

**Locality in Ellipsis: Pseudogapping Remnants in vP-edge\***

Hidekazu Tanaka and Katherine Smith  
Department of Languages and Linguistic Science  
University of York  
Heslington, York  
YO31 5DD  
England

[ht6@york.ac.uk](mailto:ht6@york.ac.uk) (Hidekazu Tanaka)

[ks173@york.ac.uk](mailto:ks173@york.ac.uk) (Katherine Smith)

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## Locality in Ellipsis: Pseudogapping Remnants in vP-edge

### Abstract

Since Jayaseelan (1990), the standard assumption has been that remnants in pseudogapping move out of the vP prior to vP-ellipsis. However, there is much disagreement in what kind of movement is responsible for dislocating the remnant phrase. One school argues that the relevant movement should be identified with heavy NP shift, while the other argues that object shift is responsible. In this article, we point out that neither satisfactorily accounts for the construction. Our claim is based on two observations: 1) remnants can be a proper subpart of the object NP, 2) remnants observe locality principles characteristic of A'-dependencies. Our principal claim based on these observations is that the remnant moves to the vP-edge, and the rest of vP deletes at PF. We compare pseudogapping with sluicing, and give a principled explanation of the asymmetry between the two constructions: pseudogapping, but not sluicing, observe island constraints within the ellipsis.

### 1. Introduction

Pseudogapping refers to the ellipsis phenomenon in (1)<sup>1</sup>.

(1) George will select me, but he won't ~~select~~ you.

To introduce some terminologies, *you* in (1) is called a remnant. We refer the phrase that corresponds to the remnant, *me* in (1), as the correlate.

The ellipsis site in (1) contains only a verb, *select*, but pseudogapping can delete something larger than a verb, as in the following examples.

- (2) John could pull you out of a plane, like he did ~~pull~~ his brother ~~out of a plane~~.
- (3) The DA proves Jones guilty and the Assistant DA will ~~prove~~ Smith ~~guilty~~.
- (4) John gave Bill a lot of money, but he won't ~~give~~ Susan ~~a lot of money~~.

For this reason, there is a general agreement in the literature that pseudogapping involves vP-ellipsis, with remnants, such as *you* in (1), escape deletion by moving out of the elided vP prior to deletion.<sup>2</sup> However, researchers differ on exactly what kind of movement is responsible for dislocating the remnant out of the elided VP. Jayaseelan (1990) argues that the relevant movement is Heavy NP Shift (HNPS), as depicted in (5).


- (5) George will select me, but he won't [<sub>VP</sub> ~~select t~~ ] you.



Lasnik (1999), while agreeing that pseudogapping involves VP ellipsis, argues against Jayaseelan's HNPS account. As an alternative, he proposes that the remnant moves out of the elided vP via object shift. Assuming that objects in English move to AgrOP-spec

(see Chomsky (1991) and in particular, Koizumi (1995)), Lasnik's proposal amounts to saying that (1) has the representation in (6).

(6) George will select me, but he won't [<sub>AgroP</sub> you [<sub>vP</sub> ~~select~~ t ] ].



More recently, Takahashi (2004) argues that pseudogapping can be derived by either kind of movement. Thus, (1) is derivationally ambiguous between (5) and (6).

In this paper, while agreeing on the assumption that pseudogapping is derived by vP-deletion, we demonstrate that neither HNPS nor object shift can adequately account for pseudogapping. Our alternative explanation is that the remnant moves to vP-edge, which is driven by the edge feature on v, and the rest of vP deletes at PF.

## 2. NP-Contained Remnants

### 2.1. Object Shift

In (7-8), the remnant in the second half of the sentence corresponds to a NP contained in the object NP. These sentences, as we demonstrate below, pose a problem for Lasnik's approach.

(7) George read a report on Iraq, but he didn't ~~read a report on~~ Afghanistan.

(8) George saw pictures of Iraq, but he didn't ~~see pictures of~~ Afghanistan.

The problem posed by these sentences is that the remnant is a proper subpart of the object NP. Note that this is not expected under the object shift account, since object shift cannot apply in this fashion. Since English does not have obvious cases of object shift, let us turn our attention to Swedish. In this language, a wh-phrase can move out of an object<sup>3</sup>.

(9) Vad läste du en rapport om?

what read you a report on

“What did you read a report on?”

(10) Vad såg du en bild av?

what saw you a picture of

“What did you see a picture of?”

(9-10) show that when wh-movement is involved, extraction out of an object is possible in this language. However, object shift is not possible in the same environment.

(11) \*Du läste den inte en rapport om

you read it not a report on

“You didn't read a report on it.”

(12) \*Du såg dem inte en bild av.

you saw them not a picture of

“You didn’t see a picture of them.”

The fact that the prepositional object contained in the object NP in Swedish cannot shift out of the object, which would be necessary to derive (7-8) under the object shift account of pseudogapping, poses a serious problem for Lasnik’s account.

## 2.2. *Heavy NP Shift*

(7), repeated as (13), is also problematic for the HNPS account.

(13) George read a report on Iraq, but he didn’t ~~read a report on~~ Afganistan.

The remnant cannot shift rightward stranding *on*, regardless of the weight of the prepositional object.

(14) \*George read a report on  $t_i$  yesterday [ the country that was calling international attention ],.

One might object that the problem that (13) poses is only apparent, because (15) is grammatical.

(15) George read a report on Iraq, but he didn’t ~~read a report on~~ Afganistan.

The remnant in (15) is the prepositional phrase headed by *on*. Based on the similarity between (13) and (15), one could claim that HNPS, or in this case, PP-extraposition out of a NP can dislocate the PP out of the elided VP, as demonstrated by (16).

(16) George read [ a report  $t_i$  ] yesterday [ on the country that was calling international attention ]<sub>i</sub>.

A simple deletion rule would remove *on* in the remnant phrase of (15), which would give rise to (13). However, this objection is not warranted, since *on* in (14) cannot be deleted, a process necessary to get (13) out of (15). This point is shown by (17).

(17) \*George read [ a report  $t_i$  ] yesterday [ ~~on~~ the country that was calling international attention ]<sub>i</sub>.

In fact, the PP-extraposition account of (13) has an additional problem. Consider (18).

(18) \*George visited a lake near Iraq, but he didn't ~~visit a lake near~~ Afganistan.

The ungrammatical (18) has a structure similar to (13). Under the HNPS/PP-extraposition account, the ungrammaticality of (18) is expected, since (19), the HNPS counterpart of (18), is not grammatical.

(19) \*George visited a lake near  $t_i$  yesterday [ the country that was calling

international attention ]<sub>i</sub>.

However, if we maintain this account of (18) and (19), (13) should also be ungrammatical, since (14) is ungrammatical. Furthermore, (20) shows that the PP can be remnant. In this case, PP-extraposition seems to be responsible, as shown by (21)<sup>4</sup>.

(20) George visited a lake near Iraq, but he didn't ~~visit a lake~~ near Afganistan.

(21) George visited a lake t<sub>i</sub> yesterday [ near the country that was calling  
international attention ]<sub>i</sub>.

The problem here is that if the preposition *on* in (15) can delete to yield (13), there is no apparent reasons for *near* in (20) not to delete to yield (18).

In this section, we have shown that neither object shift nor HNPS can account for sentences like (7) and (8). Particularly problematic is the contrast between (13) and (18). We provide an account of this contrast in the next section.

### **3. Remnant in vP-Edge**

#### *3.1. A'-Movement of remnants*

Let us go back to the problematic contrast. The examples (13) and (18) are repeated here.

(22) George read a report on Iraq, but he didn't ~~read a report on~~ Afganistan.

(23) \*George visited a lake near Iraq, but he didn't ~~visit a lake near~~ Afganistan.

The intuition that we would like to pursue here is that there is a parallelism between the above contrast and the one in (24) and (25).

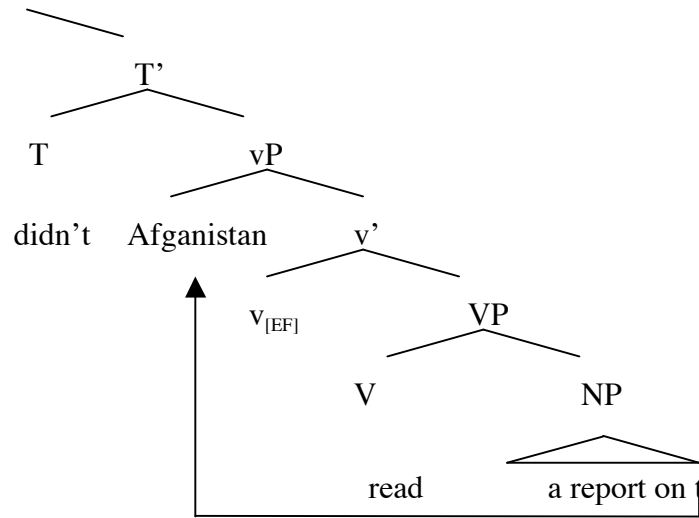
(24) Which country did George read a report on?

(25) \*Which country did George visited a lake near?

The standard account of the contrast between (24) and (25) is that the latter violates the adjunct condition, since the PP headed by *near* is an adjunct, which blocks extraction.

Since the PP headed by *on* is a complement of the head noun, wh-movement is possible in (24). We can extend this account to (22) and (23), if the pseudogapping remnant undergoes A'-movement, on par with wh-phrases<sup>5</sup>. In the recent framework, when a wh-phrase moves to CP-specifier, it moves through vP-edge<sup>6</sup> (Chomsky (2001)). Movement from the variable position to the vP-edge position is driven by the edge feature on v (Chomsky (2005)). Suppose that pseudogapping remnants move to the vP-edge driven by this edge feature [EF], as depicted in (26).

(26)

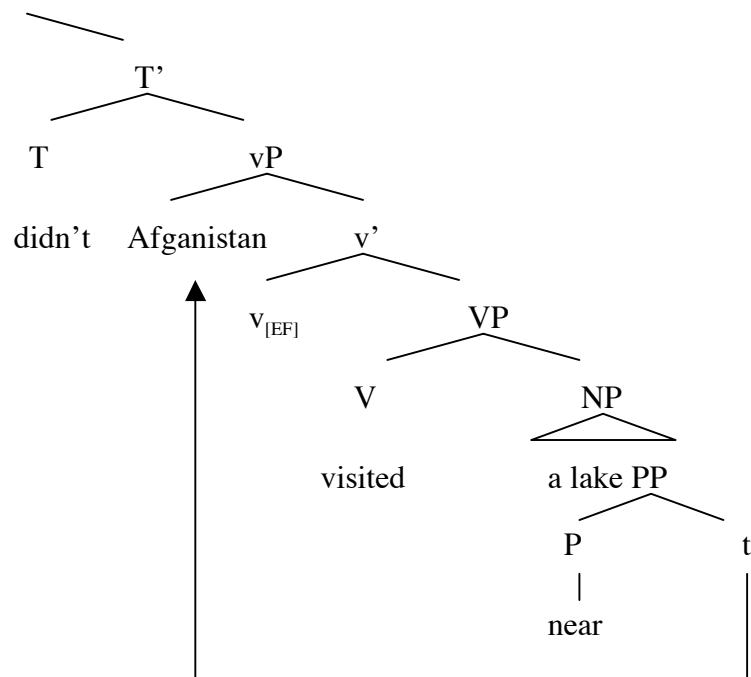


VP-deletion can elide the everything in the vP but the remnant.

The ungrammaticality of (23) gets a straightforward explanation if the adjunct

island is active when the prepositional object moves to the vP-edge.

(27)



Since the PP is an adjunct, extraction in (27) is impossible, and therefore, (23) is ungrammatical.

### 3.2. *Locality Constraints on Remnants*

Above, we argued that remnants move to the vP-edge, constrained by the adjunct condition. This section shows further constraints on remnant movement.

#### 3.2.1. *Adjunct condition*

The example in (28) shows that pseudogapping remnant cannot move out of an adjunct contained in an object NP. Consider the more standard case of adjunct island. Extracting a wh-phrase out of an adjunct gives rise to ungrammaticality in (28).

(28) \*Who did they leave before meeting?

The pseudogapping counterpart of (28) is shown in (29), which seems to be as ungrammatical as (28).

(29) \*George left before meeting Nancy, but he didn't ~~leave before meeting~~  
Barbara.

It is, of course, possible for the adjunct itself to move, as in (30).

(29) When did they leave?

Thus, it is expected that the adjunct phrase itself can be a remnant.

(30) George left before meeting Nancy, but he didn't ~~leave~~ before meeting Barbara.

As (30) shows, our expectation is fulfilled.

### 3.2.2. *Definiteness*

Wh-phrases cannot move out of a definite NPs.

(31) \*Which country did George read {Tony's/those} reports on?

(32) \*Which country did George see {Tony's/those} pictures of?

As expected, pseudogapping remnants cannot be contained in a definite NP.

(33) \*George read {Tony's/those} report on Iraq, but he didn't ~~read {Tony's/those}~~  
~~report on~~ Afganistan.

(34) \*George saw {Tony's/those} pictures of Iraq, but he didn't ~~see {Tony's/those}~~  
~~pictures of~~ Afganistan.

### 3.2.3. *Lexical Choices*

Some verbs do not allow extraction out of their complement NPs, as shown in (35) and

(36).

(35) \*Which country did George destroy a report on?

(36) \*Which country did George destroy a picture of?

Pseudogapping observe the same constraint.

(37) \*George destroyed a report on Iraq, but he didn't ~~destroy a report on~~  
Afganistan.

(38) \*George destroyed a picture of Iraq, but he didn't ~~destroy a picture of~~  
Afganistan.

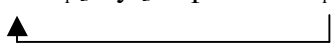
#### 3.2.4. Remnants in Interrogative Complements

As observed by Baltin (2000) and Johnson (2001), remnants can be contained in an infinitival clause.

(39) I wouldn't try to persuade Alex, but I would ~~try [to persuade Martha]~~.

This shows that “long-distance” dependency is in principle possible. Under the proposed account, this means that the remnant in (39) moves to the vP-edge of the matrix vP, as depicted in (40).

(40) ...but I would [<sub>vP</sub> Martha<sub>i</sub> [~~try [to persuade t<sub>i</sub> ] ] ]~~



Since the remnant can move out of an infinitival clause, we can test whether remnant movement is constrained by the wh-island constraint. (41) is the case in point.

(41) ??I wouldn't ask when to persuade Alex, but I would ask ~~[-when to persuade~~  
Martha ].

The example in (41) is not severely ungrammatical. Wh-movement out of interrogative infinitives in general yields a similar degree of ungrammaticality.

(42) ??Who would you ask when to persuade?

Thus, remnant movement observes wh-island constraint.

#### 3.4. *PF-deletion vs. LF-copying*

Two opposing views of ellipsis are proposed in the literature. One view is that elided materials are base-generated as empty, and get their content recovered by having their antecedent copied at LF (LF-copying). The other is that elided materials are full-fledged phrases, and get their phonetic content deleted at PF. These two views are often taken as notational variants, but the fact that remnant movement in pseudogapping observes island constraints suggest that vP-ellipsis in pseudogapping is PF-deletion. LF-copying, which posits a base-generated empty vP, cannot be responsible for the deletion, because those island constraints cannot be operative within base-generated empty phrases. Pseudogapping, therefore, involves PF-deletion.

### 3.5. *Sluicing*

It is known, since Ross (1969), that sluicing cancels potential violations of island constraints (Kennedy and Merchant (2000) and Merchant (2001) and references cited therein). Below, we list sluicing counterparts of the island violations we discussed in section 3.2. The grammaticality of these sentences show that sluicing, unlike pseudogapping, ameliorates island violations.

(43) George visited a lake near some country, but I am not sure which (country)

~~George visited a lake near.~~ (cf. (23))

(44) George left before meeting someone, but I am not sure who ~~George left before~~

~~meeting.~~ (cf. (29))

(45) George read {Tony's/those} report on some country, but I am not sure which

(country) ~~George read {Tony's/those} report on.~~ (cf. (33))

(46) George destroyed a report on some country, but I am not sure which (country)

~~George destroyed a report on.~~ (cf. (37))

(47) George asked when to persuade someone, but I am not sure who ~~George asked~~

~~[when to persuade ].~~ (cf. (41))

Chung et al. (1995) account for this “island repair” property of sluicing in terms of LF-copying. They argue that indefinite NPs, such as *some country* in the first clause of these sentences, are understood as a variable (Heim (1982)) when the TP of the first clause is copied at LF to the empty TP in the second clause. The variable is then bound by the base-generated wh-phrase, resulting in a species of binding, which is free from island constraints. The examples in (43-7) are therefore grammatical.

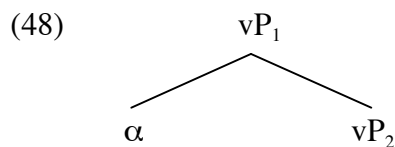
### 3.6. *Types of Ellipsis*

Let us suppose that Chung et al.’s account is correct and that derivation of sluicing involves LF-copying<sup>7</sup>. This assumption gives us a straightforward explanation of the asymmetry between pseudogapping (PF-deletion) and sluicing (LF-copying): the former, but not the latter, observe island constraints within ellipsis. Nevertheless, it poses interesting problems for our conclusion: how can a single language contain two different mechanisms for ellipsis? How do children in English speaking environment acquire such knowledge? Our answer to these problems is simple. Suppose that universal grammar permits both options (PF-deletion and LF-copying) for all kinds of ellipsis. This is tantamount to saying that for sluicing, both PF-deletion and LF-copying

are potentially available, but in (43-7), island constraints preclude PF-deletion. Since LF-copying, which gives a way around island constraint violations, is also possible, the examples in (43-7) are grammatical. For pseudogapping, something must be preventing LF-copying, forcing PF-deletion. Our proposal here appeals to the following assumption from Chomsky (1995).

(47) At the LF interface, only lexical items and maximal projections (and their constituent features) are relevant to LF interpretation.

(47) amounts to saying that intermediate projections are not visible within the narrow syntax. In particular, if  $\alpha$  is adjoined to vP, as in (48), the lower segment of vP, vP<sub>2</sub>, is not visible at LF.



With this in mind, consider the LF structure of (1), shown in (49). (49) assumes, for the sake of discussion, that pseudogapping involves base-generated empty vP. Furthermore, in order to satisfy the parallelism constraint (Heim (1997) and Rooth (1992)), not only the remnant object of the second clause, but also the object of the first clause, gets

raised to the vP-edge.

(49) George will [<sub>vP1</sub> me [<sub>vP2</sub> select me ] ], but he won't [<sub>vP</sub> you [<sub>vP</sub> Ø ] ]

Note that the maximal vP in the first clause is vP1, not vP2. vP2, not being maximal, is invisible to LF interpretation and therefore cannot get copied. Copying vP1 to the empty vP slot gives us (50).

(50) ..., but he won't [<sub>vP</sub> you [<sub>vP1</sub> me [<sub>vP2</sub> select me ] ] ]

Note, however, that (50) is not a licit representation. The remnant *you* is not associated with any argument positions, and gives rise to a theta-criterion violation.

Consider now the PF-deletion account of (49). At PF, the sentence looks like

(51).

(51) George will [<sub>vP1</sub> me [<sub>vP2</sub> select <me> ] ], but he won't [<sub>vP3</sub> you [<sub>vP4</sub> select  
<you> ] ]

Note that PF, not being a part of narrow syntax, is free from the constraint in (47), and as such, PF-deletion can target intermediate projections. In the present case, vP<sub>2</sub> and vP<sub>4</sub> are both visible at this level. Assuming that the copy/trace is irrelevant for the purpose of identity, VP<sub>4</sub> can delete under identity with VP<sub>2</sub>.

### 3.7. *Spell-Out in-situ*

One remark is in order at this point. The account offered here presupposes that the correlate, which corresponds to the remnant in the second clause, raises to the vP-edge position in (51). However, this does not correctly represent the word order of the sentence. This is possible under the recent proposal that phonology can target the tail of the chain (Brody (1995), Bobaljik (1995), Groat and O'Neil (1996), Pesetsky (2000)). That is, in the first clause of (51), the object moves to vP-edge, satisfying parallelism, but is pronounced in-situ.

There is good reason to believe that the correlate also gets raised in the first clause. Chomsky (1976) observes that when the main stress is on *betrayed* in (52), the sentence allows coreference between *he* and *John*. The capital indicates the main stress.

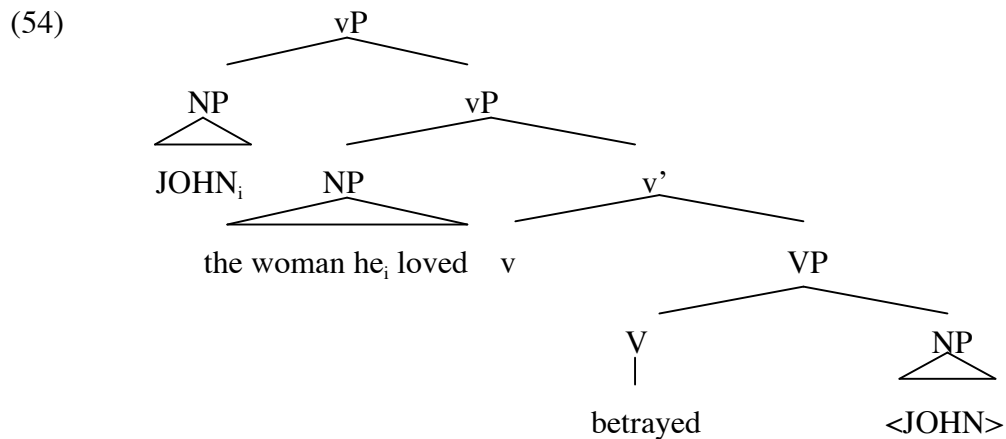
(52) The woman he<sub>i</sub> loved BETRAYED John<sub>i</sub>.

When the main stress is on *John*, the coreference interpretation is not possible.

(53) ??The woman he<sub>i</sub> loved betrayed JOHN<sub>i</sub>.

Chomsky's account is that phrases bearing main stress undergo covert LF movement (by an operation similar to quantifier raising), giving rise to crossover effects (Postal

(1971)). Recast in the current terminology, the relevant part of (53) is represented as follows. We assume that movement of the stressed phrase is adjunction to vP, which crosses over the original copy of the subject.



(54) violates whatever the principle that ultimately accounts for weak crossover effects.

Since pseudogapping is associated with focal stress (Baltin (2003), Bowers (2003)), the same crossover effect is expected in (55).

(55) ??The woman he<sub>i</sub> loved betrayed John<sub>i</sub>, but she didn't ~~betrayed~~ Bill.

The ungrammaticality of this example shows that the must undergo covert movement.

The relevant portion of the first clause of (55) looks exactly like (54). Thus, if we are adopting the crossover account of (53), (55) constitutes evidence that there is covert raising of the correlate even in the first clause.

## 4. Some Consequences

### 4.1. Merchant (2001) on Sluicing

Merchant (2001) argues against the LF-copying analysis of sluicing on the basis of the two generalizations in (56) and (57).

(56) Form-identity generalization: Case-matching

The sluiced wh-phrase must bear the case that its correlate bears.

(57) Form-identity generalization: Preposition-stranding

A language L will allow preposition stranding under sluicing iff L allows preposition stranding under regular movement.

(56) is concerned with facts like (58). These examples are from German.

(58) Er will    jenmandem   schmeicheln, aber sie wissen nicht,

he wants someone-dat   flatter            but they know not

{\*wer /    \*wen /    wem}

who-nom   who-acc   who-dat

‘He wants to flatter someone, but they don’t know who.’

(59) Er will jemandem loben, aber sie wissen nicht,

he wants someone-acc praise but they know not

{\*wer / wen / \*wem-dat}

who-nom who-acc who-dat

‘He wants to praise someone, but they don’t know who.’

The verb *chmeicheln* ‘flatter’ in (58) assigns dative to its object, and the corresponding wh-phrase in the sluicing clause must also be in the dative case. The verb *loben* ‘praise’ in (59) assigns accusative, and the corresponding wh-phrase must also be in the accusative case.

The second generalization in (57) is concerned with the fact that those languages that allow preposition stranding in regular wh-movement also allow preposition stranding in sluicing. For instance, English allows preposition stranding both in sluicing (60) and wh-movement (61).

(60) Peter was talking with someone, but I don’t know (with) who.

(61) Who was he talking with?

Other languages that behave similarly include, according to Merchant, Frisian, Swedish,

Norwegian, Danish, and Icelandic. There are also languages that do not permit preposition stranding in wh-movement, and hence, no preposition stranding under sluicing. This includes Greek, German, Dutch, Yiddish, Russian, Polish, Czech, Bulgarian, Serbo-Croatian, Slovene, Persian, Catalan, Spanish, French, Italian, Hebrew, Moroccan Arabic, and Basque. The examples in (62-3) are from Greek.

(62) I Anna millise me kapjon, alla dhe ksero \*(me) pjon.

the Anna spoke with someone but not I.know with who

‘Anna spoke with someone, but I don’t know with who.’

(63) \*Pjon milise me?

who she.spoke with

‘Who did she speak with?’

Merchant (2001: 151) argues that these effects are “diagnostic exactly of movement.”

Hence, the generalizations in (56-7), Merchant argues, suggest that sluices are active within the narrow syntax, and therefore, sluicing must be regarded as PF-deletion.

#### 4.2. *Conceptual Problems with Merchant’s (2001) Account*

One of the problems with Merchant’s analysis is that he does not give a principled

reason why LF-copying is not available in sluicing. The claim that sluicing is derived through PF-deletion remains as a stipulation, unless there is a principled explanation for the unavailability of LF-copying. Furthermore, to the extent that we can determine, Merchant's reasoning summarized above has problems. In particular, he does not explicitly specify how the generalizations in (56-7) constitute a problem for LF-copying account. Let us suppose that sluicing is indeed LF-copying, as claimed by Chung et al. (1995). The generalization in (56) follows if (64) is valid.

(64) At LF interface, all the members of chains must have matching formal features.

What (64) amounts to saying is that a phrase bearing dative case, for example, cannot be in the same chain with a phrase bearing the dative case. In (58), for instance, *schmeicheln* assigns dative to its complement, *jenmandem*, within the first clause. This gets copied to the empty TP slot. The wh-phrase, which forms a chain with the dative phrase, must also bear the dative case.

(65) Er will jenmandem schmeicheln, aber sie wissen nicht,

he wants someone-dat flatter, but they know not

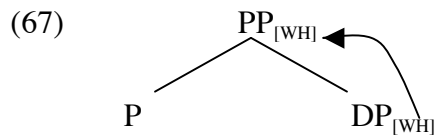
wem [TP er will jenmandem schmeicheln ]

who-dat    he wants someone-dat    flatter

‘He wants to flatter someone, but they don’t know who.’

As for (57), one problem is that Merchant does not give an explicit mechanism of pied-piping, and is therefore hard to argue for/against his approach. For concreteness, let us assume that what forces pied-piping in languages like Greek is the feature percolation principle in (66), which is depicted in (67).

(66) If P has a wh-phrase as its complement, the wh-feature obligatorily percolates to PP.



Let us assume that this principle holds generally true in those languages that forces pied-piping. Since the dominating PP bears the wh-feature, interrogative C attracts the PP, forcing pied-piping in (63). In sluicing, we assume that when the TP is copied, the indefinite in the first clause has an interrogative feature<sup>8</sup>, which percolates to the PP.

(62) looks like (68).

(68) I Anna millise me kapjon, alla dhe ksero

the Anna spoke with someone but not I.know

\*(me) pjon [<sub>TP</sub> I Anna millise [<sub>PP[WH]</sub> me kapjon ] ].

with who the Anna spoke with someone ]

‘Anna spoke with someone, but I don’t know with who.’

Since the PP has the wh-feature, the wh-phrase that forms a chain must also have the same categorial features [-N, -V], according to (66). Thus, PP is required in the CP-spec.

In languages like English, (66) does not hold. Hence, feature percolation depicted in (67) is optional. In wh-questions, the interrogative feature on C can attract either the PP or its complement NP. Correspondingly, the wh-phrase in the sluiced clause, that eventually form a chain with the PP or the NP, can also be PP or NP.

These considerations do not argue strongly against the PF-deletion. However, they show that it is possible to state the generalizations in (56-7) under the LF-copying approach. Since LF copying gives an automatic explanation of island repair, one of the crucial properties of sluicing, and since, as we will demonstrate in the next section,

Merchant's account has a number of empirical problems, LF-copying should be adopted as an account of sluicing.

#### 4.3. Empirical Problems with Merchant's (2001) Account

Merchant's account of island repair with sluicing classifies island conditions into two different types<sup>9</sup>. The first class, consisting of left-branch condition, *that*-trace effects, subject condition, topic islands, and coordinate structure constraint (extraction of a conjunct), should be regarded, according to Merchant, as PF-islands. As PF-islands, their effects can be nullified with phonetic deletion. The example in (69) illustrates a case of extraction of a conjunct, which can be repaired under sluicing, as in (70).

(69) \* $[\text{Which senator}]_i$  did they persuade  $[\text{Kennedy and } t_i]$  to jointly sponsor the legislation?

(70)  $[\text{Irv and someone}]$  were dancing together, but I don't know who.

The second class, consisting of complex NP constraint, adjunct condition, sentential subject condition, coordinate structure constraint (extraction out of a conjunct), is called propositional islands. This class involves extraction out of propositional domain. Island repair effects with this kind of island are only illusory, since the embedded propositional

domain is being used to satisfy the identity condition on ellipsis. For instance, consider a case of an adjunct condition violation in (71). The island violation goes away with sluicing, as in (72). This is because what is sluiced in (72) is not (73), but (74).

(71) \*Who will Abby mad if Ben talks to?

(72) If Ben talks to someone, Abby will be mad, but I don't remember who.

(73) ..., but I don't remember who ~~if Ben talks to, Abby will be mad.~~

(74) ..., but I don't remember who ~~he talks to.~~

In light of the present approach to pseudogapping, Merchant's account encounters a number of difficulties. For instance, extraction of a conjunct is not possible with pseudogapping. The sentence in (75) does not have the specified interpretation, but its sluicing counterpart is grammatical.

(75) \*I saw Irv and Leanne, but I didn't ~~see Irv and~~ Sherry.

(76) I saw Irv and some girl, but I can't remember which (girl) ~~I saw Irv and.~~

If the relevant constraint is a PF condition, (75) is wrongly predicted to be grammatical.

Since the offending coordination is deleted. Our account offers a straightforward explanation of (75), since (77) is ungrammatical.

(77) \*Who<sub>i</sub> did you see Irv and t<sub>i</sub>?

Similarly, consider the extraction out of an adjunct case, discussed above. (43) is repeated here.

(78) George visited a lake near some country, but I don't know which (country).

Cases like (78) should be regarded as PF-island, since the island in (78), *near some city*, does not contain any propositional content that can trigger deletion (sluicing) in the second clause. If this type of adjunct condition is attributed to PF, it is wrongly expected that the sluicing counterpart in (79) is grammatical.

(79) \*George visited a lake near Iraq, but he didn't ~~visit a lake near~~ Afganistan.

For the same reason, the examples (44-6) and their pseudogapping counterparts in (29), (33), and (37) are problematic under Merchant's explanation.

Similar consideration also poses a challenge to Merchant's account of the second class of islands. The sluicing construction in (80) is grammatical.

(80) Bob ate dinner and saw a movie that night, but he didn't say which.

Merchant's account is that (80) looks like (81), not (82), before deletion.

(81) ..., but he didn't say which<sub>i</sub> (movie) he [~~ate dinner and saw t<sub>i</sub> that night~~]

(82) ..., but he didn't say which<sub>i</sub> (movie) [~~he saw t<sub>i</sub> that night~~]

Although (80) is grammatical, its pseudogapping counterpart in (83) is not.

(83) \*Bob ate dinner and saw a movie, but he didn't ~~eat dinner and see~~ an opera.

Not only that (83) does not have the specified reading, it is also impossible to obtain the interpretation in (84).

(84) \*Bob ate dinner and saw a movie, but he didn't ~~see~~ an opera.

Our account attributes the ungrammaticality of (84) to the same factor that is responsible for the ungrammaticality of (85).

(85) \*[ Which movie ]<sub>i</sub> did Bob eat dinner and saw t<sub>i</sub>?

This shows empirical superiority of our approach<sup>10</sup>.

To summarize, the fact that the same island constraint is operative in pseudogapping but not in sluicing constitute an insurmountable obstacle to Merchant's approach. Our explanation, which regards island constraints are derivational, is free from such a problem.

## 5. Conclusions

We have shown that pseudogapping observes island constraints within the ellipsis site.

Assuming that island constraints are derivational, we concluded that pseudogapping is derived by PF-deletion. In clear contrast to pseudogapping, sluicing does not observe island constraints. Our explanation of this fact is that sluicing (as one of its options) involves LF-copying. When the sluice contains island violations, PF-deletion is not possible due to subjacency. The asymmetry between pseudogapping (PF-deletion) and sluicing (LF-copying) is derived from the deeper principles, independently proposed in the literature: computations from numeration to LF cannot see intermediate projections. In pseudogapping, the lower segment of the adjoined vP-structure cannot get copied at LF, rendering LF-copying unavailable. We also critically examined Merchant's PF-deletion account of sluicing, and the generalizations he proposes are in fact consistent with the PF-deletion account.

Presumably, one of the greatest features of our proposal is that it opens up a new line of research on ellipsis. In the previous studies, attentions have been paid to determine the derivational process of ellipsis: either PF-deletion or LF-copying. However, to the extent that the model of grammar, which have two interfaces (PF and LF) and derivation, allows these two possible analyses, permitting just one derivational

process without giving a specific reason as to why the other is not possible is simply a stipulation. The research reported here shows that UG permits two different possible derivations for ellipsis. For example, sluicing constructions that do not have island violations are derivationally ambiguous between PF-deletion and LF-copying. It also shows that on top of the two interfaces (PF and LF), derivation, to which locality constraints apply, is essential. Hence, our proposal can be regarded as an argument for a derivational model of grammar<sup>11</sup>.

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<sup>1</sup> We will ~~strike out~~ the ellipsis site throughout this article.

<sup>2</sup> A good argument for vP-ellipsis in pseudogapping comes from contracted auxiliaries. It is well-known that contracted forms cannot immediately precede the ellipsis site (see Lobeck (1995)).

- (i) a. John is leaving, and Mary is, too.
- b. \*John is leaving, and Mary's, too.
- c. John is leaving, and Mary will, too.
- d. \*John is leaving, and Mary'll, too.

Pseudogapping observes the same constraint.

- (ii) a. Although John is not reading *War and Peace*, he is ~~reading~~ *First Love*.
- b. \* Although John is not reading *War and Peace*, he's ~~reading~~ *First Love*.
- (iii) a. Although John didn't read *War and Peace*, he will ~~read~~ *First Love*.
- b. \* Although John didn't read *War and Peace*, he'll ~~read~~ *First Love*.

This shows that pseudogapping and vP-ellipsis belong to the same natural class.

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<sup>3</sup> I am indebted to Anders Holmberg (personal communication) for the Swedish examples in (9)-(12). Holmberg (p.c.) is not aware of any languages that allow object shift of the kind in (11-2).

<sup>4</sup> Our analysis in section 3.1 is that the remnant undergoes A'-movement to the vP-edge. However, examples like (15) and (20-1) show that PP-extraposition can also dislocate remnants out of the elided vP.

<sup>5</sup> As observed by Sauerland (1998), pseudogapping remnants pattern with A'-movement with respect to principle C reconstruction. (i) shows that reconstruction is forced for an R-expression contained in a nominal complement. The same is not true for an R-expression in a relative clause, as in (ii).

- (i) \*While some granted him<sub>i</sub> everything, others did ~~grant him<sub>i</sub>~~ only the story that John<sub>i</sub> had met alien.
- (ii) While some granted him<sub>i</sub> everything, others did ~~grant him<sub>i</sub>~~ only the story that John<sub>i</sub> had evidence for.

The same contrast is also observed for wh-movement, as noted by Lebeaux (1988).

- (iii) \*[ Whose claim that John<sub>i</sub> is nice ] did he<sub>i</sub> believe?
- (iv) [ Which story that John<sub>i</sub> wrote ] did he<sub>i</sub> like?

As observed in Chomsky (1993), reconstruction is not forced in A-movement even if the R-expression is contained in a nominal complement.

- (v) [ The claim that John<sub>i</sub> was asleep ] seems to him<sub>i</sub> [ to be correct ].

<sup>6</sup> More technically, derivation proceeds phase by phase. CP and vP constitute a phrase. When a derivation reaches a higher phase, say CP, items in the lower phase, vP, is not

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visible unless they occupy the edge position of the vP.

<sup>7</sup> See Section 4 for criticisms on Merchant (2001), who argue against the LF-copying analysis of sluicing.

<sup>8</sup> This assumption essentially follows Heim's (1982) assumption that indefinites can serve as a variable.

<sup>9</sup> On top of these two classes, Merchant (2001:162) argues that there is a third class, consisting of weak islands.

<sup>10</sup> The example in (47) and its pseudogapping counterpart also present the same problem.

<sup>11</sup> In fact, it is difficult to translate our analysis to a framework such as head-driven phrase structure grammar (HPSG). HPSG has at least three different (and independent) kinds of features simultaneously represented on a tree: SYNSEM (corresponding to derivation), PHON (PF), and SEM (LF). Translating our account of pseudogapping means that PHON is derived from SYNSEM (subject to island constraints), but SEM is independent from SYNSEM.