka da).  
K.-NOM tomorrow/hard run-PRES DJ M.-NOM tomorrow/hard run-PRES RC-ka COP  
'Either Ken will run tomorrow/hard or Mari will run tomorrow/hard.'

<sup>9</sup>When postpositional phrases are coordinated with RC-*ka* as in (i), the acceptability is somewhat degraded (Satoshi Tomioka p.c.).

- (i) ?\* Taro-wa Tookyoo-kara ka Oosaka-kara ka ki-ta.  
T.-TOP Tokyo-from DJ Osaka-from RC-ka come-PST  
Lit. 'Taro came either from Tokyo or from Osaka.'
- (ii) Taro-wa Tookyoo-kara ki-ta ka Oosaka-kara ki-ta (ka da).  
T.-TOP Tokyo-from come-PST DJ Osaka-from come-PST RC-ka COP  
'Taro either came from Tokyo or came from Osaka.'

The contrast seems indeed clear between (i) and (ii). It can be attributed to the differences between case markers and postpositions. Postpositions contain semantic contents, while the case markers do not (Kuroda 1978, Fukui and Sakai 2003, among others). If (i) is derived from (ii) through PF-reanalysis, *kara* 'from' would be inserted in the phonological component, which is followed by the insertion of RC-*ka*. It would violate a condition defined in Fukui and Sakai (2003:344), which states that particles with semantic contents cannot be inserted in the phonological component.

<sup>10</sup>*Or* may coordinate CP: He said [either [CP that he would eat rice] or [CP that he would eat beans].

(den Dikken 2006:27)

- b. \*[Ken-ga tabun/osoraku hasir-u] ka [Mari-ga tabun/osoraku hasir-u] (ka da).  
 K.-NOM probably/perhaps run-PRES DJ M.-NOM probably/perhaps run-PRES RC-ka COP  
 ‘Either Ken will probably/perhaps run or Mari will probably/perhaps run.’
- c. Tabun/Osoraku [Ken-ga hasir-u] ka [Mari-ga hasir-u] (ka da).  
 Probably/Perhaps K.-NOM run-PRES DJ M.-NOM run-PRES RC-ka COP  
 (Kishimoto 2013:199–200)

Another argument is based on the distribution of topic-marked NPs, as illustrated in (24).

- (24) The distribution of topic-marked NPs:
- a. \*[Ken-ga hon-wa yom-u] ka [Mari-ga sinbun-wa yom-u] (ka da).  
 K.-NOM book-TOP read-PRES DJ M.-NOM newspaper-TOP read-PRES RC-ka COP  
 ‘Either Ken will read the book or Mari will read the newspaper.’
- b. Hon-wa<sub>i</sub> [Ken-ga t<sub>i</sub> yom-u] ka [Mari-ga t<sub>i</sub> yom-u] (ka da).  
 Book-TOP K.-NOM read-PRES DJ M.-NOM read-PRES RC-ka COP  
 Lit. ‘The book, either Ken will read or Mari will read.’  
 (Kishimoto 2013:202–203)

Although Kishimoto’s argument is seemingly convincing given these observations, I argue that the data presented above are not compelling enough to conclude that *ka* is a TP coordinator. In (25), CP adverbs *kitto/tabun* ‘surely/perhaps’ are inside the conjuncts.

- (25) a. [Ken-wa [kitto isoidei-ta] ka [tabun assettei-ta] (ka da).  
 K.-TOP surely hurry-PST DJ perhaps rush-PST RC-ka COP  
 ‘Either Ken was surely be in a hurry or he was perhaps in a rush.’
- b. [Ken-ga kitto ku-ru] ka [tabun ko-na-i] (ka da/daroo).  
 K.-NOM surely come-PRES DJ perhaps come-NEG-PRES RC-ka COP/will  
 ‘Either Ken will surely come or he perhaps will not come.’

Moreover, topic marked NPs may also remain in-situ inside the conjuncts, as in (26).<sup>11</sup>

- (26) The distribution of Topic-marked NPs:
- a. [Ken-wa hon-o yon-da] ka [Mari-wa hon-o  
 K.-TOP book-ACC read-PST DJ M.-TOP book-ACC  
 yoma-nakat-ta] (ka dochiraka da/daroo)  
 read-NEG-PST RC-ka which-ka COP/will  
 ‘Either Ken read a book or Mari didn’t read the newspaper.’
- b. ?Ken-wa [tosyokan-de-wa Chomsky-no hon-ga karir-are-ta] ka  
 K.-TOP library-at-TOP Chomsky-GEN book-NOM borrow-can-PST DJ  
 [syoten-de-wa (C.-no hon-ga) teniire-rare-nakkat-ta] (ka dochiraka da/daroo)  
 bookstore-at-TOP (C.-GEN book-NOM) get-can-NEG-PST (RC-ka which-ka COP/will)  
 ‘Ken either could borrow a Chomsky’s book at a library or could not get the book at a bookstore.’

Based on the above observations, I conclude that Kishimoto’s examples sound unnatural due to some extra-syntactic factors.<sup>12</sup> Although the examples sound somewhat strange when a speaker-

<sup>11</sup>A topic is interpreted either thematically or contrastively (Kuno 1972), and when they are used as contrastive topics, they may remain in situ (Kishimoto 2013:202).

<sup>12</sup>It is true that there are some elements that are not allowed to occur inside conjuncts, as in (ii) below. In (ii), discursal particles such as *ne/yo* are inside the conjunct, while *ne/yo* are outside the conjunct in (i). However, it is implausible to argue that *ka* coordinates only up to the TP-domain, disregarding the observations above.

- (i) [Ken-ga hasir-u] ka [Mari-ga hasir-u] ka da ne/yo  
 K.-NOM run-PRES DJ M.-NOM run-PRES RC-ka COP PRT  
 ‘Either Ken will run or Mari will run.’

oriented modal adverb, *daroo* ‘will’ is within each conjunct, other modal adverbs such as *odoroi-ta-koto-ni* ‘surprisingly,’ and *kooun-na-koto-ni* ‘luckily’ (Endo 2007:208–209) may occur inside the conjuncts.

(27) The distribution of the speaker-oriented modal adverbs:

Sono supiichi-taikai-de-wa Taro-ga odoroitakotoni, yuusyoosi-ta ka  
 that speech-contest-at-TOP T.-NOM surprisingly, victory-do-PST DJ  
 Hanako-ga koounnakotoni, yuusyoosi-ta (ka da soo da)  
 H.-NOM fortunately victory-do-PST RC-ka COP apparently COP  
 ‘At the speech contest, either T. surprisingly won the 1st prize or H. fortunately won the 1st prize.’

Why then, in some cases, are CPs coordinated by *ka*, though in others cases acceptability is somewhat degraded? Here is one possible account. In Japanese, a number of homophonous particles exist: e.g. *to* is homophonous between a coordinator *to* ‘and,’ a comitative postposition *to* ‘with,’ and a complementizer-like *to* ‘that.’<sup>13</sup> A disjunctive particle *ka* also has its homomorphic particle *ka* ‘Q,’ which is exclusively used in the CP domain. I assume that *ka* ‘or’ can syntactically coordinate CPs, but it might sometimes compete with the homomorphic *ka* ‘Q,’ which makes examples somewhat sound unnatural (Naoki Fukui p.c.). Although I need further empirical supports to verify this argument, at least we can see that *ka* ‘or’ may syntactically coordinate CPs, as of this moment. I leave this issue for future research.

## 6 Conclusion

To sum up, I argued that Japanese RC-*ka* functions in parallel with *either* in *either-or* construction. Furthermore, we have seen that RC-*ka* is not a focus particle that denotes exhaustivity, contra Johannesssen (1998) and Hendriks (2004). The parallelisms between RC-*ka* and *either* are summarized in (28).

(28) RC-*ka* and *either* overtly indicate the scopal properties of disjunction (=12).

Scope of DJ	English	Japanese
NSR/WSR	( <i>either</i> ) A or B [adjacent]	A ka B (RC- <i>ka</i> ) [adjacent]
NSR	base-generated nominal DJ	base-generated nominal DJ
WSR	clausal DJ/displaced <i>either</i>	clausal DJ/displaced RC- <i>ka</i>

We have also seen that PF-reanalysis in the post-syntactic component correctly derives nominal disjunctions from clausal/phrasal ones, which further supports the proposals in (12). Previous studies have just ignored the presence of RC-*ka*, and made the system of disjunction in Japanese more complex with mere descriptions. If one assumes Japanese disjunction to be somewhat peculiar compared to those in other languages, then it may end up in miscellaneous and evanescent scenario. This study, however, brought NSR/WSR to the fore and brings back Kuroda’s (1965) insight that nominal and clausal/phrasal disjunctions are interrelated. I believe that the present paper contributes to simplification of the cross-linguistic theory of disjunction, through a comparative study of Japanese and English disjunctions.

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(ii) \*[Ken-ga hasir-u ne/yo] ka [Mari-ga hasir-u ne/yo] ka da  
 K.-NOM run-PRES PRT DJ M.-NOM run-PRES PRT RC-ka COP  
 ‘Either Ken will run or Mari will run.’

(Kishimoto 2013:204–205)

<sup>13</sup>For the detailed discussions on the syntactic status of *to* ‘that,’ see Fukui (1995), and also Kobayashi (2014) for the categorial status of *to* ‘and’ in Japanese.

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