**Abstract**

This article shows that fragmentary negative concord answers in Japanese are derived by movement of the negative concord item to the specifier of C with a negative feature. Movement is driven by an uninterpretable feature on the negative concord item. Multiple fragmentary negative concord answers form a surprising constituent (Takano (2002)).

1. **Introduction**

English allows a fragmentary negative answer that only supplies the value for the wh-phrase in the question in (1). Such a negative answer uses a negative quantifier.

(1) A: Who ate pizza?  
B: Nobody.

While (1) is possible, multiple wh-questions do not allow fragmentary negative quantifiers.

(2) A: Who ate what?  
B: *Nobody, nothing.

Japanese, on the other hand, allows fragmentary negative quantifier answers in both kinds of questions. (3) is an example of a single wh-question, while (4) is a multiple wh-question. They can both be answered by fragmentary NCI answers.

(3) A: Dare-ga pizza-o tabeta-no?  
who-nom pizza-acc ate-Q  
‘Who ate pizza?’  

B: Dare-mo.  
Nobody

(4) A: Dare-ga nani-o tabeta-no?  
who-nom what-acc ate-Q  
‘Who ate what?’
B: Dare-mo nani-mo.
   Nobody nothing
   ‘Nobody, nothing.’

Following Watanabe (2004), we will refer to expressions like dare-mo or nani-mo as negative concord items (NCIs). This paper shows that fragmentary NCI answers in examples like (3) and (4) are derived by movement and ellipsis, that fragmentary NCI answers observe island constraints, that NCIs in Japanese are adjuncts, and that multiple NCI answers like the one in (4) form a surprising constituent (Takano (2002)). As a theoretical consequence, I argue that ellipsis is conditioned by syntactic identity (Fiengo and May (1994), Merchant (2007), Sag (1976)).

2. Island Effects

Since Chomsky (1977), it has been standard to assume that island conditions (Ross (1967)), or the subjacency condition that puts island conditions together, are conditions on movement operations. (5) is an example of unbounded wh-movement, assumed to be the result of successive-cyclic local movement. This is not possible in (6) due to the wh-island condition.

(5) What do you think that Mary ate?
(6) *What do you wonder when Mary ate?

Japanese also permits long-distance wh-movement, and a fragmentary NCI is also possible in response to such a question.

(7) A: John-ga [ Mary-ga nani-o tabeta-to ] omotteiru-no?
    -nom -nom what-acc ate-comp think-Q
    ‘What does John think Mary ate?’

B: Nani-mo.
   Nothing

Nishigauchi (1990) argues that Japanese observes the wh-island condition. The wh-question in (8) is marginal. The fragmentary NCI is even worse than the question itself.

(8) A: ?? John-ga [ Mary-ga nani-o tabeta-kadooka ] siritai-no?
    -nom -nom what-acc ate-whether want-to-know-Q
    ‘What does John want to know whether Mary ate?’
A wh-phrase in a complex NP is perfectly grammatical, but it is impossible to answer such a wh-question with a fragmentary NCI answer.

(9) A: John-ga [ nani-o tabeta ] hito-o sagasiteiru-no?
    -nom what-acc ate-comp person-acc looking-for-Q
    ‘What is John looking for a person who ate?’

B: *Nani-mo.
   nothing

B: *Nani-mo.
   nothing

The above examples illustrate effects of the wh-island condition and the complex NP constraint on fragmentary NCI answers. They also observe the inner island condition (Ross (1983)). This point is shown by (10).

(10) A: Dare-ga pizza-o tabe-nakatta-no?
    who-nom pizza-acc eat-neg-past-Q
    ‘Who didn’t eat pizza?’

B: *Dare-mo.
   Nobody

Thus, not only strong islands, but also weak islands are operative in fragmentary NCIs. The next section proposes an account of this observation.

3. Proposal

Under the standard assumption that subjacency is a condition on movement, the observation in the previous section suggests that fragmentary NCI answers involve movement. Our conclusion therefore is that fragmentary NCI undergoes movement out of these islands before ellipsis applies, as shown in (11), where XP_{ellipsis} is the elliptical constituent.

(11)  

\[
\begin{array}{c}
\text{Dare-mo} \\
\text{XP}_{\text{ellipsis}} \\
\vdots \text{[island \ldots \underline{t}, \ldots \ldots]}
\end{array}
\]
Particularly interesting is the fact that fragmentary NCI answers also observe the inner island condition, as in (10). This shows that the fragmentary NCI in (10) moves out of the scope of the negation. I assume the standard Japanese clause architecture in (12).

(12)
```
CP
  Dare-mo C'
  TP_ellipsis C
  T'
  NegP
  Neg'
  VP Neg
```

The ungrammaticality of (10) suggests that the fragmentary NCI must move out of the scope of negation. Kishimoto (2005) argues convincingly that the negative head raises up to the T head in Japanese. The fragmentary NCI thus raises out of the TP to a higher projection. The reasonable landing site is the CP-spec. I thus assume that the fragmentary negative quantifier moves to the CP-spec, followed by the ellipsis of the complement of the C head, a TP.

An obvious question is why fragmentary NCIs observe subjacency even after ellipsis. The problem is that ellipsis in English is known to cancel island violations. The grammatical (13) would not be grammatical were it not for the ellipsis of the constituent in angled brackets (Chung et al. (1995), Fox and Lasnik (2003), Merchant (2001), Ross (1969) among others).

(13) I believe the claim that he hit someone, but they don’t know who <*I believe the claim that he hit*>.

Our observation that fragmentary NCIs observe subjacency therefore seems to be inconsistent with what is observed in English. However, this is not a major problem. It is pointed out by Romero (1998) and Sauerland (1996) that sluicing with an adjunct wh-phrase as a remnant observes subjacency even after ellipsis.

(14) *The governor investigated whether inflation will rebound strongly, but didn’t announce how strongly; <the governor investigated whether inflation will rebound ti. >
NCIs in Japanese are adjuncts. A piece of evidence for this comes from the following consideration. The answer in (15) shows that the NCI can co-occur with a Case-marked phrase.

(15) A: Dare-ga pizza-o tabeta-no?  
     who-nom pizza-acc ate-Q  
     ‘Who ate pizza?’

     B: Gakusei-ga dare-mo pizza-o tabe-nakatta.  
        Student-nom nobody pizza-acc eat-neg-past  
        ‘None of the students ate pizza.’

The NCI in (15) is similar to a floating quantifier that quantifies the subject.

(16) Gakusei-ga san-nin pizza-o tabe-nakatta.  
     Students-nom three-class pizza-acc eat-neg-past  
     ‘Three students didn’t eat pizza.’

One property of such subject floating quantifiers is that they cannot be preceded by a VP-adverb. Thus, (18) contrasts with (17).

(17) Gakusei-ga san-nin isoide pizza-o tabe-nakatta.  
     Students-nom three-class hurriedly pizza-acc eat-neg-past  
     ‘Three students didn’t eat pizza hurriedly.’

(18) *Gakusei-ga isoide san-nin pizza-o tabe-nakatta.  
     Students-nom hurriedly three-class pizza-acc eat-neg-past  
     ‘Three students didn’t eat pizza hurriedly.’

I will not try to account for this contrast. What is interesting is that the NCI in (15) patterns with the subject floating quantifier.

(19) *Gakusei-ga isoide dare-mo pizza-o tabe-nakatta.  
     Student-nom hurriedly nobody pizza-acc eat-neg-past  
     ‘None of the students ate pizza hurriedly.’
NCIs thus behave like floating quantifiers, a species of adjunct. If NCIs are adjuncts, the above observation that fragmentary NCI answers observe subadjacency is not a problem, since (14) shows that English sluicing also displays island effects when the remnant is an adjunct.

4. Multiple Fragmentary Answers

Let us now focus on multiple fragmentary NCI answers. The account depicted in (12) is based on the assumption that fragmentary NCIs occupy the CP-spec. A question arises is how multiple negative quantifiers, such as the one in (4), are represented. (4) is repeated here.

(20) A: Dare-ga nani-o tabeta-no?  
who-nom what-acc ate-Q  
‘Who ate what?’

B: Dare-mo nani-mo.  
Nobody nothing  
‘Nobody, nothing.’

We show that multiple fragmentary answers form a so-called ‘surprising constituent’ in the sense of Takano (2002).

4.1. Clause-Mates

Multiple wh-questions allow for wh-phrases from two different clauses in a single sentence to take the same scope. The wh-question in (21) has a wh-phrase in the matrix clause and another wh-phrase in the subordinate clause. While the wh-question in (21) is grammatical, the multiple fragmentary NCI answer is not.

(21) A: Dare-ga [ Mary-ga nani-o tabeta-to ] itta-no?  
Who-nom Mary-nom what-acc ate-comp said-Q  
‘Who said that Mary ate what?’

B: *Dare-mo nani-mo.  
Nobody nothing

Fragmentary multiple NCI answers are potentially possible out of a subordinate clause.

(22) A: John-ga [ dare-ga nani-o tabeta-to ] itta-no?  
John-nom who-nom what-acc ate-comp said-Q
‘Who did John say ate what?’

B: Dare-mo nani-mo.

Nobody nothing

Thus, it is not the fact that one of the wh-phrase is subordinated that makes the answer in (21) impossible. The requirement is that the wh-phrases corresponding to multiple fragmentary NCIs must be clause-mates. The next subsection assimilates this observation to a condition on surprising constituents.

4.2. Surprising Constituents

One distinguishing property of the Japanese language is that it permits multiple phrases in the focus position of a cleft construction. As its literal English translation shows, English does not allow corresponding multiple foci in cleft sentences (Takano (2002)).

(23) John-ga t t watasita-no-wa Mary-ni hana(-o)-da.
    -nom passed-NM-top -dat flower-acc-cop

‘It was to Mary flowers that John passed t t.’

Takano’s explanation is that the multiple foci form a constituent, with one focus phrase adjoined to another.

(24) hana-o
    Mary-ni hana-o

We assume this account of (23), and refer to multiple foci forming a constituent as a surprising constituent. (25) shows that constituents from a subordinate clause can form a surprising constituent.

    -nom -nom passed-comp said-nm-top -dat flower-acc-cop

‘It was to Mary flowers that Tom said that John passed t t.’

It is not possible, however, for two phrases out of two different clauses to form a constituent.

(26) *t [ John-ga Mary-ni t watasita-to ] itta-no-wa Tom-ga hana(-o)-da.
    -nom -dat passed-comp said-nm-top -nom flower-acc-cop
‘It was Tom flowers that t said that John passed t to Mary.’

We will not go into the details of this account. The point being made here is that surprising constituents, like fragmentary NCIs, observe the clause-mate condition. Based on this observation, we assume that multiple fragmentary NCIs form a surprising constituent. The proposed structure is shown in (27).

\[
\begin{align*}
\text{CP} & \quad \text{nani-mo} & \quad \text{C'} \\
\text{dare-mo nani-mo} & \quad \text{TP_{ellipsis}} & \quad \text{C}
\end{align*}
\]

Let us now focus on the order of multiple NCIs in the CP-spec.

### 4.3. Scrambling and Fragmentary Answers

In a negative answer to a multiple wh-question, the order of the two negative quantifiers must be parallel to the order of the two wh-phrases in the antecedent wh-question. The subject wh-phrase in the wh-question in (28) precedes the object wh-phrase. Switching the order between the subject and the object between the two in the negative answer gives rise to ungrammaticality. This contrasts with (4).

\[
\begin{align*}
\text{A: Dare-ga nani-o tabeta-no?} \\
\text{who-nom what-acc ate-Q} \\
\text{‘Who ate what?’}
\end{align*}
\]

\[
\begin{align*}
\text{B: *Nani-mo dare-mo} \\
\text{Nothing nobody} \\
\text{‘Nothing, nobody.’}
\end{align*}
\]

Interestingly, when one wh-phrase is scrambled over the other, the negative quantifiers in the negative answer can appear in either order.

\[
\begin{align*}
\text{A: Nani-o} & \quad \text{dare-ga t} \quad \text{tabeta-no?} \\
\text{what-acc} & \quad \text{who-nom ate-Q} \\
\text{‘Who ate what?’}
\end{align*}
\]
In the multiple wh-question in (28), the subject wh-phrase, *dare-ga*, asymmetrically c-
commands the object wh-phrase, *nani-o*. When a phrase A is adjoined to another phrase B, A
asymmetrically c-commands B (Kayne (1994)). Thus, in the CP-spec of (27), *dare-mo* c-
commands *nani-mo*. This means that the c-command relation between the wh-phrases in the
antecedent is preserved between the NCIs in the fragmentary answer. Let us assume that
such c-command relations must be preserved (Huang (1982), Richards (2001), Watanabe
(1992)). In the fragmentary NCI answer in (28), *nani-mo* asymmetrically c-commands *dare-
mo*, but this is not consistent with the c-command relation in the wh-phrases of the antecedent
clause, since in the antecedent wh-question in (28), *dare-ga* asymmetrically c-commands
*nani-o*.

The wh-question in (29) has scrambled wh-phrases, with the object wh-phrase scrambled over
the subject wh-phrase. The scrambled object wh-phrase, *nani-o*, c-commands the subject wh-phrase, *dare-ga*. This c-command relation is consistent with the fragmentary
answer B’ in (29). The subject wh-phrase in the antecedent, *dare-ga*, also c-commands the
trace/copy of the scrambled object. This relation is preserved in the B. Thus, one of the two c-
command relations is consistent with B and B’. It is therefore expected that both of the
answers are possible in (29). In this way, the observation in (28) and (29) can be accounted
for by independent principles of the grammar.

When the wh-phrase is scrambled out of a wh-island, the result is perfectly
grammatical, as seen in (30), which is a scrambling counterpart of (8) (Tanaka (1999)). The
fragmentary NCI answer is also possible in this example.

(30) A: Nani-o, John-ga [ Mary-ga t, tabeta-kadooka ] siritai-no?
    what-acc    -nom    -nom  
    ‘What does John want to know whether Mary ate?’

B: Nani-mo.
nothing

This is in clear contrast to (8), which does not permit fragmentary NCI answer.

The contrast between (8) and (30), as well as the one between (28) and (29), shows that
ellipsis is sensitive to semantically vacuous operations like scrambling, which does not
establish an operator variable relation (see Saito (1989), and more recently Saito (2003)). We
thus conclude that any accounts of ellipsis based solely on semantics are untenable. Two
different accounts of fragmentary NCI answers have been proposed, which both rely on a
semantic identity condition on ellipsis proposed in Merchant (2001). We now critically
examine their proposals.
5. Previous Analyses

5.1. The Feature Copying Account (Watanabe (2004))

Watanabe’s account of fragmentary NCI answers assumes that negative quantifiers are inherently negative. Their negative feature is copied to the negative head which itself is negative. The two \([\text{neg}]\) features on the Neg head cancel each other out, turning the entire NegP to positive.

\[
\text{NegP} \quad \text{VP} \quad \text{Neg} \quad \text{nai}_{[\text{neg}][\text{neg}]} \quad \ldots \text{nani-mo}_{[\text{neg}]} \ldots
\]

Watanabe is concerned with the condition on ellipsis behind the fragmentary NCI answers in (3). The full-fledged counterpart of (3) is shown below. The phrase in < > is elliptical.

(32) A: Dare-ga pizza-o tabeta-no? who-nom pizza-acc ate-Q
   ‘Who ate pizza?’

B: Dare-mo < pizza-o tabe-nakatta>. Nobody pizza-acc eat-neg-past

The problem here is that, while the antecedent wh-question is positive, the presence of dare-mo in the answer requires a negation. Ellipsis is possible under some identity condition, but there is no obvious identity between the positive antecedent wh-question and the elliptical negative phrase. Watanabe’s idea is that the ellipsis is determined entirely by a semantic identity condition (Merchant (2001)). Merchant’s proposal is summarized here.

(33) A constituent \(\alpha\) can be deleted only if \(\alpha\) is e-given.

(34) An expression E counts as e-given iff E has a salient antecedent A, and module \(\exists\)-type shifting,
   a. A entails the F-clo(E) and
   b. E entails the F-clo(A)
The F-closure of \( \alpha \), written as \( \text{F-clo}(\alpha) \) is the result of replacing focus-marked parts with \( \alpha \) with \( \exists \)-bound variables of the appropriate type (module \( \exists \)-type shifting).

The F-closure antecedent wh-question in (32) is

(36) \[ \text{F-clo}(\text{TP} \text{antecedent}) = \exists x. x \text{ ate pizza} \]

Watanabe (2004:571) remains silent about what category deletes in fragmentary NCI answers. His principal claim is that the two negative features on the Neg head cancel each other out, and turn the entire sentence positive. Since every constituent in the ellipsis site deletes except for the NCI, the category that deletes must be as big as NegP. This would require removing the NCI out of the ellipsis site, in particular, out of the NegP. This is especially important in order to account for fragmentary NCIs in examples like (37), where the subject phrase, which precedes the wh-phrase in the antecedent, deletes along with the rest of the sentence, leaving the fragmentary NCI.

(37) A: John-ga nani-o tabeta-no?
    John-nom what-acc ate-Q
    ‘What did John eat?’

    B: Nani-mo < John-ga tabe-nakatta>.
    Nothing John-nom eat-neg-past

Hence, the elliptical category must be higher than the projection that dominates the subject, or the past tense, and the NCI must be outside the ellipsis site. In his footnote 13, Watanabe (2004) alludes to a possible analysis along this line in terms of Foc(us)P (Rizzi (1997)). FocP immediately dominates Top(ic)P, which in turn immediately dominates TP, according to Rizzi (1997). Ignoring TopP, the fragmentary NCI answers must have the structure in (38).
Note that Watanabe’s condition on ellipsis cannot require syntactic identity. This is because while the antecedent wh-question in (32) is positive, and therefore lacks NegP, the fragmentary answer in (32) must contain NegP. The structure that contains NegP cannot be syntactically identical to the one that does not. Hence, the hypothesis that ellipsis is conditioned by semantics is crucial. Since the copied [neg] feature cancels the one on the Neg in (31), the F-closures for the antecedent TP and the one for the elliptical TP in (37) are identical.

One problem with Watanabe’s account is that it is not clear how scrambling, a semantically vacuous operation, affects the possibility of fragmentary negative answers. The contrast between (28) and (29), as well as the one between (8) and (30), shows that scrambling remedies potentially ungrammatical fragmentary answers. The antecedent wh-question in (8) is synonymous with the antecedent wh-question in (30), and therefore, the one in (30) could serve as the antecedent for (8), if ellipsis was conditioned purely by semantics.

5.2. Negative Concord as Universal Quantifiers (Giannakidou (2000))

In a series of works, Giannakidou (1998, 2000, 2006) advances the hypothesis that negative quantifiers in Greek and other languages actually do not have a negative feature. Her account is that they are actually universal quantifiers that must scope over the negation. One of Giannakidou’s arguments against the negative quantifier analysis is based on (41).
(41) *Dare-mo pizza-o tabeta.
   Nobody pizza-acc ate
   ‘Nobody ate pizza.’

Her criticism is that the negative quantifier cannot contribute to the negative meaning of the sentence on its own, as seen by the ungrammaticality of (41), therefore, is not negative. It is clear that this criticism has a problem, since the same criticism applies to any analysis of the negative quantifiers. For instance, consider Giannakidou’s own hypothesis that negative quantifiers are actually universal quantifiers, taking scope over negation. If *dare-mo* in (41) was a universal quantifier, (41) should simply mean what (42). The minimal difference between (41) and (42) is that (42) has a Case-marked universal quantifier.

(42) Dare-mo-ga pizza-o tabeta.
    everybody pizza-acc ate
    ‘Everybody ate pizza.’

One could claim, following Giannakidou’s argument, that *dare-mo* is not a universal quantifier, since it cannot contribute to the universal meaning on its own. The problem that (41) poses is that the example is ungrammatical. What the ungrammaticality of the example shows is that expressions like *dare-mo* are not grammatical on their own under any interpretation, unless they are in the scope of a negation.

5.3. Back to Our Proposal

What is necessary in order to account for (41) is a mechanism that rules out *dare-mo* not contained in the scope of a negation. Our account accomplishes this, if *dare-mo* has an uninterpretable feature. In (41), nothing can check the feature. When a c-commanding negation is present, the uninterpretable feature can be checked as long as the neg probes an uninterpretable feature. The uninterpretable feature on the NCI can therefore work as a goal.

(43) *[Dare-mo[\nuNeg] pizza-o tabe ]-nakatta[\nuNeg].
    Nobody pizza-acc eat-neg-past
    ‘Nobody ate pizza.’

In fragmentary NCI answers, the NCI moves to the CP-spec. We assume that such NCIs check their uninterpretable neg feature against C, which we assume can be negative.

((44) CP
    \[
    \text{Dare-mo[\nuNeg]} \quad \text{C'}
    \]
    TP_{ellipsis} \quad \text{C[\nuNeg]}
In a run-of-mill example of fragmentary NCI answers, the two TPs are identical except for the wh-phrase in the antecedent and the trace/copy bound by the NCI in the ellipsis site.

(45) A: \[TP_A \text{ Dare-ga } \text{ pizza-o tabeta } \text{-no?} \]
\[\text{who-nom pizza-acc ate } \text{-Q}\]
‘Who ate pizza?’

B: \[\text{Dare-mo, } \text{TPellipsis } \text{ t t pizza-o tabeta } \text{> C}_{\text{i[Neg]}}\]
Nobody

In multiple fragmentary NCI answers, both of the NCIs carry an uninterpretable \([Neg]\) feature, with one NCI adjoined to the other. The \([iNeg]\) feature on C, being interpretable, does not delete, and therefore, can check the \([uNeg]\) feature on both of the NCIs.

(46) A: \[TP_A \text{ Dare-ga } \text{ nani-o tabeta } \text{-no?} \]
\[\text{who-nom what-acc ate } \text{-Q}\]
‘Who ate what?’

B: \[\text{Dare-mo } \text{nani-mo } \text{TPellipsis } \text{ t t tabeta } \text{> C}_{\text{i[Neg]}}\]
Nobody nothing
‘Nobody, nothing.’

Our analysis thus allows us to have a syntactically parallel antecedent for the ellipsis site.

Criticizing Giannakidou’s work, Watanabe (2004:567-8) points out that if a clause that contains a negation can be elided under identity with a positive wh-question, the fragmentary answer in (47) should have the negative interpretation, as specified on the example B. This, however, is not a correct prediction. While the fragmentary answer is possible, it only has the positive interpretation in B’.

(47) A: \[\text{Nani-o mita-no?} \]
\[\text{what-acc see-Q}\]
‘What did you see?’

B: \[\text{Hebi(-o), } \text{*t mi-nakatta>.} \]
\[\text{snake-acc see-neg-past}\]
‘< I didn’t see > a snake.’
B': Hebi(-o)_{t} < t_{i} mita>.
snake-acc see-past
‘< I saw > a snake.’

One might think that this criticism also applies to our proposal, if (48) is the structure for the fragmentary answer in (47), and that to this extent, our proposal cannot be maintained, as one of the anonymous reviewers has pointed out.

(48)

\[
\text{CP} \\
\text{Hebi(-o)}_{t} \quad \text{C'} \\
\text{TP}_{\text{ellipsis}} \quad \text{C}_{[\text{Neg}]} \\
\text{t}_{i} \quad \text{mi-ta}
\]

However, note that hebi-o does not carry a feature that drives movement to the specifier of C_{[\text{Neg}]}, and as such, the structure in (48) does not arise. The proper analysis of (47), fragmentary answers with referential NPs, is beyond the scope of this paper. One possibility is that C can have a focus feature (Miyagawa (2010)), and the referential expression in the fragmentary answer has a focus feature [uFoc].

(49)

\[
\text{CP} \\
\text{Hebi(-o)}_{[u\text{Foc}]} \quad \text{C'} \\
\text{TP}_{\text{ellipsis}} \quad \text{C}_{[\text{Foc}]} \\
\text{t}_{i} \quad \text{mi-ta}
\]

If, as seems reasonable, C_{[\text{Foc}]} cannot bear an additional [iNeg] feature, we correctly predict the absence of the negative interpretation in (47).

6. Summary

This article has shown that fragmentary negative answers in Japanese involve movement, on a par with the antecedent wh-question. The observation that fragmentary NCIs observe subjacency strongly suggests that movement is involved in the derivation of fragmentary NCIs. Our account is empirically superior to Watanabe's or Giannadiou's. It captures the observation that syntactic identity is required for ellipsis. It remains to be seen whether or not
the same syntactic condition applies to other elliptical operations in Japanese and other languages.

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