The Repetitive Coordinator *ka* in Japanese and *either* in English as Scope Indicators in Disjunction
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This study aims to investigate the clausal disjunction (DJ) in Japanese and English, and to propose a unified account for the theory of DJ. Since Larson (1985), it has been observed that the distribution of *either* is taken to mirror the scopal properties of DJ (Schwarz 1999). On the other hand, the Repetitive Coordinator-*ka* (*RC-ka*) in Japanese has been assumed to be optional and used for the purpose of emphasis (Kishimoto 2013). I argue that *RC-ka* functions as an overt indicator of the scopal properties of DJ, in parallel with *either* in English.

When *either* is adjacent to the coordinated nominals (1b), the interpretation is ambiguous between Narrow/Wide Scope readings (NSR/WSR), while the scope of DJ is explicitly marked as WSR when *either* is displaced (1a). NSR corresponds to base-generated nominal DJ, while WSR is derived from clausal DJ through deletion (Rooth & Partee 1982, Schwarz 1999).

1. a. Mary is *either* [looking for *a maid* or [*looking for *a cook*]].
   b. Mary is looking for *either* [ *a maid* or [ *a cook*].

Previous studies have concluded that sentences like (2a) cannot have *Clausal Connective readings* (WSR) in (2c) since the structure before deletion (2b) is not grammatical (Miyama 2014). When *RC-ka* is adjacent to the nominals (2a), they are assumed to be base-generated.

   T.-nom apple DJ range *RC-ka* -acc buy-past Lit. ‘Taro bought either an apple or an orange.’
   c. [Taro-ga [ringo-o kat-ta]] ka [(Taro-ga) [mikan ka-o kat-ta]] (ka da)
   T.-nom apple-acc buy-past DJ T.-nom orange-acc buy-past (RC-*ka* cop)
   ‘Taro either bought an apple (or bought) an orange.’

Following Kuroda’s (1965) insight that DJ such as (2a/c) are interrelated, I argue that WSR sentences are always derived from clausal DJ, through Fukui & Sakai’s (2003) PF-reanalysis (3).

   →b. PF components: [Taro-ga [[NP ringo kat-ta]] ka [[NP mikan (ka)]]-o kat-ta].

After deletion of verbal elements in the first conjunct, the string adjacent morphological units *ringo ka mikan* are reanalyzed as a nominal PF constituent through Morphological Merger (Halle and Marantz 1993). The case assignment pattern in (3b) further supports the reanalysis account since case particles can only be assigned to nominal elements (Kuroda 1978 inter alia).

Furthermore, when *RC-ka* is stressed and immediately followed by deaccenting (RC-*KA*), DJ obligatorily obtains WSR (*exclusive-or*) interpretation. I propose that this is due to the underlying clausal DJ like (2c). The fact that RC-*KA* never occurs with the clause-final RC-*ka* (*Taro-wa ringo ka mikan ka-o kat-ta da*) further supports this argument. The prediction is borne out that TP-adverbs such as *kyoo/kinoo ‘today/yesterday’* are licensed only when RC-*KA* is present (4b).

4. a. *Taro-wa [kyoo ringo ka kinoo mikan (ka) ]-dochiraka-o kat-ta
   b. Taro-wa [kyoo ringo ka kinoo mikan KA ]-o kat-ta
   T.-top today apple DJ yesterday orange RC-*KA* -acc buy-past
   ‘Taro either bought an apple today or an orange yesterday’ (*WSR, exclusive-or Only*)

Following Miyama’s (2014) observation that nominal DJ is always base-generated when *dochiraka ‘which-ka’* is present, I propose that RC-*ka* functions in parallel with *either*, as in (5).

(5) **Proposals:**

<table>
<thead>
<tr>
<th>Scope of DJ</th>
<th>English</th>
<th>Japanese</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSR/WSR</td>
<td><em>(either) A or B [adjacent]</em></td>
<td><em>A ka B (RC-<em>ka</em>) [adjacent]</em></td>
</tr>
<tr>
<td>NSR</td>
<td>base-generated nominal DJ</td>
<td>base-generated nominal DJ (<em>dochiraka</em>)</td>
</tr>
<tr>
<td>WSR</td>
<td>clausal DJ/displaced <em>either</em></td>
<td>clausal DJ/displaced RC-<em>ka</em>/RC-<strong>KA</strong></td>
</tr>
</tbody>
</table>

Furthermore, our proposals (5) enable us to take a fresh look at the puzzle of *Inverse Scope Readings* (ISR) in DJ (Watanabe 2000:12). Since Japanese is a rigid scope language (Hoji 2003, among others), it is difficult for *daremo ‘everyone’* to scope over the subject *John* *ka Mary* in (6a). However, when *RC-ka* is stressed (RC-*KA* in 6b), ISR becomes available.
(6) a. John ka Mary (ka)-ga daremo-o sonkeisitei-ru (\(\lor > \) every, \(\ast \) every \(\lor > \))
    b. John ka Mary KA-ga daremo-o sonkeisitei-ru (\(\ast \)or > every, \(\lor \) every > or)

J. DJ M. RC-KA-nom everyone-acc admire-pres
or\(\forall y\)'John or Mary admires everyone' / \(\forall y\)or'For each person, John or Mary admires him/her'.

Showing that pragmatic accounts fail to explain (6b) (Ishihara 2000, Hayashishita 2013), I argue that ISR (\(\forall y\)or) (6) is actually a consequence of the Respectively readings, as in (7) (Eggert 2000).

(7) a. [Tolstoy and Dostoyevsky] wrote [Anna Karenina and The Idiot] (respectively).

b. Tolstoy wrote Anna Karenina and Dostoyevsky wrote The Idiot. (Gawron & Kehler 2004:169)

(5b) tells us that (6b) is derived from (8a) (or\(\forall y\)), which is problematic. The similar configurations are independently observed by Abels (2004), in which he claims that (8b) is not derived from (8c) since the interpretations are completely different. Rather, the shared constituent two different songs is multiply dominated by both sang and recorded, as in (8d).

(8) a. [John-ga [daremo-o sonkeisitei-ru]] ka [Mary-ga [daremo-o sonkeisitei-ru]] (ka da)
   J-nom everyone-acc admire-pres DJ M.-nom everyone-acc admire-pres (RC-ka cop)
   ‘Either John admires everyone or Mary admires everyone.’ (\(\ast \)or\(\forall y\), \(\ast \)\(\forall y\))

b. John sang, and Mary recorded, two different songs.

c. John sang [two different songs], and Mary recorded [two different songs].

d.

\[\begin{tikzpicture}
    \node (john) {John};
    \node (sang) [below right of= john] {sang};
    \node (and) [below left of= john] {and};
    \node (mary) [below right of= and] {Mary};
    \node (recorded) [below right of= mary] {recorded};
    \node (TP) [above of= john] {TP}
    \node (OP) [below of= john] {OP\(\text{Resp}\) [two different songs] (adapted from Abels 2004:51)}
    \draw (john) -- (sang);
    \draw (john) -- (and);
    \draw (and) -- (mary);
    \draw (mary) -- (OP);\end{tikzpicture}\]

taking the basic assumption that universal quantifiers denote every individual in a relevant set (Sauerland 2003), I argue that daremo ‘everyone’ consists of subsets, say \{subset\(_1\), subset\(_2\}\}, either of which is admired by John or by Mary (\(\text{OP}\text{\(\text{Resp}\)}\) distributes the subsets over the subjects). If this line of argument is on the right track, it is reasonable to assume that \(\text{OP}\text{\(\text{Resp}\)}\) enables conjoined object nominals to be distributed over the subjects. This prediction is borne out (9b).

(9) a. *\(\text{Resp}\):[John ka Mary (ka)](dochiraka)-ga (sorezore) [Taro, Hanako]-o paatii-ni sasot-ta
b. (Kino) John ka (kyoo) Mary KA-ga (sorezore) [Taro, Hanako]-o paatii-ni sasot-ta

Yesterday J. DJ today M. RC-KA-nom (respectively) T. & H.-acc party-to invite-past OK
Group reading: ‘J. invited T. and H. to the party’ OR [M. invited T. and H. to the party]’
OK Respective reading: ‘J. invited T. to the party yesterday and M. invited H. to the party today’

\(\text{OR}\) ‘J. invited H. to the party yesterday and M. invited T. to the party today’

Gawron & Kehler’s semantic interpretation rules in (10) require the \(\text{Resp}\), give a one-to-one correspondence from individuals to properties (2002:2-3). This lends credence to (6), since the cardinality of individuals is two in clausal DJ (6b), but pragmatically one in nominal DJ (6a).

(10) a. \([[(8b)]] = \text{Resp}[\text{sing}(\text{song}) □ \text{record}(\text{song})](j \lor m) = \text{sing}(\text{song})(j) □ \text{record}(\text{song})(m)\]
    b. \([[[6b]] = \text{Resp}[\text{admire}(\text{subset},) □ \text{admire}(\text{subset},)](j \lor m) = \text{admire}(\text{subset},)(j) □ \text{admire}(\text{subset},)(m)\]
    c. \([[[9b]] = \text{Resp}[\text{admire}(t) □ \text{admire}(h)](j \lor m) = \text{admire}(t)(j) □ \text{admire}(h)(m) □ \text{admire}(h)(j) □ \text{admire}(t)(m)\]

I conclude that DJ such as (2a) are ambiguous between NSR/WSR (nominal/clausal), and that RC-ka functions as an overt scope indicator in parallel with \(\text{either}\) in English. The present work also contributes to the study of cross-serial dependencies in respective readings.