

On the “Clausal-Connective” and “Nominal-Connective” *ka* ‘or’ in Japanese*

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This paper focuses on the two possible forms of constructions involving disjunction: clausal disjunctive in which ka ‘or’ takes clauses and nominal disjunctive in which ka ‘or’ takes nominal elements. I first claim that Japanese clausal disjunctive and nominal disjunctive should not be analyzed as coming from the same source (i.e. nominal disjunctive is not derived from clausal disjunctive through ellipsis). After presenting the difference between clausal disjunctive and nominal disjunctive, I give two possible analyses of the two types of ka ‘or’: the focus analysis and the wh analysis. The main proposal of this paper is that while both analyses have problems and require amendment, the wh analysis better explains the data and goes well with the claim that nominal disjunctive does not involve ellipsis.

Keywords: Alternative Question, either...or... construction, disjunction, ellipsis

1. Introduction

In Japanese, Alternative Questions (AltQs) and constructions involving disjunction such as the counterpart of English *either...or...* construction have the forms in (1) and (2) which have been previously taken up in the literature. Although in (1a) the sentence is somewhat degraded, it is an AltQ and the possible answers would be: *Taro-wa koohii-o nonda* ‘Taro drank coffee’, *Taro-wa otya-o nonda* ‘Taro drank tea’, *Koohii* ‘Coffee’, and *Otya* ‘Tea’.^{1,2}

- (1) a. *??/?Taro-ga koohii-o nonda ka otya-o nonda ka?*
T-Nom coffee-Acc drank or tea-Acc drank or
‘Did Taro drink coffee or did Taro drink tea?’ (Uegaki (2014: 257))
- b. *Boku-wa[Taro-ga koohii-o nonda ka (soretomo) otya-o non-da ka] sitteiru.*
I-Top T-Nom coffee-Acc drank or AnalyDisj tea-Acc drank or know
‘I know whether Taro drank coffee or tea.’
- (2) *[John-ga hasitta ka] [Mary-ga koronda ka] da.*
J-Nom ran or M-Nom fell.down or Cop
‘Either John ran or Mary fell down.’ (Kishimoto (2013: 16))

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¹ The abbreviations used in this paper are the following: Acc = Accusative, Adn = Adnominal form, AnalyDisj = Analytic Disjunctive, Cop = Copula, Gen = Genitive, Lin = Linker, Neg = Negation, Nom = Nominative, Nmn = Nominalizer, Pol = Polite form, Ren = *Renyookei*, Top = Topic, SFP = Sentence-Final Particle.

² Even though Uegaki (2014: 257) judges (1a) to be perfect as an AltQ, since some native speakers report difficulty in taking the sentence as an AltQ, I marked it “??/?.” He also gives a “?” for the YNQ reading for the same sentence, but I feel that a special intonation is needed to get the reading, so I will assume in this paper that this sentence is an AltQ.

In both (1) and (2) two clauses seem to be connected. I thus call them “clausal disjunctive.”^{3,4}

In addition to (1) and (2), AltQs and constructions involving disjunction also have forms which seem to be conjunction of two nominal elements using *dotti* ‘which’ or *dottika* ‘either’ as in (3) and (4). I call them “nominal disjunctive.”⁵

- (3) Taro-wa [koohii ka otya (ka)]-no dottio nonda no?
 T-Top coffee or tea or-Lin which-Acc drank Q
 ‘Did Taro drink coffee or tea?’
- (4) Taro-wa [jyotyuu ka ryoorinin (?ka)](-no dottika)-o sagasiteiru.

³ Kishimoto (2013) gives the following “V/vP-disjunctive” example besides the “TP-disjunctive” example in (2).

- (i) [John-ga hasir-i ka] [Mary-ga korob-i ka] sita.
 J-Nom run-Ren or M-Nom fall.down-Ren or did
 ‘Either John ran or Mary fell down.’ (Kishimoto (2013: 16))

Since “TP-disjunctive” and “V/vP-disjunctive” have the same scopal property as in (ii), Kishimoto (2013) claims that the latter is derived from the former via ellipsis as shown in (iii). I assume that both are the same and do not take up “V/vP-disjunctive” here (but see note 8).

- (ii) a. [John-ga hasira-**na**-katta ka] [Mary-ga hasira-**na**-katta ka] da. (“TP-disjunctive”)
 J-Nom run-Neg-Past or M-Nom run-Neg-Past or Cop
 ‘What happened is either John didn’t run or Mary didn’t run.’ $\neg A \vee \neg B$
- b. [John-ga hasir-i ka] [Mary-ga hasir-i ka] si-**na**-katta. (“V/vP-disjunctive”)
 J-Nom run-Ren or M-Nom run-Ren or do-Neg-Past
 ‘What happened is either John didn’t run or Mary didn’t run.’ $\neg A \vee \neg B$ (Kishimoto (2013: 28))
- (iii) [John-ga hasir-i **NEG-PAST** ka] [Mary-ga hasir-i ka] si-**na**-katta. (Kishimoto (2013: 36))

⁴ As for the clausal disjunctive AltQs in (1), although Uegaki (2014) claims that they are instances of disjunction of two Yes/No questions and the *ka*’s are Q particles, I claim that the *ka*’s in (1) are disjunction particles. (Note that the Q particle, in any form, cannot be overt with disjunctive *ka* ‘or’ so we cannot tell whether the *ka*’s in (1) are a disjunctive particle or a Q particle from their cooccurrence with the Q particle.) A piece of evidence that Uegaki (2014) presents for his claim is that the *ka*’s can be replaced by *no*, a particle often used as a Q particle, as in (i). Further, the sentence in (ii) seems at first sight to support his claim in that the politeness marker can appear between the verb and *ka* in both of the clauses and the two clauses behave like root clauses.

- (i) Taro-wa koohii-o non-da no ~~Taro-wa~~ otya-o non-da no?
 T-Top coffee-Acc drink-Past Q T-Top tea-Acc drink-Past Q
 ‘Which is true: Taro drank coffee or he drank tea?’ (Uegaki (2014: 261))
- (ii) Taro-wa koohii-o nom-i-masi-ta ka otya-o nom-i-masi-ta ka?
 T-Top coffee-Acc drink-Ren-Pol-Past Q tea-Acc drink-Ren-Pol-Past Q
 ‘Did Taro drink coffee or did he drink tea?’ (polite)

However, we have a reason to believe that the status is different between (1a) on the one hand and (i) and (ii) on the other. That is, they have a different intonation. (i) and (ii) have a rising intonation in both clauses. This intonation makes sense if both of them are root clauses and are Yes/No Questions. However, the most natural intonation in (1a) is rising intonation in the first clause and falling intonation in the second clause. This intonation pattern is odd if (1a) is the same as (i) and (ii) in that it involves two Yes/No Questions. It thus seems reasonable to take (1a) as distinct from (i) and (ii).

- (1) a. Taro-wa koohii-o non-da ka (↑) (soretomo) otya-o non-da ka (↓) ?
 (i) Taro-wa koohii-o non-da no (↑) (soretomo) otya-o non-da no (↑) ?
 (ii) Taro-wa koohii-o nom-i-masi-ta ka (↑) (soretomo) otya-o nom-i-masi-ta ka (↑) ?

I thus assume that sentences with the intonation *rise-rise* as in (i) and (ii) are disjunction of Yes/No Questions (to which the analysis made by Uegaki (2014) is applicable), whereas sentences with the intonation *rise-fall* as in (1) involve two Disjunction Phrases headed by disjunction particles.

⁵ Elements which do not fall into the category of noun can actually be connected using *ka* ‘or’ as in (i). Examples of this sort behave in the same way as nominal disjunctive (see Section 2.2.)

- (i) a. Densya-ga [Tokyo eki kara ka Shinagawa eki kara (ka)] syuppatusuru no?
 train-Nom T station from or S station from or will.depart Q
 ‘Will the train depart from Tokyo station or Shinagawa station?’ (YNO) Ans ex: Un. ‘Yes.’
- b. Densya-ga [Tokyo eki kara ka Shinagawa eki kara (ka)]-no **dotti** kara syuppatusuru no?
 train-Nom T station from or S station from or-Lin which from will.depart Q
 ‘From which station will the train depart: from Tokyo station or from Shinagawa station?’ (AltQ)
 Ans ex: Tokyo eki kara syuppatusuru yo. ‘It will depart from Tokyo station.’

It is thus unclear whether the classification “nominal disjunctive” is really adequate.

T-Top maid or cook or-Lin either-Acc looking.for
 ‘Taro is looking for either a maid or a cook.’

As for English AltQs with nominal disjunctive like (5a), one of the central attempts to explain their behavior is to introduce ellipsis. Han & Romero (2004) claim that sentences like (5a) are derived from clausal disjunctive and turned into the surface form through movement of the Q operator and ellipsis in the second disjunctive clause, as shown in (5b).

- (5) a. Did John drink coffee or tea?
 b. Q_i Did t_i [John drink coffee or ~~John drink~~ tea]?

Their claim is based on Schwarz’s (1999) gapping analysis of the “unbalanced disjunction” involved in the *either...or...* construction shown in (6). The idea is that, although in surface form the two elements connected by *either...or...* seem to be unbalanced, in the underlying source they are balanced and the surface form is derived through ellipsis.

- (6) a. John either ate rice or beans.
 John either [_{VP} ate rice] or [_{VP} ~~ate~~ beans]
 b. Either John ate rice or beans
 Either [_{IP} John ate rice] or [_{IP} ~~John ate~~ beans] (Schwarz (1999: 351-352))

How about Japanese? Taking into consideration the clausal disjunctive in (1) and (2) on the one hand and the nominal disjunctive in (3) and (4) on the other, are they from the same source (i.e., the nominal disjunctive is derived from the clausal disjunctive) as Han & Romero (2004) (among others) claim for English, or are they derived independently of each other? In this paper I pursue the latter line of argument and propose that although the surface form of Japanese nominal disjunctive in (3) and (4) is similar to the English examples in (5) and (6), Japanese nominal disjunctive does not involve ellipsis. I further claim that the clausal-connective *ka* in (1) and (2) takes clauses as its argument, whereas the nominal-connective *ka* in (3) and (4) takes nominal elements as its argument.

In Section 2 I first give pieces of evidence supporting the claim that Japanese clausal disjunctive and nominal disjunctive should not be analyzed to come from the same source. This claim departs from the ellipsis account for sentences with nominal disjunctive made by Han & Romero (2004) among others, at least for Japanese. A consequence of my claim is also discussed in Section 2.1. After presenting the difference between clausal disjunctive and nominal disjunctive in Section 2.2, in Section 3 I give two possible analyses of the two types of *ka* ‘or’: the focus analysis and the *wh* analysis. The main proposal of this paper is that while both analyses have problems and require amendment, the *wh* analysis both goes well with the argument in Section 2.1 and also better explains the data in Section 2.2. Section 4 concludes the paper.

2. The Data

2.1. Japanese Clausal Disjunctive and Nominal Disjunctive Have Different Sources

This section introduces the idea that Japanese nominal disjunctive does not involve ellipsis throughout its derivation. There are two pieces of evidence for this claim. The first point is the (un)availability of *soretomo* ‘or’ in clausal disjunctive and nominal disjunctive. The analytic disjunctive *soretomo* ‘or’ has been assumed to conjoin sentences/CPs in previous research (cf. Aone (1988)). Let us take this assumption and see (7).⁶

⁶ Some native speakers, including one of the anonymous reviewers, report that (7) is acceptable for them. For other speakers, including myself, the sentence is not so good, and some of them feel that the sentence becomes worse when *dotti* ‘which’ is used and the surface form becomes like a nominal disjunctive. I speculate that for the former group of speakers *soretomo* ‘or’ is not restricted to connecting clauses, while the latter group of speakers including myself accept

- (7) ??/? Taro-ga koohii-~~o~~ **nonda ka**, soretomo Taro-ga otya(-no dotti)-o nonda ka.
 T-Nom coffee-Acc drank or AnalyDisj T-Nom tea-Lin which-Acc drank or

If nominal disjunctive is derived from clausal disjunctive through ellipsis, we can try to derive a nominal disjunctive example from clausal disjunctive connected by *soretomo* ‘or’ by eliding the case particle on the object and the V+*ka* of the first disjunct and the subject in the second disjunct. The resulting sentence would be like (7), but I feel that it is not acceptable. The fact gives the first point that the ellipsis approach fails to account for.

Another piece of supporting evidence for the claim that Japanese nominal disjunctive does not involve ellipsis is that the “underlying” sentence of the nominal disjunctive example (8) (according to the ellipsis analysis) is unacceptable as shown in (9).^{7,8}

- (8) Taro-wa [koohii ka otya (ka)]-no **dotti-o** nonda no? (= (3))
 T-Top coffee or tea or-Lin **which-Acc** drank Q
 ‘Did Taro drink coffee or tea?’
- (9) * [Taro-ga koohii-o nonda ka otya-o nonda (ka)]-no **dotti-o nonda no?**
 T-Nom coffee-Acc drank or tea-Acc drank or-Lin **which-Acc drank Q**
 (intended) ‘Which did Taro do: he drank coffee or he drank tea?’

Thus we must treat clausal disjunctive and nominal disjunctive as having different sources.⁹ I further claim

only the uses in which *soretomo* ‘or’ conjoin clauses.

⁷ For reasons unclear to me, a light verb (*suru* ‘do’) can come to the right of *dotti* ‘which’ in this sentence even when the *ka*’s ‘or’ take clauses.

- (i) Taro-ga koohii-o nonda ka otya-o nonda ka-no **dotti-o sita no?**
 T-Nom coffee-Acc drank or tea-Acc drank or-Lin **which-Acc did Q**
 ‘Which did Taro do: he drank coffee or he drank tea?’

⁸ Some might claim that examples of nominal disjunctive like (8) are derived from disjunction of VPs via gapping like the English *either...or...* construction example in (ia) or the Japanese example in (ib). (In Japanese the verb in the first clause is elided since Japanese is a head-final language.)

- (i) a. John either [_{VP}ate rice] or [_{VP}~~ate~~ beans]
 b. Watakusi-wa sakana-o ~~tabe~~, Biru-wa gohan-o tabeta.
 I-Top fish-Acc eat B-Top rice-Top ate
 ‘I ate fish, and Bill ate rice.’ (Ross (1970: 251))

However, it seems that this is not what is going on in (8). This is because, even if we elide the verb in the first VP as in (ii), we do not get the form we want.

- (ii) ?? Taro-ga [koohii-o ~~nom-i~~ ka] [otya-o nom-i ka] sita.
 T-Nom coffee-Acc drink-Ren or tea-Acc drink-Ren or did
 (intended) ‘Taro drank either coffee or tea.’

Deriving (8) from a sentence with two VP disjuncts through Across-the-Board Movement which is in operation in (iii) does not seem to be a possible option either. (iv) shows that the Across-the-Board Movement still does not give us the form in (8). The case marker is not in the position we want it to be, left inside the DisjP, and even though the sentence in (iv) is not completely out, we do not have a way to make the case marker go outside the DisjP and turn it into (8).⁸

- (iii) John-ga Bill-nituite t_1 , sosite Mary-ga Susan-nituite t_1 hanasita.
 J-Nom B-about, and M-Nom S-about talked
 ‘John talked about Bill and Mary about Susan.’
- (iv) ?? Taro-ga [koohii-o ~~nonda~~ ka] [otya-o ~~nonda~~ (ka)](-no dottika-o) nonda.
 T-Nom coffee-Acc drank or tea-Acc drank or-Lin either-Acc drank
 (intended) ‘Taro drank either coffee or tea.’

I thank Kyle Johnson for bringing the issue to my attention.

⁹ Uegaki (2014) also claims that nominal disjunctive examples like (ia) (which is a Yes/No Question) are not derived from sentences that have two clauses as disjuncts. That is, the underlying structure is not like the one in (ib).

- (i) a. [Taro-ga [koohii ka otya]-o nonda ka](-ga mondai da).
 T-Nom coffee or tea-Acc drank Q-Nom question Cop
 ‘(It is a question) whether Taro drank coffee or tea.’ (Uegaki (2014: 257))

that the clausal-connective *ka* ‘or’ in (1) and (2) takes a clause as its argument, whereas the nominal-connective *ka* ‘or’ in (3) and (4) takes nominal elements as its argument.

A consequence of my claim is illustrated below. Larson (1985: 218) describes that the *either...or...* construction in English is ambiguous when *either* is not used or is in its base position as in (10). In terms of the scope interaction between the indefinite noun and the predicate, there are two *de dicto* readings. One is the reading in which the disjunction item *or* connects two NPs as in (10A). The other is the reading in which *or* takes wide scope and works as a sentential connective as in (10C). (10) also has a *de re* reading in (10B).

- (10) Mary is looking for a maid or a cook. / Mary is looking for **either** a maid or a cook.
 A. Mary is looking for ((a maid) or (a cook)). (*de dicto* reading)
 B. for some x, a maid or a cook, Mary is looking for x. (*de re* reading)
 C. Mary is looking for (a maid) or Mary is looking for (a cook). (“...but I don’t know which”)

The Japanese counterpart of (10) contrasts with the English data in that in all of the forms described in (11a-d), the sentential-connective reading (the C. reading) is quite difficult to obtain.

- (11) a. Taro-wa [jyotyuu **ka** ryoorinin]-o sagasiteiru.
 T-Top maid or cook-Acc looking.for
 b. Taro-wa [jyotyuu **ka** ryoorinin **ka**]-o sagasiteiru.
 T-Top maid or cook or-Acc looking.for
 c. Taro-wa [jyotyuu **ka** ryoorinin]-no **dottika**-o sagasiteiru.
 T-Top maid or cook-Lin either-Acc looking.for
 d. ? Taro-wa [jyotyuu **ka** ryoorinin **ka**]-no **dottika**-o sagasiteiru.
 T-Top maid or cook or-Lin either-Acc looking.for
 C. ?*Taro is looking for (a maid) or Taro is looking for (a cook).

Under the present proposal, the difference between the English and Japanese examples is explained in a straightforward manner. The *ka* ‘or’ used in (11) is a nominal-connective *ka* ‘or’ and it connects two NPs. Since there is another *ka* ‘or’, namely the clausal-connective *ka* ‘or’, which connects two clauses and directly derives the sentential-connective reading, the sentential-connective reading is blocked for the nominal-connective *ka* ‘or’.¹⁰

In this section, I have attested the claim that the Japanese clausal disjunctive and nominal disjunctive have different sources. We will next overview the differences between the two types of disjunctive in the following section, and give possible analyses of them in Section 3.

b. *[Taro-wa koohii-~~o~~ **nonda** ka], [Taro-wa otya-o nonda ka]
 T-Top coffee-Acc drank or T-Top tea-Acc drank or (Uegaki (2014: 258))

The reason he gives for this restriction on ellipsis is that the elided material has to be in the right edge of the disjunct, as is the case in the conjunction example in (ii).

(ii) a. [Taro-ga doko-e ~~itta~~ **ka**], sosite [Taro-wa dare-to itta ka]
 T-Nom where-to went Q and T-Top who-with went Q
 b. *[Taro-ga doko-e ~~itta~~ **ka**], sosite [Taro-wa dare-to itta ka]
 ‘Where Taro went and with whom he went’ (Uegaki (2014: 258))

¹⁰ An anonymous reviewer points out that the C. reading is available for the sentences in (11) for him/her. Taking in the suggestions he/she and Akira Watanabe made, a context which would make only the C. reading of the sentence true is the following: Few weeks ago I heard from Taro that he is looking for a person to work at his house, and I remember that the kind of person he was looking for was either a maid or a cook (and only one of the two), but I just don’t remember which he was looking for. I have to admit that I feel that the examples in (11) are not so bad in this context. However, a native speaker that I consulted reports that (11b-d) are not good for him in this context and the exact nature of this reading awaits further investigation. I also note that even if it turns out in the end that the availability and unavailability of the C. reading, dubbed “wide scope *or*” reading in Rooth & Partee (1982), do not correspond to clausal disjunctive and nominal disjunctive, it does not undermine the argument made in this section that ellipsis is not involved in nominal disjunctive. It only makes the nature of the “wide scope *or*” reading even more mysterious.

2.2. Differences between Clausal Disjunctive and Nominal Disjunctive in Japanese

Clausal disjunctive and nominal disjunctive differ from each other in terms of their possible readings and possible forms. Let us first look at nominal disjunctive, since its behavior is simpler than that of clausal disjunctive. The nominal disjunctive example (12a), in which *ka* ‘or’ connects two NPs and literally corresponds to the English translation, is unambiguously a Yes/No Question (YNQ). (Notice that the English translation itself is ambiguous between an AltQ and a YNQ.) In order for the example to obtain an AltQ reading, the item *dotti* ‘which’ has to be used as in (12b).¹¹

- (12) a. Taro-wa [koohii **ka** otya (ka)]-o nonda no? (YNQ)
 T-Top coffee or tea or-Acc drank Q
 ‘Did Taro drink coffee or tea?’
- b. Taro-wa [koohii ka otya (ka)]-no **dotti**-o nonda no? (AltQ)
 T-Top coffee or tea or-Lin **which**-Acc drank Q
 ‘Which did Taro drink, coffee or tea?’

As we can observe from (12) and also from the counterpart of the *either...or...* construction in (13), in nominal disjunctive examples the second *ka* ‘or’ is optional. Thus there are four possible forms (Cf. (11)). As well as the form with only one *ka* ‘or’ connecting the alternatives as in (13a), the sentence is also grammatical with both of the alternatives having *ka* ‘or’ as in (13b). The second *ka* ‘or’ is optional when *dottika* ‘either’ is used, too, as exemplified in (13c,d).

- (13) a. Taro-wa [jyotyuu **ka** ryoorinin]-o sagasiteiru.
 T-Top maid or cook-Acc looking.for
- b. Taro-wa [jyotyuu **ka** ryoorinin **ka**]-o sagasiteiru.
 T-Top maid or cook or-Acc looking.for
- c. Taro-wa [jyotyuu **ka** ryoorinin]-no **dottika**-o sagasiteiru.
 T-Top maid or cook-Lin either-Acc looking.for
- d. ? Taro-wa [jyotyuu **ka** ryoorinin **ka**]-no **dottika**-o sagasiteiru.
 T-Top maid or cook or-Lin either-Acc looking.for
 ‘Taro is looking for (either) a maid or a cook.’

As for the clausal disjunctive examples, the situation is a little more complicated. Regarding the possibility of the AltQ/YNQ reading, the sentence is an AltQ when *ka* ‘or’ connects two clauses as in (14a), whereas the sentence is a YNQ when the second *ka* ‘or’ is not used as in (14b). (14c) shows that if constructions involving disjunction (2) are turned into interrogatives by changing the ending of the sentence, they are YNQs.¹²

¹¹ The YNQ reading and the AltQ reading can be made clearer by using the ending *nokai* and *ndai*, which are the question-forming endings for YNQs and WhQs respectively as observed by Yoshida (1998).

- (i) a. Taro-wa [koohii ka otya (ka)]-o nonda **nokai**? (YNQ)
 T-Top coffee or tea or-Acc drank Q-Y/N
 ‘Did Taro drink coffee or tea?’
- b. *Taro-wa [koohii ka otya (ka)]-o nonda **ndai**?
 T-Top coffee or tea or-Acc drank Q-WH
- (ii) a. Taro-wa [koohii ka otya(ka)]-no **dotti**-o nonda **ndai**? (AltQ)
 T-Top coffee or tea or-Lin which-Acc drank Q-WH
 ‘Which did Taro drink, coffee or tea?’
- b. *Taro-wa [koohii ka otya(ka)]-no **dotti**-o nonda **nokai**?
 T-Top coffee or tea or-Lin which-Acc drank Q-Y/N

I thank Satoshi Tomioka for bringing the fact to my attention.

¹² Here too, the YNQ reading and the AltQ reading can be made unambiguous by using the ending *nokai* for YNQ and *ndai* for WhQ (cf. note 11). Note that the AltQ reading in (i) cannot be obtained without *dotti* ‘which,’ and this fact

- (14) a. *a.??/?Taro-ga koohii-o nonda ka otya-o nonda ka?*(= (1a)) (AltQ)
 T-Nom coffee-Acc drank or tea-Acc drank or
 ‘Which did Taro do: he drank coffee or he drank tea?’
- b. Taro-ga koohii-o nonda ka otya-o nonda (no)? (YNQ)
 T-Nom coffee-Acc drank or tea-Acc drank Q
 ‘Is it the case that Taro drank coffee or tea?’
- c. [Taro-ga koohii-o nonda ka] [~~Taro-ga~~ otya-o nonda ka] desu ka? (YNQ)
 T-Nom coffee-Acc drank or T-Nom tea-Acc drank or Cop.Pol Q
 ‘Is it the case that Taro drank coffee or tea?’
- Cf. [John-ga hasitta ka] [Mary-ga koronda ka] da. (= (2))
 J-Nom ran or M-Nom fell.down or Cop
 ‘Either John ran or Mary fell down.’

Clausal disjunctive differs from nominal disjunctive in the status of the second *ka* ‘or’. It is illustrated in (15) and (16) that in AltQs and constructions involving disjunction, dropping the second *ka* ‘or’ either leads to complete unacceptability ((15b) and (16)) or unavailability of an AltQ reading ((15a)). In either way, the sentence cannot obtain the intended reading without the second *ka* ‘or.’ In contrast, (17) shows that in the YNQ (14b) the second *ka* ‘or’ cannot appear, regardless of the form of the Q particle.

- (15) a. Taro-ga koohii-o nonda ka otya-o nonda *(ka)?
 T-Nom coffee-Acc drank or tea-Acc drank or
 ‘Did Taro drink coffee or did Taro drink tea?’
- b. Boku-wa[Taro-ga koohii-o nonda ka otya-o nonda *(ka)](-o) sitteiru.
 I-Top T-Nom coffee-Acc drank or tea-Acc drank or-Acc know
 ‘I know whether Taro drank coffee or tea.’
- (16) [John-ga hasitta ka] [Mary-ga koronda *(ka)] da.
 J-Nom ran or M-Nom fell.down or Cop
 ‘Either John ran or Mary fell down.’
- (17) * Taro-ga koohii-o nonda ka otya-o nonda ka {no / ka / Ø}?
 T-Nom coffee-Acc drank or tea-Acc drank or Q
 ‘Is it the case that Taro drank coffee or tea?’

seems to support the *wh* analysis defended in this paper (see Section 3.2.), which proposes that there is a covert *dotti* ‘which’ in clausal disjunctive AltQs.

- (i) a. [Taro-ga koohii-o nonda ka otya-o nonda ka]-no dotti na ndai? (AltQ)
 T-Nom coffee-Acc drank or tea-Acc drank or-Lin which Cop.Adn Q-WH
 ‘Which did Taro do: he drank coffee or he drank tea?’
- b. *[Taro-ga koohii-o nonda ka otya-o nonda ka] na ndai?
 T-Nom coffee-Acc drank or tea-Acc drank or Cop.Adn Q-WH
- (ii) a. [Taro-ga koohii-o nonda ka otya-o nonda] nokai? (YNQ)
 T-Nom coffee-Acc drank or tea-Acc drank Q-Y/N
 ‘Is it the case that Taro drank coffee or tea?’
- b. *[Taro-ga koohii-o nonda ka otya-o nonda] ndai?
 T-Nom coffee-Acc drank or tea-Acc drank Q-WH
- (iii) a. [Taro-ga koohii-o nonda ka] [~~Taro-ga~~ otya-o nonda ka] na nokai? (YNQ)
 T-Nom coffee-Acc drank or T-Nom tea-Acc drank or Cop.Adn Q-Y/N
 ‘Is it the case that Taro drank coffee or tea?’
- b. *[Taro-ga koohii-o nonda ka] [Taro-ga otya-o nonda ka] na ndai?
 T-Nom coffee-Acc drank or T-Nom tea-Acc drank or Cop.Adn Q-WH

Using *dotti/dottika* ‘which/either’ is a possible option for clausal disjunctive AltQs and the *either...or...* construction in much the same way as nominal disjunctive examples:

- (18) a. [Taro-ga koohii-o nonda ka otya-o nonda *(ka)]-no **dotti** na no?
 T-Nom coffee-Acc drank or tea-Acc drink or-Lin which Cop.Adn Q
 ‘Did Taro drink coffee or did Taro drink tea?’
 b. [Taro-ga koohii-o nonda ka otya-o nonda *(ka)]-no **dotti** (na no) ka sitteiru.
 T-Nom coffee-Acc drank or tea-Acc drank or-Lin which Cop.AdnLin Q know
 ‘I know whether Taro drank coffee or tea.’
- (19) [John-ga hasitta ka] [Mary-ga koronda *(ka)]-no **dottika** da.
 J-Nom ran or M-Nom fell.down or-Lin either Cop
 ‘Either John ran or Mary fell down.’

Let me note an interesting property of clausal disjunctive regarding the (un)availability of the second *ka* ‘or.’ (20) shows that the Disjunction Phrase (DisjP) as a whole behaves as if it is a nominal element when the second *ka* ‘or’ is present, even though the elements connected by *ka* ‘or’ are clauses.

- (20) a. [Taro-ga koohii-o nonda ka otya-o nonda ka]-o sitteiru.
 T-Nom coffee-Acc drank or tea-Acc drank or-Acc know
 ‘I know whether Taro drank coffee or tea.’
 b. [John-ga hasiru ka] [Mary-ga hasiru ka] **desu**.
 J-Nom run or M-Nom run or **Cop.Pol**
 ‘Either John runs or Mary runs. (polite)’
 Cf. John-wa gakusei **desu**. (N+Cop.Pol)
 J-Top student Cop.Pol
 Cf. John-ga hasitte **i-masu**. (V+Cop.Pol)
 J-Nom running is-Cop.Pol

A case-marker can attach to the DisjP as in (20a) and further, we can see from (20b) that the polite form of the copula used in the construction which corresponds to the *either...or...* construction is *desu*, which is the form used with NPs. Thus the sentences in (20) behave as if they are NPs.¹³

In contrast, there is no evidence that clausal disjunctive behaves as if it is a nominal element when the second *ka* ‘or’ is not overt (= is a YNQ). As (21) shows, when we try to make the question polite by using the polite form of the copula, the clause has to be nominalized before *desu*, the form which is used after NPs, or else we directly attach *masu*, which is used after verbs, to the verb in the second disjunct. We observe that the behavior is different between sentences in which the second *ka* ‘or’ is overt and sentences in which it is absent.

- (21) Taro-ga koohii-o nonda ka Taro-ga otya-o {nonda-**no-desu** / nomi-**masi-ta**} ka? (YNQ)
 T-Nom coffee-Acc drank or T-Nom tea-Acc drank-Nmn-Cop.Pol/drink-Cop.Pol-Past Q
 ‘Is it true that Taro drank coffee or tea (polite)?’

So far we have seen in this section that clausal disjunctive and nominal disjunctive are different from each other in terms of their possible readings and forms. Now, how can we account for the facts? Two possible analyses, namely *the focus analysis* and *the wh analysis*, are given in the next section. It is shown that the latter analysis does not conflict with the claim in Section 2.1 that nominal disjunctive does not contain ellipsis and also explains

¹³ This is why I have used the gloss ‘Linker’ for the *no* that follows the clausal disjunctive in (18) and (19). The *no* is between the clausal disjunctive that behaves like a nominal element and *dotti/dottika* ‘which/either’ and this is the environment where Mod-Insertion is applied. (Kitagawa & Ross (1982); see Section 3.2.)

the data shown in Section 2.2 in a more straightforward manner than the focus analysis.

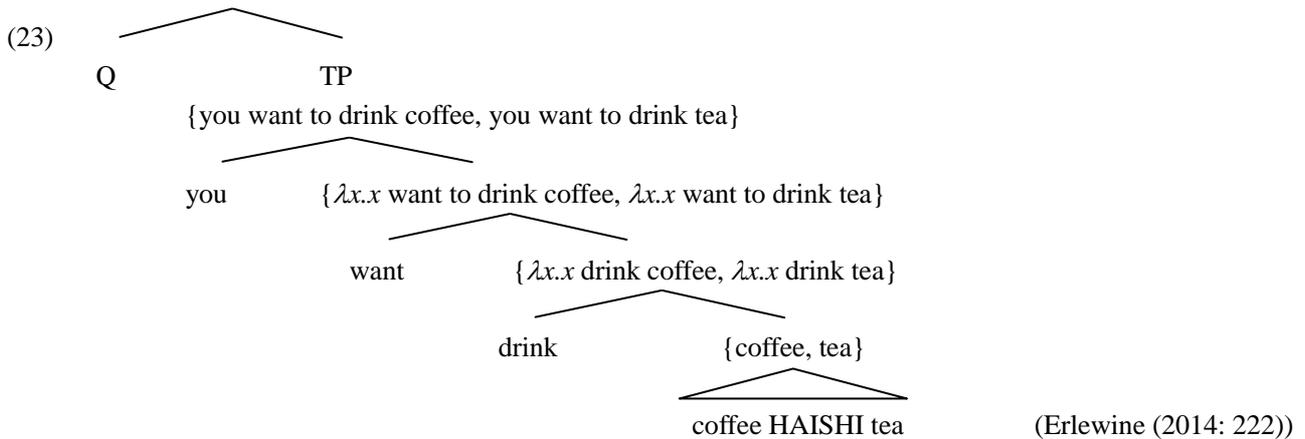
3. Proposal

3.1. The Focus Analysis

One possible way to explain the fact that a sentence with the clausal-connective *ka* ‘or’ typically obtains only the AltQ reading (cf. (14a), (1)) is to claim that the clausal-connective *ka* ‘or’ does not project the ordinary semantic value but only the focus semantic value. This is what Erlewine (2014) proposes for the Mandarin Chinese disjunction item *háishi*, which derives only the AltQ reading as exemplified in (22).

- (22) Nǐ xiǎng hē kāfēi háishi hóngchá (ne)?
 you want drink coffee HAISHI tea Q
 Alternative question: ‘Do you want to drink coffee or tea?’
 Possible answers: (I want) coffee; (I want) tea; #Yes; #No (Erlewine (2014: 221))

The focus semantic value is the set of possible alternatives (cf. Rooth (1992)). As shown in (23), the item *háishi* projects only the focus semantic value, which is the set of the two alternatives introduced by *háishi*, namely {coffee, tea}. The semantics of the sentence is computed through pointwise functional application and the denotation of the TP node would be {you want to drink coffee, you want to drink tea}. The semantic role of the Q operator is to lift the focus semantic value of its sister into the ordinary semantic value of the whole sentence. Thus the ordinary semantic value of the question (22) would be {you want to drink coffee, you want to drink tea}, which is precisely the AltQ reading induced by the use of *háishi* in (22).



On the other hand, we can account for the fact that a sentence with the nominal-connective *ka* ‘or’ can only have the YNQ reading (cf. (12a)) by claiming that the nominal-connective *ka* ‘or’ has an ordinary disjunction meaning, namely the union. The AltQ reading in (12b) repeated below is derived by the work of *dotti* ‘which’, which projects only the focus semantic value.

- (12) b. Taro-wa [koohii ka otya (ka)]-no **dotti**-o nonda no? (AltQ)
 T-Top coffee or tea or-Lin **which**-Acc drank Q
 “Which did Taro drink, coffee or tea?”

However, there are problems for the focus analysis. For one thing, the union, which is proposed to be the semantic role of the nominal-connective *ka* ‘or’, can only handle sets. If the claim in Section 2.1. that the nominal-connective *ka* ‘or’ takes a noun (phrase) as its argument is on the right track, the semantic role of the

nominal-connective *ka* ‘or’ cannot be the union, assuming that the semantic type of a noun is an individual.¹⁴

For another, if we adopt the focus analysis it is difficult to account for the English and Japanese data in (24b) and (25).

- (24) a. Is Mary French or Italian? (AltQ / YNQ)
 b. Is Mary **either** French or Italian? (YNQ only) (Aloni et al. (2013))
- (25) Mary-wa furansujin ka itariajin (ka)-no **dottika** na no?
 M-Top French or Italian or-Lin either Cop.Adn Q
 ‘Is Mary either French or Italian?’ (YNQ only)

The English examples in (24) show that, in contrast to the basic example (24a), which is ambiguous between the AltQ reading and the YNQ reading, (24b) in which *either* is used with *or* has only the YNQ reading. The Japanese example (25) in which *dottika* ‘either’ is used is also unambiguous and only has the YNQ reading. The problem is, how can we explain the fact that using *either* or *dottika* ‘either’ leads to the sentence obligatorily being a YNQ as in (24b) and (25)? Previous studies have pointed out that *either* is focus-sensitive (cf. Hendriks (2003), Den Dikken (2006)). If so, it may be possible to think of both *either/dottika* ‘either’ and *dotti* ‘which’ as being focus-sensitive in some sense and thus having the same semantic role. However, the two groups actually behave differently, one forcing the YNQ reading while the other the AltQ reading. Why can’t *either/dottika* ‘either’ derive the AltQ reading in the same way as *dotti* ‘which’ does in (12b), which projects only the focus semantic value?¹⁵ If we are to adopt the focus analysis, this behavior of *either/dottika* ‘either’ must be explained in some way.

Further, the focus analysis is not able to account for some of the facts described in Section 2.2., especially the behavior of the clausal disjunctive. We cannot explain why the sentence becomes a YNQ when the second *ka* ‘or’ is dropped as in (14a,b) since we do not have a way to distinguish the second *ka* ‘or’ from the first one.

- (14) a. ???Taro-ga koohii-o nonda **ka** otya-o nonda **ka**? (AltQ)
 T-Nom coffee-Acc drank **or** tea-Acc drank **or**
 ‘Which did Taro do: he drank coffee or he drank tea?’
- b. Taro-ga koohii-o nonda **ka** otya-o nonda (**no**)? (YNQ)
 T-Nom coffee-Acc drank **or** tea-Acc drank **Q**
 ‘Is it the case that Taro drank coffee or tea?’

The data that the second *ka* ‘or’ cannot be dropped in AltQs and constructions involving disjunction ((15), (16))

¹⁴ Satoshi Tomioka (p.c.) points out that this might be unproblematic if the set theory proposed by Quine, which is referred to by Schwarzschild (1996) as “Quine’s innovation”, is adopted. Schwarzschild (1996) takes this option in order to apply set theoretic operations to both sets and individuals as in (i).

(i) $j \cup m = \{j\} \cup \{m\} = \{j, m\}$ (Schwarzschild (1996: 1))

¹⁵ There remains a possibility that *either* and *dottika* ‘either’ do not behave in the same way as *dotti* ‘which’ but are focus particles which function in the same way as *only*. If so, it may be understandable that the use of *either* and *dottika* ‘either’ gives rise only to the YNQ reading, since interrogative sentences with *only* are also unambiguously YNQs as in (i).

(i) Does **only** John like Mary or Susan? (YNQ only) (Beck & Kim (2006: 167))

Beck & Kim (2006) give a focus-semantic account for the unavailability of the AltQ reading for (i). Their claim is that *only* intervenes between the DisjP (or the *wh* element adjoined to it) and the Q operator. If *only*, *either*, and *dottika* ‘either’ are all focus particles of the same kind, however, a problem would be how to account for (ii). A basic property of *either* is that it can float (cf. Larson (1985), Den Dikken (2006)), but it cannot float to a position higher than *only* as in (iib).

(ii) a. **Only** John ate **either** rice or beans.

b. ?***Either only** John ate rice or beans. (Beck & Kim (2006: 201))

This behavior cannot be explained if *only* and *either* have completely the same semantic role. It seems that *either* must be connected to *or* in some way (the movement account made by Larson (1985) is one of the possible approaches to explain this connection,) but the problem is left for future research.

are also problematic for the focus analysis by the same reasoning. I conclude that at least the focus analysis is hard to maintain as it is.

3.2. The Wh Analysis

Let us next turn to the *wh* analysis. The basic idea is that both clausal-connective *ka* ‘or’ and the nominal-connective *ka* ‘or’ have the same semantic role: making a set whose members are the elements connected by *ka* ‘or’ (cf. Alonso-Ovalle (2006)). Examples of the semantic denotation of clausal disjunctive and nominal disjunctive are shown in (26a, b). As we can easily see, in both of them the denotation is the set which consists of the alternatives introduced by *ka* ‘or’.

- (26) a. [[John-ga hasitta ka Mary-ga koronda ka]] = {John ran, Mary fell down}
 J-Nom ran or M-Nom fell.down or
 b. [[koohii ka otya ka]] = {coffee, tea}
 coffee or tea or

I propose that in both clausal disjunctive and nominal disjunctive, the AltQ reading is derived through the work of *dotti* ‘which’. Recall that in order to obtain the AltQ reading, nominal disjunctive has to make use of the item *dotti* ‘which’ as we have seen in (12). My proposal is that in clausal disjunctive AltQ examples also, a covert *dotti* ‘which’ is present. I show a preview of the analysis below before giving the details.

	YNQ	AltQ
Nominal disjunctive	(12a) ← no <i>dotti</i> ‘which’	(12b) ← overt <i>dotti</i> ‘which’
Clausal disjunctive	(14b) ← no <i>dotti</i> ‘which’	(14a) ← <u>covert <i>dotti</i> ‘which’</u>

The data in (27) supports the idea that the AltQ reading is derived through the work of *dotti* ‘which’. We can observe from the examples that if and only if *dotti* ‘which’ or *dottika* ‘either’ is present, the conjunction particle *to* ‘and’ and the disjunction particle *ka* ‘or’ have the same meaning. (Clausal disjunctive examples behave in the same way as the nominal disjunctive examples in (27).) The data suggest that *dotti* ‘which’ and *dottika* ‘either’ themselves have some semantic role and that conjunction also falls within the scope of the discussion.¹⁶

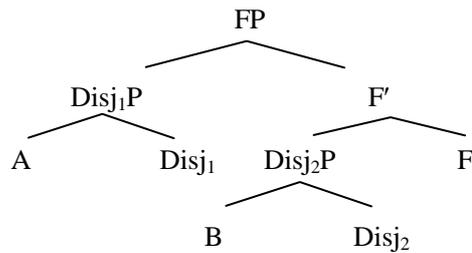
- (27) a. Taro-wa [koohii **to** / **?ka** otya **to** / **?ka**]*(-no **dotti**)-o nonda no?
 T-Top coffee **and** / **or** tea **and** / **or** -Lin **which**-Acc drank Q
 ‘Did Taro drink coffee or tea?’
 b. Taro-wa [jyotyuu **to** / **?ka** ryoorinin **to** / **?ka**]*(-no **dottika**)-o sagasiteiru.
 T-Top maid **and** / **or** cook **and** / **or** -Lin **either**-Acc looking.for
 ‘Taro is looking for either a maid or a cook.’

Before we move on to the details of the *wh* analysis, let me introduce the assumptions taken here. First, I assume that in the constructions under discussion, two Disjunction Phrases (DisjPs), whose heads are the *ka*’s ‘or,’ are in the specifier and the complement positions of a covert functional phrase. The structure I have in mind is the one in (28).

¹⁶ Note that the conjunction particle *to* ‘and’ and the disjunction particle *ka* ‘or’ are different from each other in some sense even if they are under the domination of *dotti/dottika* ‘which/either.’ Thus, we cannot use both of the particles at the same time.

(i) *Taro-wa [koohii **to** otya **ka**]-no **dotti**-o nonda no? (cf. (27))
 T-Top coffee **and** tea **or**-Lin **which**-Acc drank Q

(28)



This option is taken in order to explain the word order between the disjunct and *ka* ‘or’ while retaining the head parameter at the same time. Although the details of how the semantic denotation is computed for this structure is left for future research, what is assumed here is that the denotation given for the FP is the set which consists of the alternatives introduced by *ka* ‘or’ like the ones we have seen in (26). I further assume that the FP is taken as an argument by the DPs *dotti/dottika* ‘which/either.’ This is because *dotti/dottika* ‘which/either’ need some set of alternatives which are overt or specified in the context, so that the items can refer to that set. For example, the sentences in (29) have no overt DisjP/FP and are infelicitous if uttered out of the blue, but are felicitous if there is a certain context providing the alternatives, such as the speaker and the hearer looking at a menu at a restaurant.¹⁷

- (29) a. Dotti-o taberu?
which-Acc eat
‘Which (of them) will you eat?’
b. Dottika tabe-tai naa.
either eat-want SFP
‘I want to eat one of them.’

Second, it is assumed here that AltQs are a type of *Wh*-Questions (WhQs). The idea is quite common in analyzing the semantics of AltQs (cf. Larson (1985), Higginbotham (1991), Romero & Han (2003), Han & Romero (2004); but this is not to say that there are no other approaches: cf. Uegaki (2014)). Third, the function that the C in WhQs has and the function that the C in YNQs has are different. As their denotation, WhQs have the set of possible answers and YNQs have the set consisting of the proposition that the complement of C denotes and its negated proposition, i.e., $\{p, \neg p\}$.

Building on Larson’s (1985) analysis of *whether* and *either*, I propose that *dotti* ‘which’ has a [+WH] feature and *dottika* ‘either’ has a [-WH] feature. Further, the WhQ type C and YNQ type C also have [+WH] feature and a [-WH] feature respectively, and the features have to agree in order to avoid feature mismatch and clash. That means, in order to derive a well-formed sentence, if *dotti* ‘which,’ which has a [+WH] feature, is in the structure the WhQ type C head, not the YNQ type C head, has to be in the CP domain. Conversely, if *dottika* ‘either’ is in the structure the YNQ type C head has to be in the CP domain, since the presence of the WhQ type C head leads to feature mismatch. Consequently, if *dotti* ‘which’ is in the structure the sentence gets the AltQ meaning in the end while if *dottika* ‘either’ is in the structure the YNQ reading is derived.

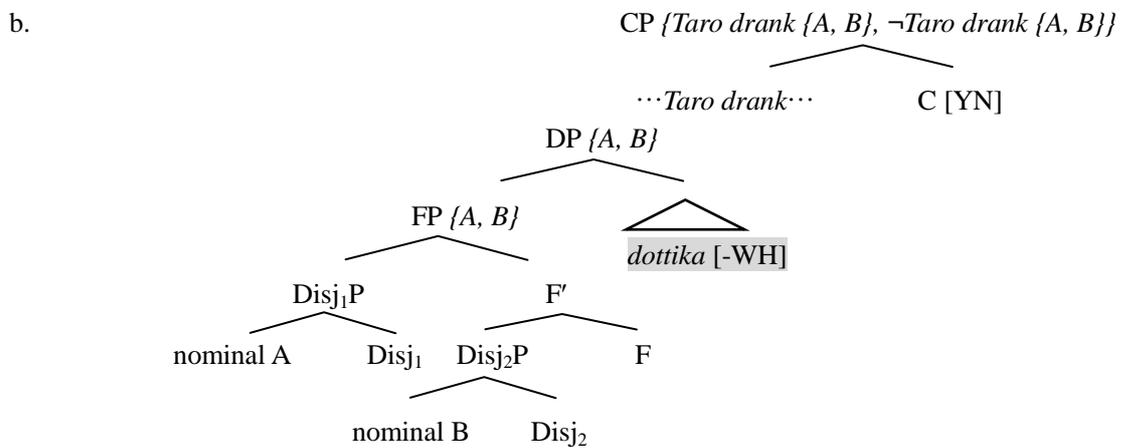
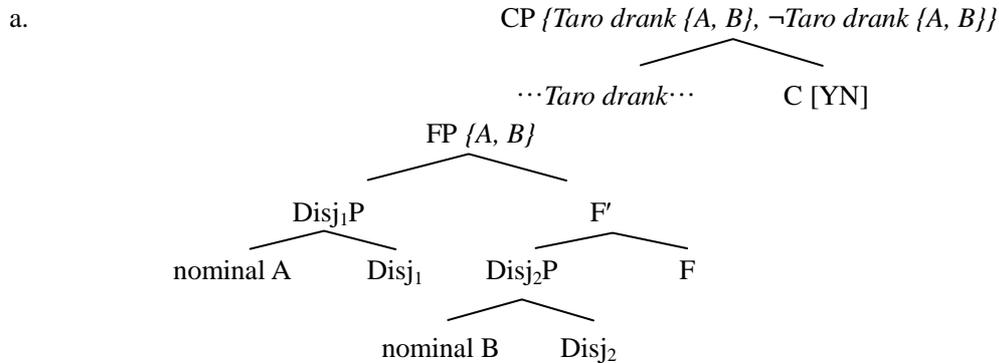
Now let’s first look at the analysis of nominal disjunctive. The data that we have seen in Section 2.2 is simple: while sentences which make use of only *ka* ‘or’ have only the YNQ reading, sentences which use *dotti* ‘which’ are unambiguously AltQs. See (30) (= (12)).

- (30) a. Taro-wa [koohee ka otya (ka)]-o nonda no? (YNQ)
T-Top coffee or tea or-Acc drank Q
‘Did Taro drink coffee or tea?’

¹⁷ Strictly speaking, the number of alternatives to which *dotti/dottika* ‘which/either’ refer to has to be two, so the felicitous context would be something like: the speaker and the hearer are looking at a menu at a restaurant and there are two dishes which are under consideration at the time of utterance.

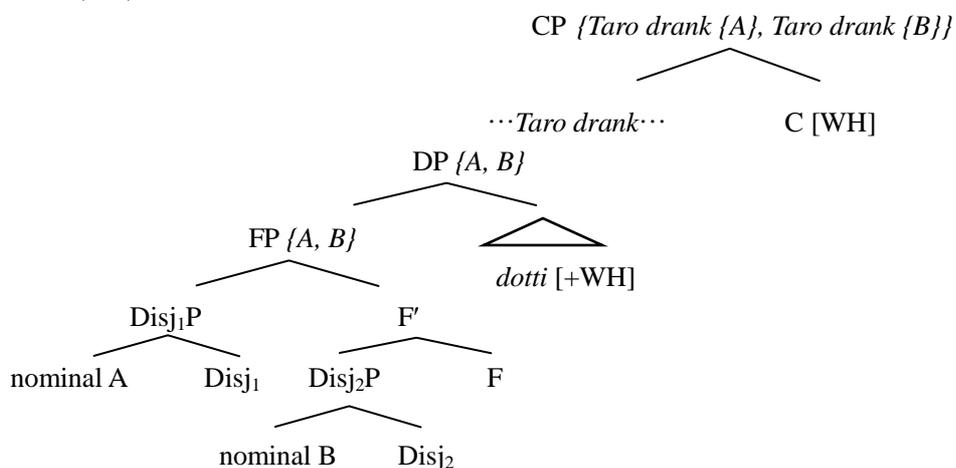
- b. Taro-wa [koohii ka otya (ka)]-no **dotti**-o nonda no? (AltQ)
 T-Top coffee or tea or-Lin **which**-Acc drank Q
 “Which did Taro drink, coffee or tea?”

(31) Two possible structures of (30a)



There are two possible structures for the YNQ example. In (31a) the DisjP is directly taken by the verb as its argument. I assume that here the YNQ type C is selected in the CP domain as the default choice and thus the sentence becomes a YNQ. In (31b) the DisjP adjoins to the covert *dottika* ‘either’, which has the [-WH] feature (covert items are screened hereafter.) Thus in order to avoid feature mismatch the YNQ type C has to be selected when the derivation comes to the CP domain and the sentence becomes a YNQ.

(32) Structure of (30b)

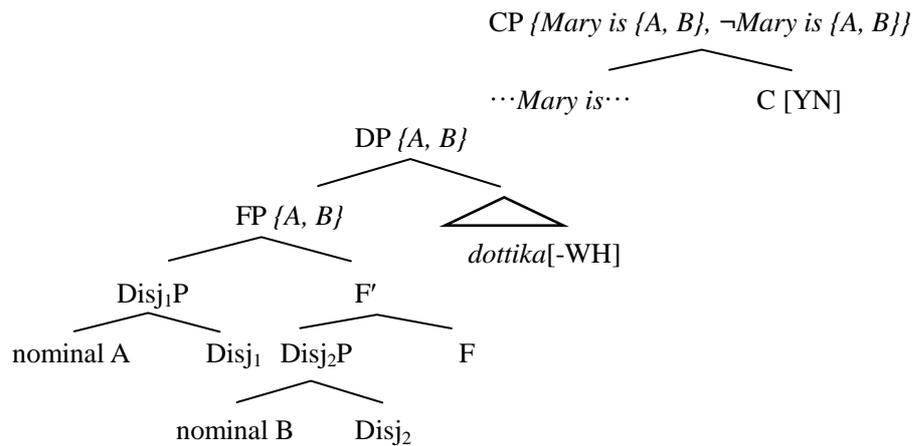


The nominal disjunctive AltQ examples require an overt *dotti* ‘which’ and thus a WhQ type C needs to be selected in the CP domain and the sentence becomes an AltQ.

An advantage of the *wh* analysis is that it naturally explains the data that might be problematic for the focus analysis, repeated below.

- (33) Mary-wa furansujin ka itariajin (ka)-no **dottika** na no? (= (25))
 M-Top French or Italian or-Lin either Cop.Adn Q
 ‘Is Mary either French or Italian?’ (YNQ only)

- (34) Structure of (33)



Here *dottika* ‘either’ with [-WH] must be overt, so the sentence becomes a YNQ by the work of the YNQ type C.

Next let us turn to the analysis of clausal disjunctive. Recall that in clausal disjunctive AltQs repeated below, the DisjP as a whole behaves as if it is a nominal element.

- (20) a. [Taro-ga koohii-o nonda ka otya-o nonda ka]-o sitteiru.
 T-Nom coffee-Acc drank or tea-Acc drank or-Acc know
 ‘I know whether Taro drank coffee or tea.’

I thus claim that in clausal disjunctive AltQs, *dotti* ‘which’, which can be covert, is in the structure. DisjP adjoins to *dotti* ‘which’ and thus the whole structure is a DP (the category depends on the category of *dotti* ‘which’.) On the other hand, in clausal disjunctive YNQs there is no evidence that the DisjP as a whole behaves as if it is a nominal element (21).

- (21) Taro-ga koohii-o nonda ka Taro-ga otya-o nonda-no-desu ka?
 T-Nom coffee-Acc drank or T-Nom tea-Acc drank-Nmn-Cop.Pol Q
 ‘Is it true that Taro drank coffee or tea (polite)?’

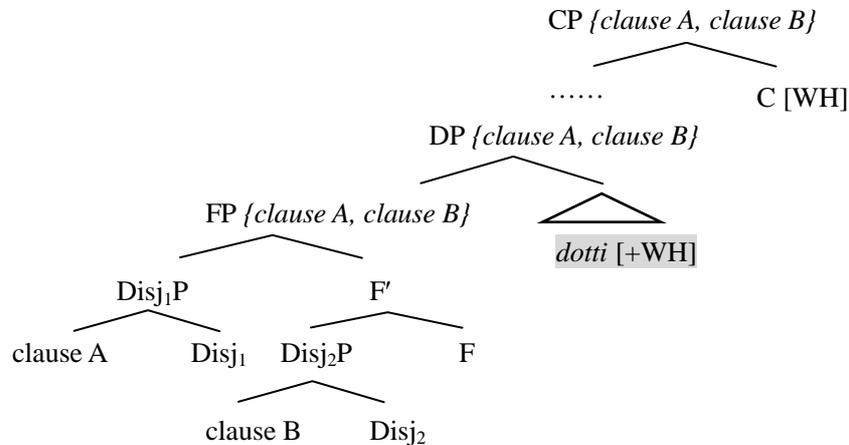
I thus claim that in clausal disjunctive YNQs, *dotti* ‘which’ is not in the structure and this structure gives rise to the YNQ reading.

Core data are repeated in (35) and the structures proposed for them are shown in (36) and (37).

- (35) a. ???Taro-ga koohii-o nonda ka otya-o nonda **ka?** (AltQ)
 T-Nom coffee-Acc drank or tea-Acc drank or
 ‘Which did Taro do: he drank coffee or he drank tea?’

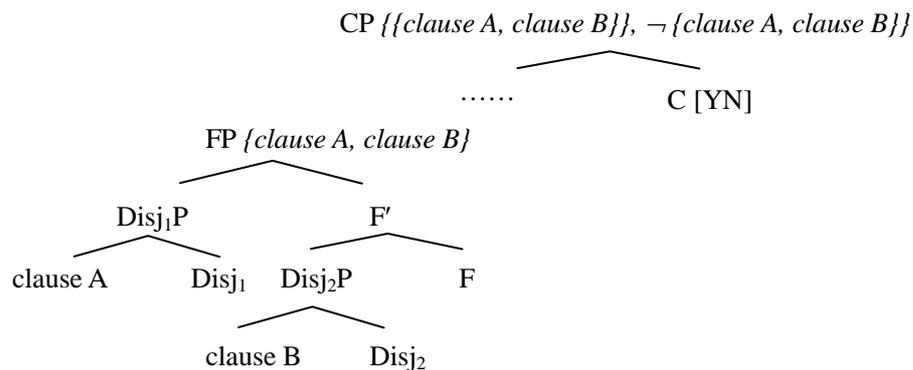
- b. Taro-ga koohii-o nonda ka otya-o nonda **(no)?** **(YNQ)**
 T-Nom coffee-Acc drank or tea-Acc drank Q
 ‘Is it the case that Taro drank coffee or tea?’

(36) Structure of (35a)



The present proposal for the clausal disjunctive AltQs is that there is a covert *dotti* ‘which’ in the structure as in (36). For the sentence to be well-formed the WhQ type C has to be selected and the sentence becomes an AltQ.

(37) Structure of (35b)



As for the clausal disjunctive YNQs, the present claim is that there is no *dotti* ‘which’ in the structure. Here again the sentence becomes a YNQ under the assumption that the YNQ type C is selected in the CP domain as the default choice.

I give a morphosyntactic reason for why the second *ka* ‘or’ cannot be dropped in clausal disjunctive AltQs (repeated below).

- (15) a. Taro-wa koohii-o nonda ka otya-o nonda ***(ka)?**
 T-Top coffee-Acc drank or tea-Acc drank or
 ‘Did Taro drink coffee or did Taro drink tea?’
 b. Boku-wa [Taro-ga koohii-o nonda ka otya-o nonda ***(ka)**](**-o**) sitteiru.
 I-Top T-Nom coffee-Acc drank or tea-Acc drink or-Acc know
 ‘I know whether Taro drank coffee or tea.’

When two nominal elements are connected by *ka* ‘or,’ even if the second *ka* ‘or’ is dropped the linker *no* can be inserted between the second nominal element and *dotti/dottika* ‘which/either,’ as a morphological process. This is

the Mod-Insertion rule (Kitagawa & Ross (1982)):

(38) $[_{NP} \dots XP(-tense) NP] \rightarrow [_{NP} \dots XP(-tense) Mod NP]$, where Mod = *no*

The rule states that when an element which is unspecified of Tense is adjacent to an NP, Mod is inserted between them. However, this insertion is not possible if clauses are connected by *ka* ‘or,’ since when the second *ka* ‘or’ is dropped what would be adjacent are the second clause and *dotti/dottika* ‘which/either’ and this would not satisfy the requirement for the Mod-Insertion rule. This seems to be a possible reason for the second *ka* ‘or’ being obligatory in clausal disjunctive.

Even though the *wh* analysis explains most of the data, it also has a problematic point. In (39) the clausal disjunctive examples are repeated, with covert items added according to the *wh* analysis.

- (39) a. Taro-ga koohii-o nonda ka otya-o nonda (no)? (YNQ)
 T-Nom coffee-Acc drank or tea-Acc drank Q
 ‘Is it the case that Taro drank coffee or tea?’
- b.??/?Taro-ga koohii-o nonda ka otya-o nonda ka **dotti[+WH]**? (AltQ)
 T-Nom coffee-Acc drank or tea-Acc drank or **which**
 ‘Which did Taro do: he drank coffee or he drank tea?’
- c. [Taro-ga koohii-o nonda ka] [T-ga otya-o nonda ka] **dottika[-WH]** na no? (YNQ)
 T-Nom coffee-Acc drank or T-Nom tea-Acc drank or **either** Cop.Adn Q
 ‘Is it the case that Taro drank coffee or tea?’

(39a,b) are unproblematic. In (39a) the clausal disjunctive as a whole does not behave as if it is a nominal element while in (39b) it does, and according to the *wh* analysis there is no covert *dotti* ‘which’ in (39a) while there is in (39b). This line of argument explains the fact that the two sentences have the YNQ/AltQ reading respectively. However, in (39c) the clausal disjunctive behaves as if it is a nominal element, since the copula between the DisjP and the Q particle must be in the adnominal form. So, in order to explain the fact that (39c) is a YNQ, we have to say that there is a covert *dottika* ‘either’ in this sentence and that this covert item leads to the selection of the YNQ type C. The problem is: how can we distinguish environments where covert *dotti* ‘which’ can be in the structure from environments where covert *dottika* ‘either’ can be in the structure? We do not have a principled rule which describes when the covert items come into the structure and how the item is chosen between *dotti* ‘which’ and *dottika* ‘either’. If the problem is solved we will also be able to determine the structure of the nominal disjunctive YNQs, which is currently ambiguous between (31a) and (31b).

4. Concluding Remarks

This paper has shown the following two points: Japanese nominal disjunctive does not involve ellipsis and the differences between clausal disjunctive and nominal disjunctive are well accounted for by the *wh* analysis, which attributes the emergence of the AltQ reading to the existence of an overt/covert *dotti* ‘which’.

If we are to pursue the *wh* analysis, one point that has to be made clear is how the connection between *dotti* ‘which’ and the WhQ type C is created. In the preceding section I have only stated that the WhQ type C is selected because of the [+WH] feature that *dotti* ‘which’ possesses. In a relevant context James Huang (p.c.) and Shigeru Miyagawa (p.c.) (independently) ask me about the acceptability of AltQs when DisjP + *dotti* ‘which’ is in an island. Both nominal disjunctive and clausal disjunctive AltQs retain their AltQ reading:

- (40) Taro-wa [[koohii ka otya]-no dotti-o nonda hito]-ni atta no? (nominal disjunctive)
 T-Top coffee or tea-Lin which-Acc drank person-to met Q
 ‘Which of the following did Taro meet a person who drank it: coffee or tea?’ (AltQ)
 Answers: ‘Someone who drank coffee.’ ‘Someone who drank tea.’ ‘Coffee.’ ‘Tea.’

- (41) Taro-wa [[John-ga Bill-o tataita ka] [Mary-ga Susan-o ketta ka]-no dotti-ga
 T-Top J-Nom B-Acc hit or M-Nom S-Acc kicked or-Lin which-Nom
 okotta genba]-o mokugekisita no? (clausal disjunctive)
 happened scene-Acc witnessed Q
 ‘Which of the following did Taro witness: John hit Bill or Mary kicked Susan?’ (AltQ)
 Answers: ‘The scene in which John hit Bill.’ ‘The scene in which Mary kicked Susan.’

It seems that movement of DisjP + *dotti* ‘which’ does not take place. Thus establishing the connection between *dotti* ‘which’ and the WhQ type C cannot be through movement, contrary to Larson’s (1985) analysis of English. I leave the problem for future research. Note that the behavior of Japanese AltQs shown above is similar to that of disjunctive questions in Mandarin Chinese, which involve *háishi* ‘or’ and are analyzed by Huang (1991) as not involving ellipsis, but not to that of A-not-A questions.

References

- Aloni, Maria, Paul Égré, and Tikitu de Jager (2013) “Knowing Whether A or B,” *Synthese* 190, 2595-2621.
- Alonso-Ovalle, Luis (2006) *Disjunction in Alternative Semantics*, Doctoral dissertation, University of Massachusetts.
- Aone, Chinatsu (1988) “Type-Shifting and Variable-Introducing Disjunction,” *WCCFL* 7, 15-28.
- Beck, Sigrid and Shin-Sook Kim (2006) “Intervention Effects in Alternative Questions,” *Journal of Comparative Germanic Linguistics* 9, 165-208.
- Den Dikken, Marcel (2006) “Either-Float and the Syntax of Co-or-dination,” *Natural Language and Linguistic Theory* 24, 689-749.
- Erlewine, Michael Yoshitaka (2014) “Alternative Questions through Focus Alternatives in Mandarin Chinese,” *CLS* 48, 221-234.
- Han, Chung-Hye and Maribel Romero (2004) “The Syntax of *Whether/Q...or* Questions: Ellipsis Combined with Movement,” *Natural Language and Linguistic Theory* 22, 527-564.
- Hendriks, Petra (2003) “‘Either’ as a Focus Particle,” ms., University of Gronigen.
 (available at: <http://www.let.rug.nl/hendriks/papers/either03.pdf>)
- Higginbotham, James (1991) “Either/Or,” *NELS* 21, 143-155.
- Huang, C.-T. James (1991) “Modularity and Chinese: A-not-A Questions,” *Interdisciplinary Approaches to Language: Essays in Honor of S. -Y. Kuroda*, ed. by Carol Georgopoulos and Roberta Ishihara, 305-332, Kluwer, Dordrecht.
- Kishimoto, Hideki (2013) “Nihongo no Toogo Koozoo: Sookan Tooisetu kara Mita Kaisoo” (The Syntactic Structure of Japanese: The Hierarchy in the View from Correlative Conjunctive Clauses), *Sekai ni Muketa Nihongo Kenkyuu* (Studies of Japanese to the World), ed. by Yoshio Endo, 15-43, Kaitakusha, Tokyo.
- Kitagawa, Chisato and Claudia Ross (1982) “Prenominal Modification in Chinese and Japanese,” *Linguistic Analysis* 9, 19-53.
- Larson, Richard K. (1985) “On the Syntax of Disjunction Scope,” *Natural Language and Linguistic Theory* 3, 217-264.
- Romero, Maribel and Chung-hye Han (2003) “Focus, Ellipsis and the Semantics of Alternative Questions,” *Empirical Issues in Formal Syntax and Semantics* 4, ed. by Claire Beyssade, Olivier Bonami, Patricia Cabre de Hofherr, and Francis Corblin, 291-307, Presses Universitaires de Paris – Sorbonne, Paris.
- Rooth, Mats (1992) “A Theory of Focus Interpretation,” *Natural Language Semantics* 1, 75-117.
- Rooth, Mats and Barbara Partee (1982) “Conjunction, Type Ambiguity, and Wide Scope ‘or,’” *WCCFL* 1, 353-362.
- Ross, John Robert (1970) “Gapping and the Order of Constituents,” *Progress in Linguistics: A Collection of Papers*, ed. by Manfred Bierwisch and Karl Erich Heidolph, 249-259, Mouton, The Hague.
- Schwarz, Bernhard (1999) “On the Syntax of *Either ... Or*,” *Natural Language and Linguistic Theory* 17,

339-370.

Schwarzchild, Roger (1996) *Pluralities*, Kluwer, Dordrecht.

Uegaki, Wataru (2014) "Cross-Linguistic Variation in the Derivation of Alternative Questions: Japanese and Beyond," *The Art and Craft of Semantics: A Festschrift for Irene Heim Vol.2 (MITWPL 71)*, 251-274, MIT.

Yoshida, Tomoyuki (1998) "Wh-Operator vs. Yes/No-Operator," *ICU Language Research Bulletin* 13, 159-172, ICU.