

MOVEMENT AND ELLIPSIS IN AFTERTHOUGHT RIGHT DISLOCATION, SLUICING AND FRAGMENTS*

*Junko Shimoyama, Alex Drummond¹, Bernhard Schwarz and Michael Wagner
McGill University and Queen Mary University of London¹*

1. Afterthought Right Dislocation: the right periphery as the left periphery

In an analysis of Afterthought Right Dislocation (ARD) that we will call the Fronting & Deletion (FD) analysis, the constituent that occurs at the right periphery of a clause (e.g. *Bob le chef* in (1a)) is in fact located at the left periphery of another clause that follows the first as shown in (1b). The rest of the second clause undergoes PF deletion. This type of analysis was originally proposed for a similar construction in Japanese (Abe 1999, Tanaka 2001) and most recently extended to Dutch and German by Ott and de Vries (2015). (See also Kuno 1978, Whitman 2000, Takita 2014, Park and Kim 2009, Yoon 2013, among others.)

- (1) a. Julie invited a famous cook: BOB LE CHEF! (Specificational ARD)
b. [_{CP₁} Julie invited a famous cook] [_{CP₂} BOB LE CHEF [~~Julie invited t~~]]
c. [_{CP₁} ... correlate ...] [_{CP₂} XP [... t ...]] (Ott and de Vries 2015)

Perhaps the strongest argument for the FD analysis is that the mechanisms independently motivated in the grammar, i.e., (i) leftward movement and (ii) clausal ellipsis, take care of ARD, leaving no need for construction-specific rules. For Dutch and German, the relevant leftward movement assumed is what is known as topicalization, a movement to the pre-field, while for Japanese, it is what is known as scrambling. The clausal ellipsis process proposed for ARD in the FD analysis is also found elsewhere in the grammar, according to Ott and de Vries (2015), in sluicing and fragment utterances as in (2) (Merchant 2001, 2004).

- (2) a. Julie invited someone today, but I don't know who [~~Julie invited t today~~]
b. A: Who did Julie invite today?
B: Bob le chef [~~Julie invited t~~].

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This paper is an interim report on our exploration of the question as to whether the leftward movement and clausal ellipsis proposed for ARD in the FD analysis indeed reduce to existing phenomena. We report some challenges to the FD analysis by presenting properties of ARD that cannot be completely reduced to independent phenomena such as leftward movement and clausal ellipsis. In what follows, we will first report on our preliminary findings regarding clausal ellipsis: (i) we identify a puzzle shared by the three constructions, ARD, Sluicing and Fragment utterances, which we call a No-source puzzle; (ii) the shared No-source puzzle presents a challenge to the analyses of these phenomena currently on the market; and (iii) the shared puzzle, on the other hand, is suggestive of some basic ellipsis mechanism underlying these three constructions. We will then turn our attention to the nature of the leftward movement that needs to be assumed for ARD in Japanese in the FD analysis, and show that such leftward movement cannot be reduced to scrambling.

Before moving on, a couple of notes are in order. An ARD example like (1a) above is called Specificational ARD in Ott and de Vries (2015), while an ARD like (3a) below is called Predicative ARD. Its derivation in the FD analysis is shown in (3b), along with the general recipe in (3c). In both Specificational ARD and Predicative ARD, the phrase that appears at the right periphery is focused.

- (3) a. Julie invited Bob le chef: A FAMOUS COOK! (Predicative ARD)
 b. $[_{CP_1}$ Julie invited Bob le Chef] $[_{CP_2}$ A FAMOUS COOK [~~he~~-is-~~t~~]]
 c. $[_{CP_1}$... correlate_i ...] $[_{CP_2}$ XP [~~Y~~-~~P~~-~~BE~~-~~t~~]]

The example in (4) below illustrates what is typically referred to as Right Dislocation in the literature, in which the phrase at the right periphery is deaccented. In Ott and de Vries (2015), this construction is called Backgrounding RD, and it is given the same syntactic analysis as Afterthought RD despite the differences in their prosodic and semantic/pragmatic properties. We leave for future the question of whether or not Backgrounding and Afterthought RD's should indeed receive the same analysis.

- (4) I really like her, the new Dean.

2. Connectivity effects in ARD

In ARD, the right-peripheral phrase appears to bear grammatical relations to constituents in the host clause, exemplified by phenomena such as case matching, scope taking, binding, and island effect. This is known as connectivity effects. In the FD analysis, the apparent connectivity between the right-peripheral XP and the preceding clause (CP_1 in (1) and (3)) arises from within CP_2 . This is where the FD analysis contrasts with a type of analysis that can be referred to as a direct syntactic connection analysis, in which the right-peripheral XP is syntactically connected to its correlate at some level of representation, for example by forming a constituent with it (*cf.* Potts 2005, Cecchetto 1999, Griffiths and de Vries 2013, etc.).

Importantly, in environments where the syntactic materials in CP₁ and CP₂ match, Ott and de Vries (2015)'s analysis gets the connectivity effect for free. In this paper, we will focus on environments where the material in the putative ellipsis site in CP₂ does not correspond fully to the material in CP₁. It is precisely this type of environment that allows us to see challenges to the idea of reducing the connectivity effect to CP₂.

3. Case connectivity in clausal ellipsis and a no-source puzzle

3.1 Apparent island-insensitivity and availability of short sources

It has been observed that Sluicing and Fragment utterances show apparent island-insensitivity, as illustrated in (5) and (6).

- (5) a. They hired [someone who speaks a Balkan language], guess which!
 b. * guess which [~~they hired~~ [~~someone who speaks t~~]] (Merchant 2001)
- (6) a. Did they hire [someone who speaks a Balkan language]?
 b. Yes, Albanian.
 c. * Albanian [~~they hired~~ [~~someone who speaks t~~]] (Griffiths and Lipták 2014)

There are two main views on the apparent island-insensitivity:

- (7) a. TP ellipsis repairs island violations (e.g., Chomsky 1972, Lasnik 2001).
 b. There exist shorter, non-island containing antecedents of ellipsis (e.g., Merchant 2001, Fukaya 2007, 2014).

The view in (7b) is supported by the observation that island sensitivity resurfaces in certain contexts where shorter, non-island containing antecedents are blocked for some reason and thus island-containing antecedents are forced (Merchant 2001, 2004, 2008, Griffiths and Lipták 2014, Barros 2014a,b, Barros et al. 2014, Weir 2014). Below are some examples of so-called Contrast TP Ellipsis in Sluicing and Fragment utterances.

- (8) *They hired [someone who speaks *Greek*], but I don't know which *other* language. (Merchant 2008)
- (9) A: Does Abby speak the same Balkan language that BEN speaks?
 B: *No, CHARLIE. (Griffiths and Lipták 2014)
- (10) A: Did Ben leave the party because SALLY didn't dance with him?
 B: *No, CHRISTINE (Barros 2014a)
- (11) A: Ben left the party early because CHRISTINE didn't dance with him.
 B: *No, SANDRA. (Barros 2014a)

3.2 No-source puzzle for clausal ellipsis in ARD

The non-repair, short source analysis in (7b) predicts that when a short source is blocked for certain interpretational reasons (therefore a non-short island-containing source is forced), ungrammaticality should result. We show in this section that the prediction is not borne out. In other words, for certain ARD, Sluicing or Fragments that are acceptable, we are unable to posit appropriate sources for ellipsis (No-source puzzle).

For (12), a German example modelled after Ott and de Vries (2015), there is no reasonable source for clausal ellipsis, as shown in (13). First, the content of ellipsis in (13a) is island-containing in German, thus syntactically ill-formed. Secondly, if we assume a smaller ellipsis content as in (13b), we would derive the wrong interpretation. The speaker who utters (12) is not claiming that VW is actually planning a new Beetle. Finally, while assuming a copular clause for CP₂ as in (13c) does derive the desired interpretation, the accusative case-marking on *einen neuen Käfer* ‘a new beetle’ is left unexplained. A post-copular DP in German is nominative-marked.

- (12) Es ist möglich, dass Volkswagen etwas ganz neues plant: EINEN
 it is possible that Volkswagen something entirely new plans.IND: a.ACC
 NEUEN KÄFER.
 new.ACC Beetle
 ‘It’s possible that VW is planning something entirely new: A NEW BEETLE.’
- (13) a. *[CP₁ It is possible that VW is planning something completely new]
 [CP₂ [a new Beetle] [~~it is possible that VW is planning t~~]] (island-containing)
- b. ≠[CP₁ It is possible that VW is planning something completely new]
 [CP₂ [a new Beetle][VW is planning t]] (Short source; wrong interpretation¹)
- c. *[CP₁ It is possible that VW is planning something completely new]
 [CP₂ [a new Beetle.ACC] [~~it/that is t~~]] (Copular source; case mismatch)

3.3 No-source puzzle – A puzzle for clausal ellipsis in general

It turns out that parallel puzzles are identified in Sluicing and Fragment utterances as well (see Barros 2012, for English). For both the sluiced question in (14b) and the fragment answer to the sluiced question in (14c), there is no source for ellipsis. (15) and (16) show why certain parses cannot serve as appropriate sources for ellipsis, in a parallel manner to (13a), (13b) and (13c) above. As it stands, the case connectivity effect in these three

¹Thanks for Noah Kaufman and Aron Hirsch, who independently made us aware of the possibility of saving (13b) by assuming a derivation like *Possibly a new Beetle VW is planning*. This type of source, however, does not give us a general solution if we look beyond the specific example in (12). Not all adjectives have adverbial counterparts that we could posit as part of ellipsis (e.g. *denkbar*(*lich) ‘thinkable’, *vorstellbar*(*lich) ‘imaginable’). Further, such a source does not extend generally to cases where the matrix clause in (12) is replaced by *Maria speculates that ...*, for example.

constructions in German cannot be attributed to any obvious ellipsis antecedent.

- (14) a. A: Es wird vermutet, dass Volkswagen etwas ganz neues plant.
 it is speculated that Volkswagen something entirely new plans.IND
 ‘It is speculated that VW is planning something completely new.’
- b. B: Ach ja, was denn?
 oh JA what DENN
 ‘Oh yeah, what?’
- c. A: Einen neuen Käfer. (Es wird vermutet dass VW einen neuen
 a.ACC new.ACC Beetle it is speculated that VW a new
 Käfer/?das plant.IND)
 Beetle/that plans
 ‘A new Beetle. (It is speculated that VW is planning a new Beetle/that.)’
- (15) a. *~~What [is it speculated that VW is planning t]~~? (Non-short source; island-
 containing in German²)
- b. ~~≠What [is VW planning t]~~? (Short source; wrong interpretation)
- c. *~~What [is it t]~~? (Copular source; case mismatch³)
- (16) a. *~~A new Beetle [it is speculated that VW is planning t]~~ (Non-short source;
 island-containing in German)
- b. ~~≠A new Beetle [VW is planning t]~~ (Short source; wrong interpretation)
- c. *~~[A new Beetle]_{ACC} [it is t]~~ (Copular source; case mismatch)

A similar case mismatch problem in sluicing in (17) is noted in Barros et al. (2014), and (18) is suggested as a possible source of ellipsis.

- (17) Sie haben keine angestellt, die einen bestimmten deutschen Dialekt
 they have no.PL hired, the.PL [a certain German dialect]_{ACC}
 sprechen, aber ich weiß nicht mehr welchen deutschen Dialekt.
 speak, but I know not more [which German dialect]_{ACC}
 ‘They didn’t hire anyone who speaks a certain German dialect, but I don’t remem-
 ber which German dialect.’
- (18) They didn’t hire anyone who speaks a certain German dialect, but I don’t remember
 which German dialect [nobody/none of them speaks t].

²(15a) is good in German when *es* ‘it’ is not pronounced. This, however, does not apply to sentences with *möglich* ‘possible’.

³Due to case syncretism we cannot observe a case mismatch overtly with *was* ‘what’, but we could see the mismatch if we used *was für* ‘what kind of’ instead, for example.

3.4 No-Source Puzzle for Japanese ARD

Turning our attention to Japanese ARD now, for which the FD analysis was originally proposed, we encounter a no-source puzzle similar to what we just observed for German. In (19), both the non-short and short sources in (20a) and (20b) are excluded for the same reason we saw above for German. The copular source is also excluded: while the nominative-marked DP is fine as the right-peripheral phrase in ARD, it is questionable as a pre-copular phrase, as shown in (20c).⁴ There is thus no reasonable source for ellipsis for deriving the ARD in (19) in the FD analysis.⁵

- (19) Gakkoo-de [chiisai kaisha-ga mujin heri-o kangaeteru-toyuu
school-at small company-NOM pilotless helicopter-ACC is.thinking-COMP
uwasa]-o kiita yo: BIZEN(-ga).
rumor-ACC heard PRT: Bizen-NOM
'(I) heard at school the rumor that a small company is planning pilotless helicopters:
BIZEN.'
- (20) a. BIZEN(*-GA/?-Ø) [gakkoo-de [t mujin heri-o kangaeteru-toyuu
Bizen-NOM school-at pilotless helicopter-ACC is.thinking-COMP
uwasa]-o kiita yo]
rumor-ACC heard PRT
'(lit.) BIZEN, [(I) heard at school [the rumor that t is planning pilotless heli-
copters]] (Non-short source; island-containing)
- b. ≠ BIZEN(-GA/?-Ø) [t mujin heri-o kangaeteiru]
Bizen-NOM pilotless helicopter-ACC is.thinking
'BIZEN, [t is planning pilotless helicopters]' (Short source; wrong interpreta-
tion)

⁴Thanks to Satoshi Tomioka for suggesting to try out a *ga*-marked dislocated phrase as in (19). Thanks also to Kazuya Bamba for pointing out that (1a) below is another possible copular source for (19). The ungrammaticality of (1b), however, makes (1a) an unlikely candidate for a source for ARD because the phrase at the right periphery in ARD can be marked with accusative case.

- (1) a. BIZEN-ga sore-da.
Bizen-NOM it COP
'(lit.) Bizen is it.'
- b. *BIZEN-o sore-da.
Bizen-ACC it COP
'(lit.) Bizen is it.'

⁵Many questions remain. For example, whether case-markers can show up easily or not seems to differ among ARD, Sluicing and Fragment utterances. We should also think about how exactly the putative ellipsis process works in Japanese copular sources. Fronting does not seem to be involved.

- c. (Sore-wa) BIZEN(*-ga) da.
 it-WA Bizen-NOM COP
 ‘It’s Bizen.’ (Copular source)

4. Another case of unexplained connectivity effect

A similar experiment can be done with the ARD example in (21). We are again forcing the content of CP₂ to differ from CP₁ by adding an island to CP₁. The parse in (22a) gives us the right interpretation, but contains a syntactic island. In order to avoid island violation, a smaller ellipsis content is assumed in (22b). CP₂ in (22b), however, contributes an unsuitable interpretation at best. The copular source in (22c) seems to be fine in terms of interpretation, including what appears to be a cross-sentential binding relation (see (23)). The copular source, however, does not work for German once again, due to case mismatch. The right-peripheral constituent in (21) can be marked with accusative case, while the copular source in (22c) only gives us nominative case.⁶

- (21) No professor₁ criticized [a book that cited an important paper of hers₁]: her₁ GENERALS PAPER.
- (22) a. [CP₁ No professor₁ criticized [a book that cited an important paper of hers₁]]
 [CP₂ [her₁ generals paper] [~~no professor₁ criticized [a book that cited t]]]~~
- b. [CP₁ No professor₁ criticized [a book that cited an important paper of hers₁]]
 [CP₂ [her₁ generals paper] [~~a book cited t]]]~~
- c. [CP₁ No professor₁ criticized [a book that cited an important paper of hers₁]]
 [CP₂ [her₁ generals paper] [~~it is t]]]~~
- (23) No professor₁ criticized [a book that cited an important paper of hers₁]: It’s her₁ GENERALS PAPER.

5. Interim summary

As we discussed in Section 1, the FD analysis of ARD has certain elegance in that it reduces ARD to the independent phenomena of leftward movement and clausal ellipsis, rendering any construction-specific rules unnecessary. Up to here, we have focused on the question of whether we have evidence that the clausal ellipsis process proposed for ARD is

⁶The role of wide scope indefinites in examples like (21) needs to be explored. The reader may notice that (21) is parallel in structure to ‘*Each husband had forgotten a certain date – his wife’s birthday.*’ (Hintikka 1986, Kratzer 1998)

indeed reducible to those that have been claimed to be involved in Sluicing and Fragment utterances. We have identified parallel no-source puzzles in ARD, Sluicing and Fragment utterances, which is compatible with the idea that the same ellipsis mechanism underlies these three constructions, lending indirect support to the FD analysis of ARD. As it stands, however, the case connectivity effect in these three constructions in German (and in ARD in Japanese) cannot be attributed to any obvious ellipsis antecedent. The shared no-source puzzle thus presents a general challenge to the clausal ellipsis analysis of these phenomena currently on the market.

At this point one might wonder whether the no-source puzzle tells us that the ellipsis repair analysis in (7a) above may be on the right track after all. We have evidence, however, that a ‘repair of syntactic islands by PF deletion’ (Chomsky 1972, Lasnik 2001) cannot be the general solution. In the exchange in (24), the full question in (24b) sounds strange, due to what is known as a factive island created by the verb *know*. Interestingly, sluicing rescues the full question from factive island violation, as shown in (24c). Since there is no syntactic island to begin with in (24b), where the oddness presumably comes from semantic/pragmatic reasons, the island repair story by PF deletion has no place in the contrast between (24b) and (24c). Then the island repair view would have to assume a short source for (24c) anyway, creating redundancy in the system.

- (24) a. A: Anton knows that Bach was born in a certain city in Germany.
 b. B: #Which city does Anton know that Bach was born in? (Szabolcsi and Zwarts 1993)
 c. B’: Which city?

6. Leftward movement

In this section we turn our attention to the other half of the FD analysis of ARD, namely, leftward movement. In the FD analysis, the leftward movement assumed for deriving ARD is topicalization in Dutch and German according to Ott and de Vries (2015), and scrambling in Japanese according to Tanaka (2001).⁷ The data in this section shows, however, that the leftward movement assumed in the FD analysis of Japanese ARD cannot be reduced to the independently attested leftward movement, scrambling.

6.1 Unscramblable constituents at the right periphery

As we can see in the Japanese ARD example in (25b), the adnominal phrase *uta-no* ‘of songs/singing’ can occur at the right periphery. This is not expected in the FD analysis as the phrase cannot undergo scrambling as shown in the ungrammatical (25c). Thus (25b) could not have been derived from applying scrambling to *uta-no* ‘of songs/singing’ in the putative second clause. The examples in (26) illustrate the same point using a relative

⁷Takita (2014) looks at Japanese RD where the right-peripheral phrase is caseless, and analyzes it as involving no movement.

clause (see Simon 1989 for similar examples. See also Yoon 2013 and the references there for similar data in Korean).

- (25) a. Haruko-ga mata uta-no renshuu-o hajimeta yo.
Haruko-NOM again song-NO practice-ACC started PRT
'Haruko started a singing practice again.'
- b. Haruko-ga mata renshuu-o hajimeta yo: UTA-NO.
Haruko-NOM again practice-ACC started PRT song-NO
'Haruko started a practice again, of songs.'
- c. *Uta-no [Haruko-ga mata t renshuu-o hajimeta yo].
song-NO Haruko-NOM again practice-ACC started PRT
- (26) a. Haruko-ga mata [Taro-ga totemo kiniitteta] uta]-o rokuonshita yo.
Haruko-NOM again Taro-NOM very liked song-ACC recorded PRT
'Haruko recorded a song that Taro was very fond of again.'
- b. Haruko-ga mata uta-o rokuonshita yo: Taro-ga totemo
Haruko-NOM again song-ACC recorded PRT Taro-NOM very.much
kiniitteta.
was.fond.of
'Haruko recorded a song again, that Taro was very fond of.'
- c. *[Taro-ga totemo kiniitteta] [Haruko-ga mata t uta-o rokuonshita yo].
Taro-NOM very liked Haruko-NOM again song-ACC recorded PRT

The fact that adnominal modifiers or complements resist scrambling shows that the leftward movement proposed in the FD analysis is not identical to and therefore not reducible to the independent phenomenon of scrambling.

6.2 Scope effects of scrambling in Japanese not observed in ARD

Ott and de Vries (2015) observe that on the salient reading of the Backgrounding RD in (27a) and that of the Afterthought RD in (27b), the phrase at the right periphery takes narrow scope with respect to *jeder* 'everyone' and (*sich*) *wünschen* 'to wish for', respectively. In their FD analysis, these interpretations are derived from reconstructing the right peripheral phrase into the trace position in CP₂ in (28) below. To support this view, Ott and de Vries (2015) observe that the (salient) readings of (29a)/(29b) match those of (27a)/(27b).

- (27) a. Da kriegt jeder Kopfschmerzen von, von drei Linguistik-Artikeln.
there gets everyone headache of of three linguistics-articles

‘That gives everyone a headache, three linguistics articles.’ ($\forall > 3$)

- b. Auch Peter wünscht sich eins: EIN EINHORN.
 also Peter wishes REFL one a unicorn
 ‘Peter, too, wishes for one: A UNICORN. (wish for $> \exists$)

(28) [_{CP₁} DP₁ DP₂ ...] [_{CP₂} DP₂ [_{DP_T} t₂ ...]]

(29) a. Von drei Linguistik-Artikeln kriegt jeder Kopfschmerzen.
 of three linguistics-articles gets everyone headache
 ‘Three linguistics articles give everyone a headache.’ ($\forall > 3$)

- b. Ein Einhorn wünscht sich auch Peter.
 a unicorn wishes REFL also Peter
 ‘Peter, too, wishes for a unicorn.’ (wish for $> \exists$)

A more interesting test case would look like (30), where (i) the quantificational DP₂ has undergone overt leftward movement in CP₁ and scopes over the quantificational DP₁; and (ii) there is no reconstruction site for DP₁ under DP₂ in CP₂. One might wonder whether we should rather consider (31) as an alternative to (30). We will discuss (31) after discussing (30).

(30) [_{CP₁} DP₂ [_{DP₁} t₂ ...]] [_{CP₂} DP₁ [_{DP₂} t₁ ...]] (no reconstruction site under DP₂ in CP₂)

(31) [_{CP₁} DP₂ [_{DP₁} t₂ ...]] [_{CP₂} DP₁ [_{DP₂} t₁ t₂ ...]]

In what follows we examine these configurations using Japanese. Let us first go over some background scope data. The sentence in (32a) has the surface scope reading in (32b) but not the inverse scope reading in (32c).⁸ Once scrambling applies to the direct object, resulting in (33a), the reading in (33c) becomes available, while the reading in (33b) might be marginally available particularly when there is no prosodic break between the two quantificational DPs. In what follows, we are only interested in the inverse scope reading (Obj $>$ Subj) in (32c)/(33c).

- (32) a. San-nin-no gakusei-ga dono hon-mo yonda.
 three-CL-NO student-NOM which book-every read
 ‘Three students read every book.’
 b. There are three students who read every book. (3 $>$ every)
 c. *For every book, there are three possibly different students who read it. (every $>$ 3)

⁸Reading (32b) entails reading (32c).

- (33) a. *Dono hon-mo san-nin-no gakusei-ga t yonda.*
 which book-every three-CL-NO student-NOM read
 ‘Every book, three students read.’
- b. ?There are three students who read every book. (3>every)
- c. For every book, there are three possibly different students who read it. (every>3)

We are now interested in how the ARD sentence in (34a) below is interpreted. The first part of (34a) is the same as the sentence in (33a) above (except for the particle *yo*). Scrambling has placed the direct object higher than the subject. Therefore the object wide scope reading in (34c), which was not available before scrambling, is available, and our focus is on this reading. With the right-peripheral phrase *san-nin-no gakubusei-ga* ‘three undergraduate students’ in (34a) taken into consideration now, the phrase still takes scope under the object *dono hon-mo* ‘every book’, in a similar manner to (27a) and (27b) above from Ott and de Vries (2015). This time, however, the FD analysis does not predict this attested scope pattern.

In the FD analysis, the phrase at the right periphery in (34a) forms part of the clause in (35a). (35a), unlike the first clause in (34a), has the base Subject-Object order. There may be a trace of the subject *San-nin-no gakubusei-ga* ‘three undergraduate students’ as a result of subject movement or string vacuous scrambling as in (35b). Crucially, the sentence in (35a) is unambiguous, allowing only the reading where the subject takes scope over the object (3>every), as in (35c). This is expected from sentences that preserves the base order. The FD analysis predicts that CP₂ should have only the subject wide scope reading and therefore sentence (34a) conveys something inconsistent, or it is ungrammatical. Contrary to the prediction, the sentence is grammatical and there is no inconsistency. The right-peripheral phrase *san-nin-no gakubusei-ga* ‘three undergraduate students’ takes narrow scope with respect to the object *dono hon-mo* ‘every book’, in a parallel fashion to the way its correlate *san-nin-no gakusei-ga* ‘three students’ takes narrow scope with respect to the object. In other words, the right-peripheral phrase behaves as if it was in the underlined position in (35e).

- (34) a. *Dono hon-mo san-nin-no gakusei-ga t yonda yo: san-nin-no*
 which book-every three-CL-NO student-NOM read PRT three-CL-NO
 GAKUBUSEI-ga.
 undergraduate.student-NOM
 ‘Every book, three students read: three UNDERGRADUATE students’
- b. ?There are three students who read every book. (3>every)
- c. For every book, there are three possibly different students who read it. (every>3)

- (35) a. San-nin-no gakubusei-ga dono hon-mo yonda.
 three-CL-NO undergraduate.student-NOM which book-every read
 ‘Three undergraduate students read every book.’
- b. San-nin-no gakubusei-ga [t dono hon-mo yonda].
 three-CL-NO undergraduate.student-NOM which book-every read
- c. There are three undergraduate students who read every book. (3 > every)
- d. *For every book, there are three possibly different undergraduate students who read it. (every > 3)
- e. [DP_{obj} [DP_{subj} t_{obj} ...]] [DP_{subj}]

The same point can be made with the following examples.

- (36) a. Sota-dake-ga go-satsu-ijoo-no hon-o yonda.
 Sota-only-NOM five-CL-greater.than.or.equal.to-NO book-ACC read
 ‘Only Sota read five or more books.’
- b. It is only Sota, and no one else, who read five or more books. (only > 5 or more)
- c. *There are five or more books that only Sota, and no one else, read. (5 or more > only)
- (37) a. Go-satsu-ijoo-no hon-o Sota-dake-ga t yonda.
 five-CL-greater.than.or.equal.to-NO book-ACC Sota-only-NOM read
 ‘Five or more books, only Sota read.’
- b. ?It is only Sota, and no one else, who read five or more books. (only > 5 or more)
- c. There are five or more books that only Sota, and no one else, read. (5 or more > only)
- (38) a. Go-satsu-ijoo-no hon-o Sota-dake-ga t yonda yo:
 five-CL-greater.than.or.equal.to-NO book-ACC Sota-only-NOM read PRT
 ROKU-SAI-NO SOTA-DAKE-GA.
 six-year-NO Sota-only-NOM
 ‘Five or more books, only Sota read: the 6-YEAR-OLD SOTA.’
- b. ?It is only Sota, and no one else, who read five or more books. (only > 5 or more)
- c. There are five or more books that only Sota, and no one else, read. (5 or more > only)

We now get back to (39), repeated from (31) above. One might wonder if (39) should be the structure for (34a). In (39), both DP₁ and DP₂ have undergone overt leftward movement while preserving the base order. The structure thus has a reconstruction site for DP₁

under DP₂. However, if we allow such a structure and a reconstruction possibility, we would overgenerate inverse scope readings for any base order sentences (Subj-Obj-V), which we do not want (see (32) above). Our point is thus maintained, that appropriate scope interpretation of (34a) cannot be derived in the FD analysis.

(39) [CP₁ DP₂ [DP₁ t₂ ...]] [CP₂ DP₁ [~~DP₂~~[t₁t₂...]]]

7. Summary and possible directions

We have presented cases in which connectivity effects (interpretation or case-matching) in ARD cannot be attributed to connectivity arising from CP₂, contrary to the claim made in the FD analysis. Identifying contexts where the materials in CP₁ and CP₂ do not fully correspond to each other allowed us to see this challenge to the FD analysis. The challenge undermines the main argument for the FD analysis that ARD is reducible to independent phenomena. Some problems for ARD, however, turned out to be a general puzzle for clausal ellipsis as proposed for Sluicing and Fragment utterances.

The next step in exploration is to ask whether our observations above lead us to conclude that a direct syntactic relation between a right-peripheral phrase and its correlate needs to be recognized in ARD. In such a view, a phrase at the right-periphery is syntactically connected to its correlate at some level of representation, for example by forming a constituent with it (*cf.* Potts 2005, Cecchetto 1999, Griffiths and de Vries 2013, etc.). This would complicate the syntax and semantics of the construction compared to the FD analysis, but seems to be more in line with our observation and therefore worth exploring.

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