1 Compound Wh-Questions and the Ban on Phrasal Fragments

Japanese allows a (nonecho) wh-in-situ to be located within a compound, as exemplified by (1) (see, e.g., Kageyama 1993:336). Dare-gonomi (meaning ‘to whose taste’) in (1) exhibits rendaku (sequential voicing, a hallmark of Japanese compounding), by which the initial [−voice] consonant of the second noun (N₂) becomes [+voice]. Furthermore, the lexical accent of the first noun (N₁) shifts to the initial syllable of N₂, which is again typical of Japanese compounding. Thus, [N₁ dare] + [N₂ kōnomi] becomes [N₁ [N₂ gōnomi]]. Below, lexical pitch accents are represented by acute accents.

(1) Q: Minná-wa intéría-o [[N₁ dare]-[N₂ gōnomi]]-no everyone-TOP interior-ACC who-taste-GEN soosyoku-ni sita no? decoration-DAT did Q Lit. ‘[Who-taste] decorations did everyone put up in the/their interior?’

A₁: Minná-wa intéría-o [[N₁ musume]-everyone-TOP interior-ACC daughter-[N₂ gōnomi]]-no soosyoku-ni sita (no da/desu). taste-GEN decoration-DAT did COMP COP Lit. ‘Everyone put up [daughter-taste] decorations in the/their interior.’

A₂: [Musumé] (da/desu). daughter COP ‘Daughter(s).’

We dub the construction in (1) the compound wh-question. Compound wh-questions can be responded to with sentential answers like (1A₁) or fragment answers like (1A₂).

Interestingly, compound wh-questions disallow some fragment answers that their semantically equivalent phrasal wh-questions allow. Compare (1) with its synonymous phrasal counterpart (2).

(2) Minná-wa intéría-o [NP dare]-no kōnomi-no everyone-TOP interior-ACC who-GEN taste-GEN soosyoku-ni sita no? decoration-DAT did Q Lit. ‘Decorations to whose taste did everyone put up in the/their interior?’

(1A₂) and (3a) are felicitous fragment answers to both (1) and (2). In contrast, (3c) and (3d) are infelicitous answers to (1), though they are perfectly acceptable as answers to (2). See also (3b), whose acceptability as a fragment answer to (1) varies among speakers to

This work is supported by JSPS KAKENHI grant numbers JP16K02779 and JP18K00660. We thank Bridget Samuels and Yosuke Sato for their valuable comments.
a certain extent; the same speakers find it perfect as a fragment answer to (2).

(3) a. [Hito-ri-músume] (da/desu).
   one-CL-daughter COp
   ‘(The/Their) only daughter(s).’
   (as a fragment answer to: ✓(1Q), ✓(2))
b. [Ano musumé] (da/desu).
   that daughter COp
   ‘That daughter.’
   (as a fragment answer to: ?/??(1Q), ✓(2))
c. [Oyome-ni itta musumé] (da/desu).
   marriage got daughter COp
   ‘Daughter(s) who got married.’
   (as a fragment answer to: *(1Q), ✓(2))
d. [Musumé hitó-ri] (da/desu).
   daughter one-CL COP
   ‘One (of the/their) daughter(s).’
   (as a fragment answer to: *(1Q), ✓(2))

The infelicitous fragment answers (3c–d) to the compound wh-question (1Q) are phrasal constituents that cannot fit into a compound, as shown by (4c–d) (the nonelliptical sentential answers corresponding to (3c–d)). (3b) as a fragment answer to (1Q) exhibits the same degree of acceptability as (4b). Repetition or omission of arguments (minná-wa and intéría-o) does not affect the acceptability (indicated by . . . ).

(4) a. . . . [[(hitori)-musume]-gónomi]-no soosyoku-ni
   only-daughter-taste-GEN decoration-DAT
   sita (no da/desu).
   did COMP COP
   Lit. ‘Everyone put up [(only) daughter]-taste] decorations in the/their interior.’
b. ?/?? . . . [[ano musume]-gónomi]-no soosyoku-ni
   that daughter-taste-GEN decoration-DAT
   sita (no da/desu).
   did COMP COP
   Lit. ‘Everyone put up [(that daughter]-taste] decorations in the/their interior.’
c. * . . . [[oyome-ni itta musume]-gónomi]-no
   marriage got daughter-taste-GEN
   soosyoku-ni sita (no da/desu).
   decoration-DAT did COMP COP
   Lit. ‘Everyone put up [(daughter(s) who got married]-taste] decorations in the/their interior.’
d. * . . . [[musume hito-ri]-gónomi]-no soosyoku-ni
   daughter one-CL-taste-GEN decoration-DAT
   sita (no da/desu).
   did COMP COP
   Lit. ‘Everyone put up [(one of the/their daughters]-taste] decorations in the/their interior.’
The deviance of (4b–d) is presumably due to lexical integrity, that is, the general tendency to avoid phrasal constituents within compounds (e.g., Di Sciullo and Williams 1987). This can be corroborated by comparing the examples in (4) with the perfectly acceptable examples in (5), where the constituents are located in NP-argument positions.

\[(5)\]

a. . . . [(hitori)-müsume]-no kónomi-no soosyoku-ni only-daughter-GEN taste-GEN decoration-DAT sita (no da/desu).
   did COMP COP
   ‘Everyone put up decorations of [the/their (only) daughter]’s taste in the/their interior.’

b. . . . [ano musumé]-no kónomi-no soosyoku-ni sita that daughter-GEN taste-GEN decoration-DAT did (no da/desu).
   COMP COP
   ‘Everyone put up decorations of [that daughter]’s taste in the/their interior.’

c. . . . [(øyome-ni itta] musumé]-no kónomi-no marriage got daughter-GEN taste-GEN soosyoku-ni sita (no da/desu).
   decoration-DAT did COMP COP
   Lit. ‘Everyone put up decorations of [the/their daughter(s) [who got married]]’s taste in the/their interior.’

d. . . . [musumé [hitó-ri]-no kónomi-no soosyoku-ni daughter one-CL-GEN taste-GEN decoration-DAT sita (no da/desu).
   did COMP COP
   Lit. ‘Everyone put up decorations of [[one of the/their daughters]’s taste] in the/their interior.’

Apart from some marginal cases such as (4b) (see Kageyama 1993, Sato 2010, Nishiyama 2017), Japanese compounds exclude phrasal elements that require genuine syntactic computations, such as relative CPs in need of clausal syntax (4c) and QPs in need of Quantifier Raising or some sort of scope-taking operation (4d).

We have observed that unlike phrasal \(wh\)-questions, compound \(wh\)-questions cannot allow phrasal elements like (3b–d) as their fragment answers, and that such fragment answers yield more or less the same degree of acceptability as the lexical integrity violations observed in (4b–d). This is summarized as the generalization in (6).\(^1\)

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\(^1\) When Y is a bound morpheme like \(-ya\) ‘shop’ in (i), X cannot stand alone as a fragment answer, perhaps because Y is too morphophonologically dependent to block X’s [+F] (focus) from percolating up to \([N X-Y]\) (see section 3 for [+F]-percolation).
(6) For wh-questions with a compound \([N \, W-Y]/[N \, Y-W]\), \(W\) a wh-word and \(Y\) a N(oun), the felicity of the fragment answer \(X\) (\(da/desu\)) correlates with the availability of a compound \([N \, X-Y]/[N \, Y-X]\).

2 Implications for the Identity Condition on Deletion

The generalization in (6) has significant implications for the identity condition on deletion, one of the controversial issues in the study of ellipsis. Merchant (2001) and others argue that some sort of semantic identity is sufficient to license deletion, whereas Chung (2013) and others claim that deletion must be conditioned by structural identity. We will argue that the contrast between compound wh-questions and phrasal wh-questions constitutes a new piece of evidence for structural identity over semantic identity.

To our knowledge, the most influential hypothesis concerning semantic identity is Merchant’s (2001:26) “focus-assisted” mutual entailment (FAME), which we state as in (7).

(7) An expression \(E\) can be deleted only if \(E\) has a salient antecedent \(A\) and, modulo \(\exists\)-type shifting, \(A\) entails \(F\text{-clo}(E)\) and \(E\) entails \(F\text{-clo}(A)\) (FAME(A, E) for short).

We can obtain \(F\text{-clo}(X)\) by replacing the focus-marked part of \(X\) with an \(\exists\)-bound variable of the appropriate type. For example, focus is put on \(dare\) ‘who’ in the compound wh-question (1Q) and \(musume\) ‘daughter(s)’ in its sentential answer (1A<sub>1</sub>). Then, \(F\text{-clo}(1Q)\) and \(F\text{-clo}(1A_1)\) are both something like ‘For all \(x, x\) a person, there exists \(y\) such that \(x\) put up the decorations to \(y\)’s taste in the/\(x\)’s interior’. Therefore, FAME((1Q), (1A<sub>1</sub>)) holds, and the fragment answer (1A<sub>2</sub>) can be derived from the underlying sentential answer (1A<sub>1</sub>) via deletion in conformity with (7).

FAME (7) was originally proposed to capture the relation between the elided clause and the antecedent clause. A natural consequence of theories of semantic identity like FAME (7) is that two antecedents \(X\) and \(Y\) should allow the same set of possible elliptical structures, insofar as \(X\) and \(Y\) are semantically equivalent. For example, the to-infinitive \(X\) in (8) and the gerundive \(Y\) in (9) mutually entail each other under \(\exists\)-type shifting, and they can equally license deletion of the same constituent \(Z\) ((9) is cited from Van Craenenbroeck and Merchant 2013:724).

(i) Q: Sore, nani-ya-(san)-de katta no?
    that what-store-HON-LOC bought Q
    Lit. ‘At the what-store did you buy that?’
A: Hana *(ya-(san)) (da/desu).
   flower-store-HON COP
   ‘A flower shop.’
To decorate for the holidays is easy if you know how to decorate for the holidays.

Decorating for the holidays is easy if you know how to decorate for the holidays.

Now, we argue that the compound wh-question (1Q) and the phrasal wh-question (2) are also semantically equivalent. Observe that a minimal pair of sentences with the compound X-gonomi ‘X-taste’ and its phrasal counterpart X-no konomi ‘X’s taste’, exemplified by (4a) and (5a), mutually entail each other: there can be no situation where one is true while the other is false. The same should hold true for wh-questions like (1Q) and (2) as well. If so, then semantic identity like (7) predicts that (1Q) and (2) should allow the same set of possible fragment answers, contrary to fact (see (3)).

Interestingly, the contrast between words and phrases disappears in nonelliptical sentential answers. Thus, sentential answers such as (4a) and (5a–d) are perfectly acceptable answers not only to the phrasal wh-question (2) but also to the compound wh-question (1Q), while (4b–d) are deviant regardless of whether they are offered for (2) or (1Q). Generally, compound wh-questions and phrasal wh-questions accept exactly the same set of nonelliptical sentential answers. This fact again strongly suggests that compound wh-questions and phrasal wh-questions are semantically equivalent, because under the standard semantic analysis of questions, a question denotes the set of propositions embodying its possible answers (Hamblin 1973, Karttunen 1977). Thus, anyone who wants to explain the relevant data by semantic identity alone must guarantee that compound wh-questions and phrasal wh-questions are equivalent in Hamblinian denotations, and that they nevertheless exhibit some difference in meaning that constrains ellipsis in fragment answers in the particular fashion depicted in (6). We doubt that such a semantic analysis is feasible.

An LI reviewer points out that there are some cases where semantic identity seems to work well. Observe the compound wh-question (10a) and the phrasal wh-question (10b).

(10) a. [[N [N1 Nani]-[N2 gorosi]]-no otoko]-ga uti-ni kita no?  
   Lit. ‘[The [N [N1 what]-[N2 slaughter]] man] came to our house?’

b. [[[NP Nani]-o {korosita/korosu}] otoko]-ga uti-ni kita no?  
   Lit. ‘[The man [that {killed/kills} [NP what]]] came to our house?’

The ban on phrasal constituents (6) clearly holds for the compound wh-question (10a): unlike (10b), (10a) disallows phrasal fragment answers like (11b).
    insect COP
    ‘Insect(s).’
    (as a fragment answer to: ✓(10a), ✓(10b)/(12))

    insect twenty-five-hop COP
    ‘Twenty-five insects.’
    (as a fragment answer to: *(10a), ✓(10b)/(12))

An account based on semantic identity may work fine for this contrast, because (10a) and (10b) are arguably not completely synonymous: compounds like (10a) often bring some special meaning that is not present in their phrasal counterparts like (10b), such as habituality or naming function (see Downing 1977, Kageyama 1993:8). Thus, musi-gorosi-no otoko ‘insect-slaughter man’ refers to a man who putatively or habitually kills quite a few insects, and it is not extensionally equivalent to musi-o korosita/korosu otoko ‘man that killed/kills (an) insect(s)’: even a man who happened to kill just one insect deserves the latter name, but not the former. To achieve a meticulous (mutually entailing, with the assistance of focus) paraphrase, we sometimes need much more laborious descriptions like (12) (the reviewer’s example, adapted).

(12) [[Nani-o kimyoonimo syuukantekini korosu] otoko]-ga
    what-ACC strangely habitually kills man-NOM
    uti-ni kita no?
    home-to came Q
    Lit. ‘[The man [that strangely habitually kills what]] came
to our house?’

The paraphrasing difficulty quite generally arises for deverbal nouns and their tensed clause counterparts, like nani-gorosi ‘what-slaughter’ and nani-o korosu ‘kill what’. However, we seem to be able to work out a close enough paraphrase for most cases, which surely makes the task for semantic approaches more difficult. For this reason, we avoided examples like (10a–b) when choosing (1Q) and (2), whose synonymy rests on firm ground.

Now, a much simpler solution is to build upon the structural difference between compounds and phrases. Therefore, we hypothesize that mere semantic equivalence is insufficient, and ellipsis is instead constrained by the structural identity condition (13).

(13) The target XP of deletion must be structurally isomorphic
to the antecedent XP.

According to (13), deletion can derive the surface form of a fragment answer only if the elided CP underlying the fragment answer is structurally isomorphic to its antecedent CP. Thus, the availability of fragment answers such as (1A_2)/(3a) to the compound wh-question (1Q) hinges on CP structures isomorphic to (1Q), which would be something like (1A_1)/(4a). Similarly, for (3b–d), their (un)acceptability as fragment answers to (1Q) is due to the (un)availability of structures iso-
morphic to (1Q) (see (4b–d)). In this manner, the correlation in (6) can be straightforwardly accounted for by structural identity (13). (13) further correctly predicts that the contrast in (3a–d) disappears when the antecedent is the phrasal wh-question (2). Thus, capitalizing on the felicitous isomorphic structures like (5a–d), deletion may freely derive the felicitous fragment answers (3a–d) to the phrasal wh-question (2).

To sum up, the contrast between compound wh-questions and phrasal wh-questions regarding their possible fragment answers provides a novel argument for structural identity (13) over semantic identity like FAME (7).

3 Implications for the Structure of Fragment Answers

Compound wh-questions also have implications for another controversial issue: do elliptical constructions like fragment answers involve hidden (deleted) structures? Our data provide evidence for deletion approaches over nondeletion ones. (14a–b) represent nondeletion analyses of fragment answers while (14c–d) represent deletion analyses.

(14) a. Nonstructural analysis
   \[\text{NP} \text{N}\]

b. Bare copular analysis
   \[\text{CP} C^0 [XP \text{ pro} [X \text{ X}^0 \text{ copula} \text{NP} N]]]\n
c. Movement-and-deletion analysis
   \[\text{CP} \text{NP} [C C^0 [XP \ldots \text{NP} \ldots]]]\n
   \[\text{Movement-and-deletion analysis}\]
   \[\text{In-situ deletion analysis}\]
   \[\text{CP} C^0 [XP \ldots \text{N(P)} \ldots]\]

In the nonstructural analysis (14a), the fragment stands alone, involving no structure other than what is overtly realized (Culicover and Jackendoff 2005, Jacobson 2016, Nagatsugu 2010, 2013). In the bare copular analysis (14b), the fragment serves as the predicate of a copular construction with the null subject pro (Saito 2004). In the movement-and-deletion analysis (14c), the fragment moves out of the ellipsis site XP to survive deletion (Merchant 2004, Saito 2004, Nishigauchi 2006, 2010, 2011, Nishigauchi and Fujii 2006). In the in-situ deletion analysis (14d), the focus-marked fragment stays inside the ellipsis site XP, while deletion only affects nonfocused recoverable elements (Den Dikken, Meinunger, and Wilder 2000, Van Craenenbroeck and Den Dikken 2006, Kimura 2010, 2013a,b, Abe 2015, Kimura and Narita 2017).

2 Nouns like musume ‘daughter’ lose their lexical accents within compounds like musume-gōno ‘daughter-taste’ in (1A). Under the in-situ deletion analysis (11d), the fragment answer (1A2) should be embedded within the compound musume-gōno ‘daughter-taste’, so readers may wonder why musume ‘daughter’ can preserve its lexical accent. One may follow Nishiyama (2017:169) and assume that accent in Japanese is not determined immediately upon word formation and that accentuation applies to the structure obtained after all the syntactic computations are complete.
The nondeletion analyses (14a–b) cannot straightforwardly explain why compound *wh*-questions disallow some of the fragment answers that the semantically equivalent phrasal *wh*-questions allow. These analyses cannot resort to structural identity like (13), simply because they do not assume deletion and thereby exclude the syntax of antecedent questions from consideration. Hence, the contrast between semantically equivalent compound *wh*-questions and phrasal *wh*-questions regarding their possible fragment answers is just accidental for the nondeletion analyses.

In contrast, the deletion analyses (14c–d) can provide a straightforward account, capitalizing on the structural identity condition on deletion (13). Under the deletion analyses, fragment answers are derived from sentential answers that are isomorphic to antecedent *wh*-questions. Therefore, it is no surprise that the acceptability of fragment answers like (1A2)/(3a–d) for the compound *wh*-question (1Q) corresponds to the availability of isomorphic sentential answers like (1A1)/(4a–d), as predicted by (13).

Moreover, data from compound *wh*-questions and fragment answers require refinement of the existing deletion analyses (14c–d). As for the movement-and-deletion analysis (14c), one question remains to be answered: why is it possible to move the fragment out of a compound? Generally, elements inside a word cannot undergo syntactic movement (another aspect of lexical integrity; Di Sciullo and Williams 1987). For instance, Saitó’s (2004) cleft movement-and-deletion analysis requires the compound-internal *N* musume ‘daughter’ in (1A2) or the null operator to move out of the compound. Merchant’s (2004), Nishigauchi’s (2006, 2010, 2011), and Nishigauchi and Fujii’s (2006) focus movement analyses face the same problem: the compound-internal element as a fragment must move out of the compound via focus movement. However, such extraction is generally prohibited, as shown in (15) for cleft movement and (16) for focus movement. (Focus is henceforth indicated by small capitals.)

(15) ![Example sentence](http://www.mitpressjournals.org/ddo/content/10.1162/ling_a_00362/1.png)

Lit. ‘It is *daughter* that everyone put up [taste] decorations in the/their interior.’

(16) ![Example sentence](http://www.mitpressjournals.org/ddo/content/10.1162/ling_a_00362/1.png)

Lit. ‘*Daughter*, everyone put [taste] decorations in the/their interior.’

(15) and (16) clearly indicate that the compound-internal *N* musume ‘daughter’ in (1A2) cannot undergo cleft movement or focus movement. Therefore, the analyses resorting to these movement operations
must explain why the deviant structures (15) and (16) can be the sources for the fragment answer (1A2).

An LI reviewer hints at another type of movement analysis, in which extraction out of the ellipsis site is rendered unnecessary by pied-piping the entire compound, and its recoverable part is subsequently reduced by “extra deletion” proposed in An 2016. For instance, the derivation of (1A2) would proceed as in (17): (a) a phrase containing the compound undergoes movement; (b) ordinary deletion applies; and (c) the domain of deletion is extended to one or more linearly adjacent elements (extra deletion).

\[
(17) \quad \text{a. } [[\text{Musume-gónomi]-no soosyoku-ni}],
\text{daughter-taste-GEN decoration-DAT}
\quad \begin{array}{l}
\text{[XP minná-wa intéría-o tì sita no] da.}
\text{everyone-TOP interior-ACC did COMP COP}
\end{array}
\]
\[
\text{b. } [[\text{Musume-gónomi]-no soosyoku-ni}], [[XP minná-wa intéría-o tì sita no] da.}
\]
\[
\text{c. } [[\text{Musume-gónomi]-no soosyoku-ni}], [[XP minná-wa intéría-o tì sita no] da.}
\]

However, there are cases to which An’s extra-deletion analysis cannot be readily extended. One such case is (18A1), where the fragment answer corresponds to the second element of the wh-compound ánti-náni ‘anti-what’. Again, phrasal fragment answers like (18A2) are unacceptable for the compound wh-question (18Q).

\[
(18) \quad \text{Q: } pro [[\text{anti}]-[\text{náni}]-no dantai-ní haitta no?}
\text{anti-wh-GEN group-DAT enrolled Q}
\quad \text{Lit. ‘An [[N1 anti]-[N2 what]] group have you enrolled in?’}
\]
\[
\text{A1: } [[\text{Zyuu-kisei-hóoan}]] (da/desu).
\text{gun-control-bill COP}
\quad \text{‘(A/The) gun control bill.’}
\]
\[
\text{A2: } *[[[\text{Zyúu-o kiseisuru}]} hooan] (da/desu).
\text{gun-ACC control bill COP}
\quad \text{‘(A/The) bill that controls guns.’}
\]

An (2016) argues that extra deletion can only affect the element(s) adjacent to the target XP of ordinary deletion. If so, it cannot derive (18A1), for which it must affect anti, an element that is not adjacent to the putatively deleted XP, as shown in (19).

\[
(19) \quad [[\text{ánti-}Z\text{YUU-KISEI-HÓOAN]-no dantai-ní }\text{[XP pro-} t]
\text{anti-gun-control-bill-GEN group-DAT}
\quad \text{haitta} (\text{no} (da/desu).}
\text{enrolled COMP COP}
\]

\[3\] Rendaku and N1-deaccentuation typical of native vocabulary (Yamato Japanese) are absent here, presumably due to the loanword nature of anti.
A more promising way to maintain the movement-and-deletion analysis may be to resort to “repair by ellipsis” (Chomsky 1972, Merchant 2008), which holds that violations of syntactic conditions like islands can be nullified by deleting the material containing the violations. Suppose that what makes structures like (15)/(16) deviant is a species of island constraint, Compound Island as we may call it, and that the island violations in question are repairable by ellipsis. This allows the derivation of (1A2) from (15)/(16).

However, this account leaves one important question: why can deletion repair violations of (i) Compound Island (one aspect of lexical integrity), but not (ii) the ban on irreducible phrases within words (another aspect of lexical integrity)? As the correlation in (6) clearly suggests, the deviance of (3b–d) is due to (ii), or specifically to the fact that the relevant fragment originates from the compound-internal position. However, this type of information is exactly what the repair mechanism for Compound Island (i) must cancel out to derive felicitous examples like (3a). It thus requires a further explanation: why Compound Island violations (i) can be selectively ameliorated while violations of the ban on irreducible phrases within words (ii) cannot.

One possible answer, hinted at by an LI reviewer, is to assume that the deviance of (3b–d) is not a matter of island violations after all, but rather owes to the notion that a phrase (syntactic constituent) cannot be generated within a word in the first place, for whatever reason underlies the discrepancy between syntax and morphology. Under such an analysis, it could be the case that violations of Compound Island (i) are repairable by ellipsis, while no repair mechanism applies to the ban on irreducible phrases within words (ii). This approach predicts that the acceptability of phrasal fragment answers to compound wh-questions is an all-or-nothing matter (generable vs. un-generable). This is, however, falsified by marginally acceptable cases like (3b), whose mild deviance is presumably due to (ii) (cf. (6)). This again shows that repair by ellipsis would not be a satisfactory solution and would not explain why some conditions are repairable but others are not.

Recourse to repair by ellipsis is not necessary under the in-situ deletion analysis (14d), in which the fragment answers can stay within the compound, as in (20).

```
(20)  a. [XP --- [[[N1 MUSUME]-[[N2 genomi]] no-soosyoku-ni
             daughter-taste-GEN decoration-DAT
             sita no] (da/desu).]
             did COMP COP

   b. [XP pro [[[N1 ZYUU-KISEI-HOAN]-[[N2 anti]]-no
             anti-gun-control-bill-GEN
             dantai ni haitta no] (da/desu).]
             group-DAT enrolled COMP COP
```

Since no extraction out of a compound takes place under this analysis, no additional mechanism is required to account for the felicity of (20),
or for the deviance of examples like (3b–d) that correlates with the status of their isomorphic structures (4b–d) (see (6)).

There is additional evidence from scope interpretation that fragments may stay within their respective compounds. Observe the minimal pair in (21a–b).

(21) a. [Roku-nin-gorosi]-ga hoodoo-sare-ta (no da/desu).
   six-CL-murder-NOM report-PASS-PST COMP COP
   ‘The murder of six people was reported.’
   (murder > 6; *6 > murder)

b. Rokú-nin, [NP ei korosi]-ga hoodoo-sare-ta (no
six-CL murder-NOM report-PASS-PST COMP
da/desu).
   COP
   ‘As for six (victims), [the murders e_i] were reported.’
   (*murder > 6; 6 > murder)

b’. [(ei korosi]-ga hoodoo-sare-ta no]-wa ROKÚ-NIN_i
   murder-NOM report-PASS-PST COMP-TOP six-CL
   da/desu.
   COP
   Lit. ‘It is six (victims), of whom [the murders e_i] were
   reported.’
   (*murder > 6; 6 > murder)

In (21a), roku-nin-gorosi ‘the murder of six people’ forms a compound, and roku-nin ‘six people’ can only take scope within the compound: there is a single mass/serial murder of six people that was reported. In (21b), by contrast, roku-nin is located outside of the NP headed by korosi ‘murder’ and takes scope above the NP, just like the cleft in (21b′): as for six victims, each of their murders was reported (so there were six murders in total).

Now, consider the compound wh-question (22Q) and the fragment answer (22A).

(22) Q: [[Nan-nin]-gorosi]-ga hoodoo-sare-ta no?
   how-many-CL-murder-NOM report-PASS-PST Q
   Lit. ‘The [[how-many-people]-murder] was reported?’

A: Rokú-nin (da/desu).
   six-CL COP
   ‘Six.’ (= ‘The murder of six people was reported.’)
   (murder > 6, *6 > murder)

In (22A), roku-nin ‘six people’ can only take narrow scope. This fact is straightforward under the in-situ analysis (23), in which it stays inside the compound, just like in (21a).

(23) [Roku-NIN]-gorosi]-ga hoodoo-sare-ta no da/desu.
   six-CL-murder-NOM report-PASS-PST COMP COP
   ‘(It is that) the murder of six people was reported.’

In contrast, obligatory narrow scope is unexpected under the movement-and-deletion approach, in which roku-nin ‘six people’ must
move out of the elliptical site XP as in (24a–b), hence should be able to take scope over the compound, just like (21b–b').

(24) a. (*)\text{ROKU-NIN, }\left[\text{\text{NP, } grindstone\text{-}ga hoodoo\text{-}sare\text{-}ta-six-CL-murder-NOM report-PASS-PST no\text{-}COMP COP da/desu.}\right]
b. (*)\text{\text{XP, } grindstone\text{-}ga hoodoo\text{-}sare\text{-}ta no\text{-}wa murder-NOM report-PASS-PST COMP-TOP ROKU-NIN, da/desu.}
\text{six-CL COP}

To account for the narrow scope interpretation, then, the movement-and-deletion approach in (24a–b) must add some assumption to guarantee that the moved quantifier somehow obligatorily reconstructs into the elided compound structure.\footnote{It may be that (21b–b') are not derived via movement of \text{ROKU-NIN} ‘six people’ from the noun-internal argument position (\text{e}), in which case they are not exactly parallel to the hypothetical movement-and-deletion derivations in (24). Even so, the obligatory narrow scope interpretation of (22A) remains unexpected under the analyses in (24a–b).}

The in-situ analysis does not require any special mechanism to explain the scope interpretation and lexical integrity effects (3b–d). However, it also needs further refinement. For instance, if we assume with Van Craenenbroeck and Den Dikken (2006) that in-situ deletion elides all recoverable elements except focus, then it is surprising that the fragment answer (25), where a constituent larger than the focus element survives deletion, is also possible. A more articulated notion of recoverability is hence required.

(25) \text{[[+F] ROKU-NIN\text{-}g\text{\text{-}rosoi} (da/desu). ([+F]: focus)}
\text{six-CL-murder COP}
\text{Lit. ‘Six-murder.’ (‘The murder of six people was reported.’)}
\text{(✓ as a response to (22Q))}
\text{(murder > 6, *6 > murder)}

One possible refinement is to assume that the focus of \text{ROKU-NIN} ‘six people’ may undergo optional feature percolation up to \text{ROKU-NIN\text{-}g\text{-}rosoi} ‘the murder of six people’, as in (26) (see, e.g., Selkirk 1995).

(26) \text{[[+F] [[+F] ROKU-NIN\text{-}g\text{\text{-}rosoi\text{-}ga hoodoo\text{-}sare\text{-}ta no}]
\text{six-CL-murder-NOM report-PASS-PST COMP}
\text{da/desu.}
\text{COP}

\footnote{(22A) cannot be explained by the bare copular analysis (14b), either. Sentential answers with pronominal subjects are excluded for quantificational compound \text{wh}-questions like (22Q) (see (i)), and the same should hold for a null subject pro as well.}

(i) \text{So\text{-}ra/He\text{-}ra/Saito\text{-}ra\ldots -wa roku\text{-}nin (da/desu).}
\text{[it\text{-}PL/he\text{-}PL/he\text{-}PL\ldots -TOP six-CL COP}
\text{(* as a response to (22Q))}
Needless to say, the mechanism of feature percolation awaits further investigation.

In this section, we have shown that the contrast between compound $wh$-questions and phrasal $wh$-questions regarding their possible fragment answers constitutes a novel piece of evidence for deletion approaches (14c–d) over nondeletion approaches (14a–b). It further reveals some necessary refinement of the two types of deletion analyses (14c–d). The movement-and-deletion approach (14c) needs some additional mechanisms of selective repair by deletion and obligatory scope reconstruction. In contrast, the in-situ analysis (14d) needs to define how and in what environment deletion can affect apparently recoverable elements. Further evidence is required to determine which approach ultimately fares better in terms of theoretical simplicity and empirical coverage.

4 Conclusion

We argued that data from compound $wh$-questions and fragment answers in Japanese have special significance for two controversial issues pertaining to ellipsis: the identity condition on deletion and the presence of elided structure. We showed that semantic identity alone is insufficient to account for the contrast between compound $wh$-questions and phrasal $wh$-questions regarding their possible fragment answers, and that structural identity like (13) is necessary to explain the relevant data. We also demonstrated that data from fragment answers to compound $wh$-questions pose serious problems for nondeletion approaches (14a–b), while they also necessitate further refinement of the deletion analyses (14c–d).

References


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