

[Forum]

On the Nature of the Repetitive Coordinator *To* in Japanese

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Abstract: This article examines the distribution of the Japanese conjunctive particle *to* which is duplicated on the final conjunct in a coordinate structure (cf. *A-to B-to* 'A and B'). It has been observed in the literature that duplication of the coordinator *to*, a phenomenon known as conjunction doubling, is possible in coordination in which conjuncts coordinated by *to* are nominal constituents and also in the so-called 'non-constituent' coordination, where conjuncts coordinated by *to* do not appear to be syntactic constituents (see, e.g., Koizumi 2000, Takano 2002, Fukui and Sakai 2003 for related discussion). Although previous analyses that deal with these constructions commonly assume that the duplicated *to*, which I refer to in this article as the repetitive coordinator *to* (RC-*to*), is realized optionally (cf. Fukui and Sakai 2003, Ito and Chaves 2008, Vermeulen 2008), I show that the distribution of RC-*to* is more restricted than previously assumed, based on three sets of observations: (i) the inapplicability of *ga/no* conversion in the presence of RC-*to*; (ii) the non-occurrence of RC-*to* in the predicate position of a copular sentence; and (iii) the fact that RC-*to* exhibits different behavior with respect to two types of focus particles. It is compatible with *dake* 'only,' but not with *sae* 'even' or *mo* 'also.' I also point out that a piece of the presented data is problematic under the analysis of non-constituent coordination as proposed by Vermeulen (2008). Considering these observations, I propose that RC-*to* is a focus particle that carries an implicature of exhaustivity in a manner similar to *dake*, and show that this proposal accounts for several previously unidentified properties of RC-*to*.*

Key words: Japanese, coordination, conjunction doubling, non-constituent, focus

1. Introduction

It is well-known that the particle *to* in Japanese that coordinates nominals may be duplicated on the final conjunct, as shown by (1).

* I would like to thank two anonymous *Gengo Kenkyu* reviewers for their insightful and constructive comments that significantly contributed to improving the quality of the article. Their comments allowed me to clarify my argument in some very important ways, explore new research areas, and eliminate a number of errors. I am also grateful to Ako Imaoka, Yukino Kobayashi, Mana Kobuchi-Philip, and Yohei Oseki for helpful suggestions and sentence judgments. All remaining errors are my own.

- (1) Taroo-ga Hanako-ni ringo to banana (to) -o ageta.
 Taroo-NOM Hanako-DAT apple and banana and -ACC gave
 ‘Taroo gave apples and bananas to Hanako.’

Duplication of the coordinator *to* as seen in this example, a phenomenon known as conjunction doubling, is also possible in the so-called ‘non-constituent’ coordination, where conjuncts linked by *to* do not appear to form syntactic constituents, as illustrated by (2).¹

- (2) Taroo-ga [Hanako-ni ringo] to [Kumiko-ni banana] (to)
 Taroo-NOM Hanako-DAT apple and Kumiko-DAT banana and
 -o ageta.
 -ACC gave
 ‘Taroo gave apples to Hanako and bananas to Kumiko.’

While sentences with coordination in Japanese, in particular those with non-constituent coordination as given above, have been widely discussed by researchers (cf. Koizumi 2000, Takano 2002, Fukui and Sakai 2003, Fukushima 2003), the literature lacks a detailed investigation of the nature of the duplicated *to* that occurs in these constructions. In this article, following Zhang (2008) and others, I use the term “repetitive coordinators” for such identical coordinators and refer to the repetitive coordinator *to* as RC-*to*.

Previous analyses in the literature that deal with data such as (1) and (2) commonly assume that RC-*to* is realized optionally, though these analyses vary in detail (cf. Fukui and Sakai 2003, Ito and Chaves 2008, Vermeulen 2008). The main aim of this article is to provide evidence that this assumption is not entirely correct and to suggest a new analysis. The data that I will present include sentences like (1), where conjuncts coordinated by *to* are nominal constituents, and also sentences with non-constituent coordination like (2). Based on these data, I propose an account that captures the behavior of RC-*to* in both types of coordination.

The article is organized as follows. Section 2 introduces three sets of observations on RC-*to*, pointing out one problem that arises in the analysis of non-constituent coordination as proposed by Vermeulen (2008). Section 3 offers a novel analysis of this particle. Finally, section 4 concludes the discussion.

2. Distribution of RC-*to*

In this section, I present three kinds of data concerning RC-*to*. As we will see, the distribution of this particle is more restricted than previously assumed.

2.1. *Ga/no* conversion

The first observation is concerned with nominative/genitive case alternation in subject position of embedded clauses—often referred to as *ga/no* conversion

¹ In this article, “a conjunct” is referred to as a sequence of items coordinated by *to* such as ‘indirect object – direct object’ in (2), irrespective of whether or not it forms a syntactic constituent. Brackets are used to indicate such conjuncts.

(Harada 1976 and many others)—found in examples like the following:

- (3) [Taroo to Ziroo -ga/no nonda] wain
 Taroo and Ziroo -NOM/GEN drank wine
 ‘the wine that Taroo and Ziroo drank’

The nominative case marker *ga* that follows the coordinate complex in (3) can be replaced with the genitive case marker *no*. However, this conversion fails to apply, when RC-*to* is present, as shown by (4).

- (4) [Taroo to Ziroo to -ga/*no nonda] wain
 Taroo and Ziroo and -NOM/GEN drank wine
 ‘the wine that Taroo and Ziroo drank’

The unavailability of *ga/no* conversion in the presence of RC-*to* is also observed in non-constituent coordination, as shown by the examples in (5) and (6).

- (5) [Tookyoo-kara amerikazin to Oosaka-kara doituzin -ga/no
 Tokyo-from American and Osaka-from German -NOM/GEN
 sankasita] kai
 attended party
 ‘the party that Americans attended from Tokyo and Germans from Osaka’
- (6) [Tookyoo-kara amerikazin to Oosaka-kara doituzin to
 Tokyo-from American and Osaka-from German and
 -ga/*no sankasita] kai
 -NOM/GEN attended party
 ‘the party that Americans attended from Tokyo and Germans from Osaka’

Ga/no conversion is permitted in the embedded clause in (5), where RC-*to* does not appear, while the conversion is impossible in (6), where RC-*to* shows up after the coordinate complex. These data are puzzling, if the insertion of this particle is totally optional.

2.2. RC-*to* in predicate position

The second observation concerning the behavior of RC-*to* comes from copular sentences. Consider the examples in (7) and (8).

- (7) Taroo to Hanako -wa sensei to gakusei (*to) dearu/da.
 Taroo and Hanako -TOP teacher and student and are
 ‘Taroo and Hanako are a teacher and a student.’
- (8) Taroo to Ziroo to Hanako -wa satuzinhan to sono itimi
 Taroo and Ziroo and Hanako -TOP murderer and his band
 (*to) datta.
 and were
 ‘Taroo, Ziroo, and Hanako were the murderer and his band.’

The occurrence of RC-*to* that follows the predicative expression in these examples yields an unacceptable result. This again shows that RC-*to* is not always realized

optionally.

2.3. RC-*to* followed by focus particles

The third set of data that I would like to present involves focus particles. Consider the example in (9), where the coordinate structure is marked by *sae* ‘even’ or *mo* ‘also.’²

- (9) Taroo-wa (ringo nominarazu) [mikan to banana (*to)] sae/mo
 Taroo-TOP apple not only orange and banana and even/also
 tabeta.
 ate
 ‘Taroo ate (not only apples but) even/also oranges and bananas.’

The example is acceptable without RC-*to*, but when this particle is present, the result becomes unacceptable. Curiously however, it is not the case that RC-*to* is always incompatible with focus particles. Consider the example in (10), which contains *dake* ‘only.’

- (10) Taroo-wa oyatu-ni [ringo to banana (to)] dake -o tabeta.
 Taroo-TOP snack-DAT apple and banana and only -ACC ate
 ‘Taroo ate only apples and bananas for his snack.’

In this example, unlike in (9), the insertion of RC-*to* is permitted. The contrasted behavior of RC-*to* with respect to the two types of focus particles—*sae/mo* and *dake*—is also found in the examples with non-constituent coordination in (11).

- (11) Kyoo-no oyatu-ni Taroo-wa [Ken-ni ringo-o huta-tu]
 today-GEN snack-DAT Taroo-TOP Ken-DAT apple-ACC 2-CL
 to...
 and
 ‘For today’s snack, Taroo gave two apples to Ken and...
 a. *[Yuri-ni banana go-hon] to sae/mo ageta.
 Yuri-DAT banana 5-CL and even/also gave
 ...even/also five bananas to Yuri.’
 b. [Yuri-ni banana ip-pon] to dake -o ageta.
 Yuri-DAT banana 1-CL and only -ACC gave
 ...only one banana to Yuri.’

² The example in (9), where RC-*to* is followed by the additive particle *mo*, should be distinguished from examples like (i), where the comitative postposition *to* ‘with’ is followed by *mo*.

- (i) Taroo-wa (ringo-o) [mikan to banana] to mo (issyoni) tabeta.
 Taroo-TOP apple-ACC orange and banana with also together ate
 ‘Taroo also ate apples, together with oranges and bananas.’

To avoid possible confusion, the example in (9) is presented with the ‘not-only’ adverbial phrase, which may help understanding the intended context.

In (11a), RC-*to* is followed by *sae* or *mo*, and in either case, the example is deviant. However, in (11b), RC-*to* is followed by *dake*, and the result is much more acceptable. Such asymmetries are unexpected if RC-*to* is merely an optional element as assumed in previous analyses (cf. Fukui and Sakai 2003, Ito and Chaves 2008, Vermeulen 2008).

Furthermore, I would like to point out that examples like (11b) present a problem for the analysis of RC-*to* in non-constituent coordination as proposed by Vermeulen (2008). For the sake of discussion, let us briefly review her proposal. Consider the following example that illustrates a crucial observation in her analysis:

- (12) Taroo-ga [Ken-ni ringo-o huta-tu] to
 Taroo-NOM Ken-DAT apple-ACC 2-CL and
 [Yuri-ni banana san-bon] -to-o/*-o-to ageta.
 Yuri-DAT banana 3-CL -and-ACC/-ACC-and gave
 ‘Taroo gave two apples to Ken and three bananas to Yuri.’

RC-*to* that appears after the second conjunct is followed by the accusative case marker *o*, but importantly, it cannot follow the case marker. This order restriction is puzzling, because the case marker that follows RC-*to* seems to be associated with the direct object in the second conjunct, but it must appear outside the conjunct. Based on this observation, Vermeulen proposes that RC-*to* as in (12), being a coordinator, initially attaches to the conjunct and hence follows the case marker *o* that is inside the conjunct, but the two particles are subsequently reordered by a phonological process as shown in (13) (see also Ito and Chaves 2008: 113, for a similar analysis of RC-*to*).

- (13) ... [NP_{IO} [DO NP Q]-o]-to → ... NP_{IO} NP Q-to-o (Vermeulen 2008: 349)

Given this reordering rule, the surface word order *to-o* in (12) is properly derived.

Now, returning to our data above, let us consider how the example of (11b) would be dealt with by Vermeulen’s analysis. According to her proposal, RC-*to* in this construction initially appears after the case marker and is subsequently reordered with it in the phonology. However, in (11b), *dake* appears between *to* and *o*. This focus particle, which bears semantic content, is not likely to be inserted phonologically. Instead, on the general assumption, *dake* is syntactically adjoined to its adjacent phrase (cf., e.g., Futagi 2004: 90–91, Aoyagi 2006: 23–24). Therefore, the sequence *to-dake-o* in (11b) cannot simply result from her phonological reordering in (13), unless we provide additional conditions with respect to exactly where in a syntactic constituent RC-*to* should be inserted phonologically. Rather, the occurrence of RC-*to* that immediately precedes *dake*, which is an element represented in syntax, suggests that RC-*to* is also represented in syntax, not inserted in the phonology.

In this section, I have presented three sets of observations on the distribution of RC-*to*, showing that the common assumption that this particle occurs optionally is not entirely adequate. I next explore a new approach in an attempt to

account for the observed distributional properties.

3. RC-*to* as a Focus Particle

3.1. Proposal

The properties of RC-*to* described above, in particular the incompatibility with a certain class of focus particles, suggest that RC-*to* has a specific function. In the research of coordination, such a view is not new. A number of researchers argue that repetitive coordinators and also “correlative” coordinators such as *both* and *either* are focus-related elements (see e.g. Hendriks 2004, Johannessen 2005, Zhang 2008). Under this line of analysis, I propose that RC-*to* is a focus particle. Specifically, I assume that it carries an implicature of exhaustivity, in a manner similar to *dake* ‘only.’³ To see more clearly the effects of exhaustive implicatures induced by the two focus particles, let us first consider the example with *dake* in (14).

- (14) **Watasi-no sukina kudamono -wa hokani mo ikutuka aru ga*
 I-GEN favorite fruit -TOP other also some are but
ringo to itigo dake da.
 apple and strawberry only are
 Lit. ‘My favorite fruits are only apples and strawberries, though there are some others.’

This example is infelicitous due to the semantic incompatibility between the implicature associated with *dake* and the context of the example. On the one hand, the presence of *dake* yields an exhaustive reading such that besides apples and strawberries, there are no other relevant items on the list of the speaker’s favorite fruits. On the other hand, the adverbial clause ‘though there are some others’ gives rise to the interpretation that the list of enumerated items, i.e., apples and strawberries, is non-exhaustive. This is why the example is infelicitous. Next, consider the example in (15), where RC-*to* appears in a similar context.

- (15) *Watasi-no sukina kudamono -wa hokani mo ikutuka aru ga*
 I-GEN favorite fruit -TOP other also some are but
ringo to itigo (??to) da.
 apple and strawberry and are
 ‘My favorite fruits are apples and strawberries, though there are some others.’

This example is fine without RC-*to*, but it becomes less acceptable when RC-*to* is present, inducing an effect analogous to (14). This observation is accounted for if RC-*to*, just like *dake*, carries an implicature of exhaustivity. Note, however, that the two particles are not exactly the same. As shown by the relative contrast in accept-

³ For detailed analyses of the syntactic and semantic properties of *dake*, see Kuroda (1970), Futagi (2004), Aoyagi (2006: 52–55), Numata (2009: 17–58), Hayashishita (to appear), among many others.

ability between (14) and (15) with RC-*to* (indicated by * and ?), the exhaustivity implicature associated with RC-*to* is not as strong as that associated with *dake*. I suggest that this is because RC-*to*, in contrast to *dake*, implies exhaustive specification, rather than exhaustive exclusivity.⁴ There is another notable difference between the two particles: only RC-*to* is parasitic on its associate conjunction *to*, that is, its occurrence depends on the presence of the other.⁵ Thus, precisely speaking, RC-*to* should not be considered as the same type of foci as *dake* (see also discussion below). Nevertheless, I assume that these differences are not crucial to the present discussion, and will show that my proposal can accommodate the properties of RC-*to* listed above.⁶

3.2. The data revisited

Let us now revisit the three sets of data discussed in section 2. The first one is concerned with *ga/no* conversion as seen in (16).

- (16) [Taroo to Ziroom to -ga/*no nonda] wain
 Taroo and Ziroom and -NOM/GEN drank wine
 'the wine that Taroo and Ziroom drank' = (4)

The fact that *ga/no* conversion is blocked in this example may be accounted for, if we consider the generalization proposed by Horie and Saito (1996) and Nambu (2013) to the effect that the conversion fails to apply if the *ga*-marked subject is a focus of the embedded sentence. This is illustrated by the example in (17).

⁴ This difference may become clearer with the following examples that show the contrast in cancellability of the exhaustive interpretations induced by RC-*to* and *dake*.

- (i) Among Taroo, Ziroom, Hanako, and Kumiko, who passed the exam?
 a. Taroo to Ziroom to-ga ukattayo. — ?Ato Hanako mo ukatta.
 Taroo and Ziroom and-NOM passed in addition Hanako also passed
 'Taroo and Ziroom passed the exam. — In addition, Hanako also passed.'
 b. Taroo to Ziroom dake-ga ukattayo. — *Ato Hanako mo ukatta.
 Taroo and Ziroom only-NOM passed in addition Hanako also passed
 'Only Taroo and Ziroom passed the exam. — In addition, Hanako also passed.'

The first statement with RC-*to* in (i-a) simply specifies an exhaustive list of persons who passed the exam, and hence, it is not infelicitous to cancel exhaustivity by adding another name on the list. In contrast, the exhaustivity associated with *dake* in (i-b), being exclusive, resists such cancellation.

⁵ To capture this parasitic nature of repetitive coordinators, Zhang (2008) proposes the "cluster-splitting" analysis, under which it is assumed that a repetitive coordinator and its associate conjunction are base-generated as a cluster, and that the cluster is split later, creating a conjunction "double." I leave for future work the question of whether the distribution of RC-*to* and its associate conjunction *to* can be dealt with in this line of analysis, and thank an anonymous reviewer for pointing this matter out to me.

⁶ As suggested by a reviewer, if RC-*to* is a focus element as I propose, we expect that it displays properties specific to focus, such as scope effects. To pursue this interesting topic, however, is beyond the limits of this article.

- (17) [Taroo dake -ga/*no tanonda] ryoori-wa esukarugo ryoori desita.
 Taroo only -NOM/GEN ordered dish-TOP escargot dish was
 'The dish that only Taroo ordered was an escargot dish.'

(Adapted from Horie and Saito 1996: 142)

Given this generalization, if RC-*to* is indeed the focus element I propose, the failure of *ga/no* conversion in (16) can be regarded as a violation of the general ban on focus in genitive subject position of embedded clauses. It thus seems likely that the inapplicability of *ga/no* conversion in (16) can be explained by some principle responsible for the inapplicability of the conversion in examples like (17), whatever it is.

Second, we discussed the unavailability of RC-*to* in the predicate position of a copular sentence. The relevant example is repeated in (18).

- (18) Taroo to Ziroo to Hanako -wa satuzinhan to sono itimi
 Taroo and Ziroo and Hanako -TOP murderer and his band
 (*to) datta.
 and were
 'Taroo, Ziroo, and Hanako were the murderer and his band.' = (8)

The fact that this example results in unacceptability when RC-*to* appears in the predicative expression follows from the current analysis. Predicates denote properties, not entities or individuals. However, the occurrence of RC-*to* after the predicate nominal in (18) induces an exhaustive specification concerning entities or individuals. This creates semantic incompatibility between the predicate and RC-*to*, making the example unacceptable.

The third observation that we made above is the variable behavior of RC-*to* with respect to the two classes of focus particles: it is compatible with *dake* 'only,' but not with *sae* 'even' or *mo* 'also.' This is illustrated by the examples in (19)–(20).

- (19) Taroo-wa [ringo to banana (to)] dake -o tabeta.
 Taroo-TOP apple and banana and only -ACC ate
 'Taroo ate only apples and bananas.'
- (20) Taroo-wa (ringo nominarazu) [mikan to banana (*to)] sae/mo
 Taroo-TOP apple not only orange and banana and even/also
 tabeta.
 ate
 'Taroo ate (not only apples but) even/also oranges and bananas.' = (9)

Under my proposal, such contrasts as seen between (19) and (20) are explained in terms of semantic (in)compatibility between RC-*to* and the two types of foci—*dake*, on the one hand, and *sae/mo*, on the other. Let us first consider the example in (19), where *dake* follows RC-*to*. *Dake*, just like RC-*to*, carries exhaustive implicatures, and hence, there is no semantic conflict between the two particles. This accounts for the grammaticality of this example. Next, in (20), RC-*to* is followed by *sae* or *mo*. As noted in the literature, sentences with this type of foci do not

express exhaustivity, but rather implicate that in addition to the proposition explicitly mentioned in the sentence, there is another relevant proposition which is true (Kuroda 1970, and many others). Therefore, in case of (20), the presence of *sae/mo* yields the reading that besides oranges and bananas, there is another fruit or thing that Taroo ate (which is also explicitly stated by the ‘not-only’ phrase in the example). This is in direct conflict with the interpretation induced by *RC-to*, in which the items that Taroo ate are exhaustively specified as being oranges and bananas. This is why (20) becomes degraded when *RC-to* is present.⁷ Now, if this line of analysis is correct, we expect that another focus element that expresses exhaustivity, *dake*, is also incongruent with *sae* and *mo*. This is indeed what we observe:

- (21) *Taroo-ga ringo dake sae/mo tabeta.
 Taroo-NOM apple only even/also ate
 Lit. ‘Taroo ate even/also only apples.’

Finally, let us return to the data concerning the order restriction between *RC-to* and a case marker in non-constituent coordination discussed in section 2.3. Recall that *RC-to* in this construction may be followed by the case marker *o*, but cannot attach to it, as shown by (22).

- (22) Taroo-ga [Ken-ni ringo-o huta-tu] to
 Taroo-NOM Ken-DAT apple-ACC 2-CL and
 [Yuri-ni banana san-bon] -to-o/*-o-to ageta.
 Yuri-DAT banana 3-CL -and-ACC/-ACC-and gave
 ‘Taroo gave two apples to Ken and three bananas to Yuri.’ = (12)

This order restriction is consistent with the current analysis of *RC-to*. Let us first discuss why the sequence *-o-to* in (22) is not permitted. The fact that *RC-to* cannot follow a case marker is not unexpected, in light of the parallelism between this particle and *dake*. As noted in the literature, *dake* exhibits rather complex behavior with respect to a case marker (cf. Futagi 2004, Aoyagi 2006: 52–53, Numata 2009: 17–35).⁸ The following examples provide a closer look at instances in which *dake* and *RC-to* appear before and after case markers:

- (23) {Taroo-dake / Taroo to Ziroo to} -ga/-no/-o/-ni
 Taroo-only Taroo and Ziroo and -NOM/-GEN/-ACC/-DAT
 (24){*Taroo-ga dake /*Taroo(-ga) to Ziroo-ga to} kita.
 Taroo-NOM only Taroo-NOM and Ziroo-NOM and came
 Lit. ‘{Only Taroo/Taroo and Ziroo} came.’

⁷ The semantic characterization of the two types of focus particles—*dake/RC-to* and *sae/mo*—provided here also captures the fact that the two particles of the latter type, *sae* and *mo*, can co-occur in a sentence, as illustrated by (i) (thanks to a reviewer for bringing this up).

(i) Taroo-ga oyatu-ni ringo sae mo tabeta.
 Taroo-NOM snack-DAT apple even also ate
 Lit. ‘Taroo even also ate apples for his snack.’

⁸ I am grateful to two anonymous reviewers for bringing this point to my attention.

- (25) { *Taroo-no dake / *Taroo(-no) to Ziroo-no to } kaban
 Taroo-GEN only Taroo-GEN and Ziroo-GEN and bag
 Lit. 'the bag of {only Taroo/Taroo and Ziroo}'
- (26) Taroo-ga { banana-o dake / *banana(-o) to ringo-o to }
 Taroo-NOM banana-ACC only banana-ACC and apple-ACC and
 tabeta.
 ate
 'Taroo ate {only bananas/bananas and apples}.'
- (27) Taroo-ga banana-o { Ken-ni dake / *Ken(-ni) to
 Taroo-NOM banana-ACC Ken-DAT only Ken-DAT and
 Jun-ni to } ageta.
 Jun-DAT and gave
 'Taroo gave bananas {only to Ken/to Ken and Jun}.'

Dake, just like RC-*to*, can precede a case marker, as shown by (23), and it also patterns with RC-*to* in that it cannot follow the nominative and genitive case markers, *ga* and *no*, as shown by (24)–(25). Yet, the two particles do not behave alike in positions after the accusative *o* and the dative *ni*: only *dake* is permitted, as shown by (26)–(27).⁹ Thus, at first glance, given (26)–(27), the parallelism between the two particles so far pursued in the present work seems to break down. However, this discrepancy can be reconciled in terms of the dual status of *dake* as discussed by Futagi (2004: 11–14) and Hayashishita (to appear). These authors show, on independent grounds, that *dake* that occurs to the right of a case marker as in (26)–(27) and the one that precedes a case marker as in (23) have different scope properties, arguing that the two types of *dake* are to be distinguished (let me refer to them as external and internal *dake*, respectively, following their terminology). In particular, Futagi puts forth the proposal that external and internal *dake* are morphologically indistinguishable but syntactically different, the former being a particle and the latter being a noun. Therefore, along this line of analysis, we can hypothesize that RC-*to* belongs to the same class of foci as internal *dake*, and regard the non-occurrence of RC-*to* after a case marker as seen in (22) as a property common to this specific class. On this view, the impossibility of the sequence *-o-to* in this example is not so surprising, putting aside the question of what explains this property.¹⁰

Let us next consider why the sequence *-to-o* is permitted in (22). The discussion so far suggests an answer to this question. If RC-*to* is a focus, it is likely that it does not function as a coordinator. Under this hypothesis, the string 'indirect object (IO)–direct object (DO)–*to-o*' in (22) can be analyzed as IO-[_{NP}[_{NP} DO]-*to*]-*o*, where *to* adjoins to its adjacent NP (DO), just as focus particles generally do, with-

⁹ There is variation in acceptability judgments in the case of NP-*o-dake*. To cite a few, while Aoyagi (2006) considers the sequence NP-*o-dake* as acceptable (I thank a reviewer for this reference), Futagi (2004) and Hayashishita (to appear) note that *o* does not precede *dake*.

¹⁰ Various attempts have been made to explain the ordering patterns between *dake* and a case marker. See Futagi (2004: 55–110), Aoyagi (2006: 85–98), among others.

out coordinating the IO and the DO into a unit. On this analysis, it readily follows that RC-*to* in (22) can precede the accusative case marker that is associated with the NP. Recall at this point that the example with non-constituent coordination in (11b), in which *dake* appears between RC-*to* and the case marker *o*, is problematic for Vermeulen's (2008) phonology-based account of RC-*to*. Unlike her analysis, the present hypothesis naturally derives the word order 'IO-DO-*to-dake-o*' in this example, since it can be analyzed as 'IO-_[NP]_[NP]DO-*to*]-*dake*]-*o*,' in which *dake* is adjoined to the NP complex already formed with RC-*to*. It is also worth mentioning that if RC-*to* is not a coordinator, the IO and the DO that appear in the second part of these examples (cf. *Yuri-ni banana san-bon* in (22)) do *not* constitute a conjunct and in this case, an apparently problematic 'non-constituent' conjunct—the source of much debate in the literature—disappears from the second half of these examples. Interestingly, this view is compatible with the analysis by Ito and Chaves (2008) developed within the framework of Head-Driven Phrase Structure Grammar, according to which a sentence like (22) does not contain any 'non-constituent' conjuncts. Roughly speaking, they assign a structure like (28) for (22), where two verbal predicates are conjoined by the abstract coordinator lexeme '*t*'¹¹ and the first occurrence of the verb is deleted under identity.

(28) Taroo-ga [Ken-ni ringo-o huta-tu age] -*t*- [Yuri-ni banana san-bon-to-o age] -ta.

In this analysis, Ito and Chaves, like Vermeulen (2008), considering that RC-*to* is a coordinator, make the assumption that the one in a sentence like (22) originates to the right of the accusative case marker and further "floats" to its left. By contrast, if RC-*to* is not a coordinator as I suggest, we do not need such a stipulation, and importantly, we can maintain the standard VP-coordination analysis as in (28), where the problem of non-constituency does not arise any more.¹²

¹¹ Specifically, Ito and Chaves assume that the coordinator lexeme '*t*' has two possible morphophonological realizations, the nominal conjunction *to* and the predicate conjunction *te*.

¹² A reviewer suggests that the VP-coordination analysis discussed here can apply to examples like the following:

- (i) *Taroo-ga Ken-ni ringo-o huta-tu to
 Taroo-NOM Ken-DAT apple-ACC 2-CL and
 Yuri-ni mikan-o mit-tu to ageta.
 Yuri-DAT mikan-ACC 3-CL and gave
 Lit. 'Taroo gave two apples to Ken and three oranges to Yuri.'
- (ii) Taroo-ga Ken-ni ringo-o huta-tu to # [tuzuite]
 Yuri-ni mikan-o mit-tu to # ageta.

This pair of examples shows an interesting repair effect: the example in (i), where RC-*to* occurs to the right of the case marker *o*, is unacceptable, but it becomes acceptable if two *to*-s (both initial and RC-*to*) are followed by a prosodic break (indicated by #), and in particular, if we assume that there is a silent connective marker like *tuzuite* 'then' (indicated by []) after the initial *to*, as shown in (ii). Clearly, this construction needs more investigation, which I

4. Conclusion

In this article, I first showed that the occurrence of RC-*to* is not always optional, on the basis of three pieces of evidence: the inapplicability of *ga/no* conversion, the non-occurrence in the predicate position of a copular sentence, and the incompatibility with the focus particles *sae* and *mo*. I also pointed out that a piece of the presented data is problematic under the analysis of non-constituent coordination proposed by Vermeulen (2008). Second, I proposed that RC-*to* is a focus particle that carries an implicature of exhaustivity, showing that the proposal accommodates a number of properties of this particle.

The present work serves as a preliminary examination of the nature of RC-*to*, and given the scope of the article, leaves many important topics untouched, such as the precise characterization of its semantic and pragmatic properties. Nevertheless, several previously unidentified characteristics of RC-*to* revealed in this paper may shed new light on the research of coordination in Japanese as well as conjunction doubling across languages.

Abbreviations

ACC: accusative, CL: classifier, DAT: dative, GEN: genitive, NOM: nominative, Q: quantifier, TOP: topic

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【要 旨】

日本語の等位接続詞「と」の重複形について

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本稿は、「りんごとバナナとを食べた」の例にあるような日本語の等位接続詞「と」の重複形 (the repetitive coordinator *to*) (以下、「RC-と」) の分布を検証する。先行研究においては、「RC-と」は随機的要素であると想定されているが (Fukui and Sakai 2003, Ito and Chaves 2008, Vermeulen 2008 など)、その分布は、次の3種類の観察が示すように、従来想定されているより制限的である: (i) 「RC-と」が連体修飾節の主語位置に現れると、主格助詞の「が」の交替が妨げられる; (ii) 「RC-と」は、コピュラ文の述部に現れることができない; (iii) 「RC-と」は、焦点化詞「だけ」とは共起できるが、「さえ」及び「も」とは共起できない。また、(iii) の観察に関して本稿が呈示するデータは、Vermeulen (2008) が提案する「RC-と」の分析にとって問題となる。これらの議論を踏まえ、本稿は、「RC-と」は「だけ」に似た排他性 (exhaustivity) の含意を持つ焦点化詞であると提案し、この提案が一連の観察された「RC-と」の特性を捉えることができることを示す。