

# On VP-Operator Movement\*

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Lee, Jeongshik. 2001. On VP-Operator Movement. *The Linguistic Association of Korea Journal*, 9(1), 95-113. In this paper, the main property that regulates the distribution of pseudogaps in English is considered to be Case in non-comparative constructions. Although pseudogaps with some stative verbs with no Case feature in English are not available in these constructions, they are paradoxically allowed in comparative contexts. The main purpose of this paper is to propose that VP-Operator movement in comparatives can explain this contrast. This paper will thus show that VP-Operator movement is as usual as any other operator movement is, and that Case can play more roles than it has been known. (Wonkwang University)

## 1. Some Contrasts in Pseudogapping

Pseudogapping in English, as shown in (1)-(3) below, deletes the verb in the second conjunct under the identity with that in the first conjunct, and leaves an overt auxiliary verb and a remnant in the second conjunct (see Levin, 1978, 1985). Call this regular pseudogapping.

(1) ?Sue will eat dog biscuits, and Neil will \_\_\_\_ goldfish.

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- (2) ?John played the guitar, and Mary did \_\_\_\_\_ the violin.  
(3) ?Tom only shovels sidewalks, but Harry will \_\_\_\_\_ driveways.

Pseudogapping constructions are normally considered awkward, but considered grammatical.

Levin (1978, 1985) reported that some cases of pseudogapping with stative verbs, as shown in (4)-(7) below, are in sharp contrast with those with non-stative verbs in examples like (1)-(3).

- (4) \*You probably just feel relieved, but I do \_\_\_\_\_ jubilant.  
(5) \*The watchdog appeared/seemed/turned out (to be) friendly,  
but the house dog did \_\_\_\_\_ ferocious.  
(6) \*Rona looked/sounded annoyed, and Sue did \_\_\_\_\_ frustrated.  
(7) A: These les look/smell/taste terrible.  
B: \*Your steak will \_\_\_\_\_ better.  
\*The onion rings do \_\_\_\_\_ even worse.

As seen above, the stative verbs including raising verbs in (5) and psyche perception verbs in (6, 7) cannot figure in regular pseudogapping. Levin (1978, 1985) also noted that not all stative verbs make bad pseudogapping, as shown in (8)-(11) (two more verbs of this kind are *contain* and *constitute*).

- (8) ?We don't own a house, but we do \_\_\_\_\_ a trailer.  
(9) ?If you don't believe me, you will \_\_\_\_\_ the weather man!  
(10) ?Kathy likes astronomy, but she doesn't \_\_\_\_\_  
meteorology.  
(11) ?They have a United flight from New York to Chicago every  
hour. I don't know if they do \_\_\_\_\_ TWA \_\_\_\_\_.

For the contrasts seen so far, a proper generalization is to be made in terms of a property other than stativity.

Those verbs that allow a pseudogap have an NP complement in

common. On the other hand, those verbs that do not allow it have an adjectival/adverbial complement, as seen in (4)-(6)/(7). If this distinction is taken into consideration, either of the following generalizations over the above contrast can be made. According to Baltin (2000), a predicative phrase cannot be a possible pseudogapping remnant. Call this remnant generalization. Or according to J.-S. Lee (1999), pseudogapping is possible if the elliptic VP contains Case. Call this Case generalization. The latter was made based on the fact that while verbs with an NP complement have a Case-assigning-ability, verbs with no such complement lack this ability, as can be seen in the above examples (1)-(11). Noting that a predicative phrase in those examples is not in a Case position and that a predicative phrase can be a pseudogapping remnant in comparatives like (13) below, I will maintain the Case generalization.<sup>1)</sup> It is stated more specifically, as follows.

- (12) Pseudogapping arises from the deletion of the VP containing a verb and the trace of its complement, where the VP is marked [+Case] by virtue of Case within that VP before deletion.

Of course, there are a variety of other examples of pseudogapping that demand modification of (12) (Levin, 1985; Baltin, 2000). Thus, the Case generalization here is considered only a necessary condition but by no means a sufficient condition for pseudogapping, limiting the present concern to the examples looked at above where the pseudogapping remnant, good or bad, is a complement of the deleted verb.<sup>2)</sup>

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1) The following example also leads us to choose the Case generalization over the remnant generalization,

(i) ?He didn't make a liar out of her, but he did \_\_\_ a fool \_\_\_\_.

Since *a fool* here is a predicative phrase, being a predicate nominal, pseudogapping is falsely predicted to be impossible under the remnant generalization. On the other hand, since it is in a Case position, pseudogapping is correctly predicted to be possible under the Case generalization. But it needs to be mentioned that while my informants accept (i) as a grammatical sentence, Baltin (2000) judges it an ungrammatical one.

I will now turn to another intriguing contrast, which will constitute the main focus of discussion in this paper. Levin (1978) observed that unacceptable pseudogapping in examples like (4), repeated below, becomes dramatically improved in a comparative context, as seen in (13).

- (4) \*You probably just feel relieved, but I do \_\_\_\_ jubilant.  
 (13) I probably feel more jubilant than you do \_\_\_\_ relieved.

Despite the fact that the same stative verb *feel* appears in both (4) and (13), the grammaticality is in sharp contrast with one another. Therefore, additional treatment for this contrast is called for. In what follows, I will suggest that VP-Operator movement takes place in comparative pseudogapping to salvage the otherwise bad pseudogap.

## 2. Licensing the Pseudogap

Following Chomsky (1995), I assume the Agr-less structure positing projections of *v*, instead of those of AgrO, above the VP -- T-v-(V<sub>mid</sub>-)V (here V<sub>mid</sub> stands for an intermediate verb). I also assume with J.-S. Kim (2000) that the pseudogap in question is obtained in the following manner. That is, the complement of the verb is raised out of the VP to a Spec of *v* (and V<sub>mid</sub>) for focus reasons (see Jayaseelan 1990, Lasnik 1995, and J.-S. Lee 1999 for different structural positions to which the remnant raises), and the VP containing the verb and the trace of its complement in the second conjunct (or clause) is deleted at PF under the identity with that in the antecedent conjunct (or clause) to yield a pseudogap, a special case of VP-ellipsis now.<sup>3)</sup>

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2) See J.-S. Lee (2001) for discussion of the distribution of various types of pseudogapping remnants in terms of Case.

3) As will be noticed throughout the paper, a question arises as to whether the elliptic VP is truly identical with its antecedent VP for deletion in that remnant traces are different between the two VPs. I simply assume that this

That the pseudogapping remnant carries a contrastive focus is seen in the following examples from Levin (1978) and Kuno (1981):

- (14) a. ?Laura notified a cop, and Gus did \_\_\_\_\_ a sheriff.  
 b. \*Laura notified a cop<sub>i</sub>, and Gus did \_\_\_\_\_ him<sub>i</sub>, too.
- (15) a. ?John hit Jane, and Tom did \_\_\_\_\_ Mary.  
 b. \*John hit Jane, and Tom did \_\_\_\_\_ somebody, too.

The contrast in (14, 15) shows that the right side remnant in pseudogapping must be in a contrastive relation with its correspondent in the antecedent clause.

Descriptively, then, pseudogapping can apply when the VP to be deleted contains a Case by virtue of a verb that has a Case feature, under the Case generalization (12), coupled with a focus movement of the remnant out of the VP. Considering the fact that there must be an overt auxiliary verb in the pseudogapping construction, I suggest that a [+tense] feature in Infl filled with an overt auxiliary element licenses the elliptic VP containing a Case feature, following J.-S. Lee (1999) (see also Lasnik, 1999).<sup>4)</sup> That is, the elliptic VP is visible for pseudogapping if it contains a Case feature.

Resorting to Case also makes it possible to explain the otherwise puzzling contrast provided in (16).

- (16) a. ?John gave a lot of money, but Mary will Susan \_\_\_\_\_.  
 b. \*John gave Bill a lot of money, but Mary will give Susan \_\_\_\_\_.

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does not pose any particular problem, following the way out suggested in Lasnik (1995) and J.-S. Kim (2000) on empirical bases.

4) Lasnik (1999) assumes, following Martin (1996) that the licensing head of VP ellipsis is an Infl with a [+tense] feature. But, of course, there are pseudogaps that can also appear after the verb *be* in the infinitives where an Infl contains a [-tense] feature (Levin, 1985; Warner, 1993). In this paper, I am not concerned with this case.

The contrast in (16) led Lasnik (1999) to suggest that some version of relativized minimality plays a role in distinguishing (16a) from (16b). That is, in (16a) there is no intervening head with substantive content between the licensing Infl and the elliptic VP, whereas in (16b) a substantive head, the verb *give*, intervenes between them. Boeckx and Stjepanovic (1999), however, pointed out that this approach cannot handle examples like (17) below, where the verbal head *have* intervenes between the licensing Infl and the elliptic VP with no harm.

(17) John might have done it, and Mary might have \_\_\_\_ too.

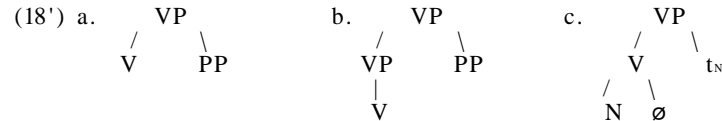
Here the right version of relativized minimality Lasnik looked for is in fact Case Minimality put forward in J.-S. Lee (1992), the leading idea of which is that an intervening element with a Case feature blocks syntactic processes. Under Case Minimality, it is obvious that examples like (16a, 17) can be differentiated from examples like (16b). Only the Case-assigning verb *give* in (16b) blocks the licensing of the pseudogap.

Some PPs can make good remnants in pseudogapping (Lasnik, 1995):

(18) a. John spoke to Bill, and Mary should \_\_\_\_\_ to Susan.

b. ?John swam beside Bill, and Mary did \_\_\_\_\_ beside Susan.

Both PPs in (18a, b), whether a complement or an adjunct, may be placed in the complement position of the verbs, as in (18'a), following Larson (1988). Or the complement PP in (18a) is a sister of V, as in (18'a); whereas the adjunct PP in (18b) may be a sister of the VP containing the verb under another VP, as in (18'b).



Within the present analysis, the PPs will be raised to a Spec of *v* for focus reasons. With either structure, however, the elided verbs, *spea*k and *swim*, apparently have no Case feature, and thus, the pseudogaps here look unlicensed. One possibility can be speculated to get around this obstacle: the VPs to be deleted can be marked as [+Case] via the Case of the prepositions even after the PP remnants have been raised out of it. Then, this extended interpretation of the Case generalization stated in (12) enables the pseudogaps in (18) to be visible for licensing. In another perspective, since the sequence, *spea*k *to*, in (18a) has been frequently treated as a reanalyzed unit in the literature, the VP could be marked as [+Case] in some understandable way (J.-S. Lee, 1999). In (18b) the intransitive verb *swim* could have been derived from a binary structure, as in (18'c) above, following Hale and Keyser (1993), where the noun complement *swim* is incorporated to an empty verb, which I assume has a Case feature, and then, the (lower) VP could be marked as [+Case]. In these ways, the elliptic VPs in question may be visible for pseudogap licensing.

The following example from Kuno (1975) also follows from the present analysis.

- (19) Mary did not visit museums in Paris, but she did \_\_\_\_\_  
in London.

After the adjunct PP remnant moves to a Spec of *v* for focus reasons, the full VP with a Case feature in it in the second conjunct can be deleted under the identity with that in the first conjunct, a core case of VP-ellipsis.

### 3. Comparative Pseudogapping : VP-Operator Movement

It was noted before that pseudogapping is strikingly improved in a comparative context, as the following contrast, repeated from (4) and (13), illustrates:

- (4) \*You probably just feel relieved, but I do \_\_\_\_ jubilant.  
(13) I probably feel more jubilant than you do \_\_\_\_ relieved.

Under the Case generalization (12), it is expected that (4) is not a good pseudogapping since the VP containing the verb *feel* does not have a Case feature, and thus, the head Infl does not license the elliptic VP. Surprisingly, however, the pseudogap in the same environment is salvaged in a comparative construction, as seen in (13). This requires an additional treatment.

For this kind of puzzling contrast, it has been simply said that comparative ellipsis is different from VP ellipsis, and that the former involves movement (see Boeckx, 1998; Kim, 2000; Baltin, 2000 and others). This being likely, though, nothing appears to differentiate (4) from (13) with respect to the pseudogapping environment. To be more specific, in (13) a kind of null Op corresponding to [X-much] moves to the Spec of CP, as seen in (20), to derive a subcomparative gap (cf. Chomsky 1977):

- (20) I probably feel more jubilant than [<sub>CP</sub> Op<sub>i</sub> [<sub>IP</sub> you do feel t<sub>i</sub> relieved]].

But it is dubious how the movement of a null Op can license the deletion of the VP containing the verb *feel*. It does not suffice to say that the comparative pseudogapping (13) is good merely because (13) involves a wh-movement of a null Op, as seen in (20).

I will attempt to offer explanation for the above contrast in terms of VP-operator movement in comparative pseudogapping. In (4, 13), under



the present analysis, the adjectival complement will be raised to a Spec of v for the focus feature checking. In (4) the remaining [<sub>VP</sub> feel t<sub>jubilant</sub>] will be deleted by pseudogapping. But the resultant gap will not be licensed for the reasons mentioned above, that is, the gap is invisible for pseudogap licensing since the VP to be deleted does not contain a Case feature. Nevertheless, in (13) [<sub>VP</sub> feel t<sub>relieved</sub>] of the same status can be successfully pseudogapped. This indicates that the otherwise bad pseudogap is salvaged by some additional means in comparatives.

Before identifying this additional means, I assume with Chomsky (1977) that wh-movement (of Op) is involved in comparative constructions, as seen in (21a). I also assume with Izvorski (1995) that the gaps in subcomparatives are obtained by the wh-movement of a null adverbial DegP (degree phrase) from a post-head position, as seen in (21b):

- (21) a. Benda spent more money than [<sub>CP</sub> Op<sub>i</sub> [<sub>IP</sub> Bernie spent t<sub>i</sub>]].  
 b. Carl writes more stories than [<sub>CP</sub> Op<sub>i</sub> [<sub>IP</sub> he writes articles t<sub>i</sub>]].

The derivation in (21c) below is rejected since the movement here violates the Left Branch Condition (Ross, 1967), which states that the leftmost element of a phrase cannot be extracted.

- (21) c. Carl writes more stories than [<sub>CP</sub> Op<sub>i</sub> [<sub>IP</sub> he writes  
 [t<sub>i</sub> articles ]]].

And (21d) below is also considered an undesirable derivation where both movement of a null adverbial DegP and the concomitant ellipsis of its modifying phrase underlined are applied (Kennedy, 1997; M.-K. Park, 1999).

- (21) d. Benda spent more money than [<sub>CP</sub> Op<sub>i</sub> [<sub>IP</sub> Bernie spent  
money t<sub>i</sub>]].

The following fact provides a reason for this. One well-known characteristic of VP-ellipsis is that it shows ambiguity in interpretation. In (22) the elliptic site in the second conjunct receives its interpretation from the VP in the first conjunct, as in (22a), or from that in the second conjunct, as in (22b).

- (22) Marcus read that book after I did \_\_\_\_, and I bought that book after Charles did \_\_\_\_.
- a. ... and I bought that book after Charles read.
  - b. ... and I bought that book after Charles bought.

But in comparatives like (23) below, the elliptic site in the second conjunct can be interpreted only locally, as in (23b).

- (23) The table is wider than the rug is \_\_\_\_, but it's not longer than the rug is \_\_\_\_.
- a. \*... but it's not longer than the rug is wide.
  - b. .... but it's not longer than the rug is long.

This difference leads to the claim that comparatives involve movement rather than deletion (Kennedy, 1977; M.-K. Park, 1999). In short, comparatives are derived by some kind of operator movement, on a par with operator movement in relative clauses.

With this movement approach to comparatives, now let us turn to the well-formed comparative pseudogapping in (13). If (13) were simply derived by the deletion of VP, [<sub>VP</sub> feel t<sub>relieved</sub>], in situ, the resultant pseudogap could not be licensed. This is because the pseudogap obtained by the same process cannot be licensed in (4). Now, as an additional means to salvage the pseudogap in (13), I propose that the VP, [<sub>VP</sub> feel t<sub>relieved</sub>], further undergoes an operator movement to a Spec of CP, as represented in (24) below. (Op<sub>i</sub> is a null Deg P, with its trace being placed in a post modifying position on a par with (21b).)

(24) I probably feel more jubilant than [<sub>CP</sub> Op<sub>i</sub> [<sub>VP</sub> feel t<sub>relieved</sub>]<sub>j</sub> [<sub>IP</sub> you do t<sub>j</sub> relieved t<sub>i</sub> ]].

The deletion of the moved VP in the Spec of CP in (24) under the identity with that in the antecedent clause will then yield the comparative pseudogapping in (13). Now the question is how the pseudogap is salvaged here. It is plausible to say that the moved VP in the Spec of CP is licensed under the predication relation with its antecedent in the preceding clause, as in relative clauses. The apparent pseudogap is in turn licensed by its antecedent VP operator. But this process is not available in (4), hence the contrast in question.

The present VP-operator movement in comparatives is supported by the locality effect exhibited in (25) below. The pseudogap in the second conjunct in (25) can be interpreted only locally, as in (25b).

(25) I probably sounded more annoyed than you did \_\_\_\_ frustrated,  
 but I felt more relieved than you did \_\_\_\_ frustrated.  
 a. \*..... I felt more relieved than you did sound frustrated.  
 b. .... I felt more relieved than you did feel frustrated.

The proposed VP movement correctly captures this locality effect. In non-comparatives, on the other hand, pseudogapping, a special case of VP-ellipsis now, can produce ambiguous interpretation, as seen in (26).

(26) John bought tomato juice, and Bill sold orange juice.  
 But I heard Mary did \_\_\_\_\_ grapefruit juice.  
 a. .... Mary did buy grapefruit juice.  
 b. .... Mary did sell grapefruit juice.

Now I will turn to another puzzling contrast provided in (27) (Kuno, 1981; Boeckx, 1988, among others).

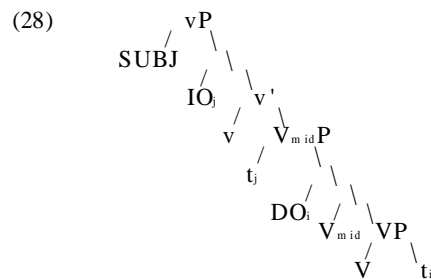
- (27) a. \*The government sent the troops food, and it did \_\_\_\_\_  
weapons, too.
- b. The government sent the troops more food than it did \_\_\_\_\_  
weapons.

In double object constructions, only the first object, but not the second one, can make a good pseudogapping remnant, as seen in (27a) above and (27c) below (Lasnik, 1995).<sup>5)</sup>

- (27) c. The government sent the troops food, and it did \_\_\_\_\_  
the civilians \_\_\_\_\_, too.

And the otherwise bad pseudogapping remnant turns into a good one in a comparative context, as seen in (27b).

Under the Larsonian Agr-less VP-shell structure of Chomsky (1995), the first object IO will be raised to its relevant Spec of *v*, and the second object DO to its relevant Spec of *V<sub>m id</sub>* (=intermediate verb), as illustrated in (28) below (Ura, 2000), for focus feature checking.



5) It is also observed that pseudogapping leaves only one remnant (Jayaseelan 1990, Lasnik 1995).

(i) \*I didn't give a dime to Mary, but I did a nickel to Jane.  
See Lasnik (1995) for the verb's theta-feature approach to examples like (i). But see also Baltin (2000) for conflicting data allowing more than one remnant in pseudogapping. The present analysis can remain neutral.

As can be seen in (28), the VP containing the second object and the verb can safely be deleted, without affecting the first object, and thus, (27c) is predicted to be grammatical. On the other hand, as can be seen in (28), the first object cannot be deleted without deleting the second object, and thus, (27a) is predicted to be ungrammatical. The only way to leave the second object as a pseudogapping remnant, with the deletion of the first object, is to raise the second object over the first object. But this will invoke a violation of minimality, e.g., Minimal Link Condition (Chomsky, 1995), which requires that a target must attract the closest element. That the second object cannot raise over the first object is independently attested by passivization, as seen in (29b).

- (29) John gave Mary the book.
- a. Mary<sub>i</sub> was given t<sub>i</sub> the book (by John).
  - b. \*The book<sub>i</sub> was given Mary t<sub>i</sub> (by John).

Thus the contrast between (27a) and (27c) follows.

Next, as for the contrast between (27a) and (27b) of present concern, the remaining question is how to salvage the comparative pseudogapping in (27b) which is otherwise bad, as seen in (27a). In what follows, I will show that the analysis of null Op movement in comparatives coupled with VP-operator movement offers a natural solution to this question.

Let us start with the following derivations to produce (27b).

- (30) a. The government sent the troops more food than  
 [c<sub>P</sub> Op<sub>i</sub> Op<sub>j</sub> [i<sub>P</sub> it did [v<sub>m idP</sub> t<sub>j</sub> [v<sub>P</sub> send weapons t<sub>i</sub>]]]].
- b. The government sent the troops more food than  
 [c<sub>P</sub> Op<sub>i</sub> Op<sub>j</sub> [i<sub>P</sub> it did [v<sub>m idP</sub> t<sub>j</sub> weapons<sub>k</sub> [v<sub>P</sub> send t<sub>k</sub> t<sub>i</sub>]]]].

In (30a) the null Op<sub>i</sub> moves to a Spec of CP to derive a subcomparative clause, extracting a null DegP from a post-head position, together with

the movement of the null  $Op_i$  corresponding to the first object on a par with a null  $Op$  movement in a relative clause. In (30b) the pseudogapping remnant undergoes focus movement to a Spec of  $V_{mid}$ . At this stage, it appears that the lower VP could simply be deleted in its place to derive (27b). Under the present analysis, in (30b), the Infl with an overt auxiliary could license the lower VP gap in its place, which contains the verb with a Case feature, and no head element with a Case feature intervenes between the Infl and the gap, thereby satisfying Case Minimality. This being true, however, the locality effect found in comparative pseudogapping in double object examples like (31) below, where the pseudogap in the second conjunct can only receive a local interpretation, obviously suggests that the lower VP should further move to a Spec of CP.

- (31) John gives Babara more records than Bill does \_\_\_ tapes, but  
 he does not send Babara more CDs than Bill does \_\_\_ tapes.  
 a. \*... Bill does give Babara tapes.  
 b. .... Bill does send Babara tapes.

Thus, to get the correct interpretation, the derivation should proceed from (30b) to (30c) as below.

- (30) c. The government sent the troops more food than  
 $[_{CP} [_{VP} \text{ send } t_k t_i]_i Op_i Op_j [_{IP} \text{ it did } [_{V_{midP}} t_j \text{ weapons}_k [t_i]]]]$ .

In (30c) the lower VP further undergoes an operator movement into a Spec of CP. The moved VP is then licensed under the predication relation by its antecedent in the preceding clause. The apparent pseudogap is in turn antecedent-licensed by this moved VP. ( $Op_i$  will also be in the same predication relation with its antecedent in the preceding clause, as in a relative clause.) Now the deletion of the VP in the Spec of CP results in pseudogapping in (27b).

Crucial to the present analysis is the postulation of the null  $Op_i$  corresponding to the first object, as in (30), on a par with a null  $Op$  in a relative clause. Thereby pseudogapping can safely delete only the lower VP containing the verb and the trace of the remnant, the second object, as seen in (30). This is possible because the first object, the null  $Op$ , is physically invisible. In non-comparatives, as in (27a), however, a null object corresponding to the first object cannot be postulated, and thus, pseudogapping cannot delete the first object without deleting the second object.

The denial of the derivation in (21d) in fact implies that there are two related null  $Ops$  in the Spec of CP in (21a), an adverbial DegP and its modifying phrase. It is reported that the moved operator in the Spec of CP may be realized as an overt wh-phrase in comparative clauses (Chomsky, 1977; den Besten, 1978). I suppose that related null  $Ops$  in the Spec of CP may constitute one composite operator, but that unrelated  $Ops$ , as in (30), may not do so.

In some cases of pseudogapping, of course, the locality effect may directly follow from the restricted ability of remnant in undergoing focus movement. Consider the following example from Fiengo and May (1994).

- (32) Mary thinks that Jane writes more books than Babara does \_\_\_\_ articles.
- a. Babara does write articles.
  - b. \*Babara does think that Jane writes articles.

In (32) the elliptic site cannot be understood as (b), but only as (a), exhibiting the locality effect. This may be attributed to the widely recognized ban on pseudogapping: the remnant is not raised out of a tensed clause in general (Boeckx, 1998 and others). I assume this ban without further arguments. Consider a derivational stage in (33a, b) below, where the null DegP undergoes an operator movement to the Spec of CP and the pseudogapping remnant undergoes focus movement to a Spec of  $v$ . (The VP movement to a Spec of CP is not illustrated

for the present purpose.)

- (33) a. Mary thinks that Jane writes more books than [<sub>CP</sub> Op<sub>i</sub>  
 [<sub>IP</sub> Babara does [<sub>VP</sub> articles<sub>j</sub> [<sub>VP</sub> write t<sub>j</sub> t<sub>i</sub>]]]].
- b. Mary thinks that Jane writes more books than [<sub>CP</sub> Op<sub>i</sub>  
 [<sub>IP</sub> Babara does [<sub>VP<sub>2</sub></sub> think that Jane [<sub>VP</sub> articles<sub>j</sub> [<sub>VP<sub>1</sub></sub> writes  
 t<sub>j</sub> t<sub>i</sub>]]]]]].

The deletion of VP in (33a) will yield the well-formed pseudogapping which has the interpretation in (32a). In (33b), however, VP<sub>2</sub> cannot be deleted without deleting the remnant, hence the unavailability of the interpretation in (32b). If the remnant in (32) raises out of a tensed clause, as in (33c) below, (with subsequent deletion of VP<sub>2</sub> to derive a pseudogap,) a violation of the ban on this remnant raising will ensue. (In (33c), the tense of the matrix clause is intentionally changed to be in the past form to ensure that the pseudogapping remnant moves to the matrix clause over the embedded tensed clause.)

- (33) c. Mary thought that Jane writes more books than [<sub>CP</sub> Op<sub>i</sub>  
 [<sub>IP</sub> Babara did [<sub>VP</sub> articles<sub>j</sub> [<sub>VP<sub>2</sub></sub> think that Jane [<sub>VP<sub>1</sub></sub> writes  
 t<sub>j</sub> t<sub>i</sub>]]]]]].

The finite clause bound nature of the remnant movement will follow if it is an A-movement.

As expected, the following examples from Fiengo and May (1994) show that VP ellipsis in comparatives results in ambiguity in interpretation, unlike pseudogapping.

- (34) a. Mary thinks that Jane wrote more books than Babara  
 does \_\_\_\_.
- b. Mary thinks that Jane wrote more books than Babara did \_\_\_\_.

After the wh-movement of Op, either the matrix VP, think that Jane



wrote t<sub>i</sub>, or the embedded VP, write t<sub>i</sub>, may be deleted under the identity with that in the preceding clause.

#### 4. More on VP-Operator Movement and Summary

In this paper, comparative pseudogapping in English is shown to undergo an additional process, VP-operator movement to a Spec of CP. It is motivated by the contrast between regular pseudogapping and comparative pseudogapping, and supported by the locality effect in the latter. The present analysis can also extend to deal with the following contrasts in other pseudogapping examples (see J.-S. Lee 2001 for more examples).

- (35) a. \*He didn't become a lawyer, but he did \_\_\_\_ a doctor.  
 b. He became a lawyer earlier than he did \_\_\_\_ a doctor.
- (36) a. ?\*I didn't try to visit Sally, but I did \_\_\_\_ to visit Susan.  
 b. ?I tried to visit Sally more often than I did \_\_\_\_ to visit Susan.

Indeed, a derived VP-operator and its syntactic function are independently attested in English (and other natural languages) (see Huang 1990, Dekydtspotter 1992, among others):

- (37) a. [Die t<sub>i</sub> ]<sub>j</sub> we all<sub>i</sub> will t<sub>j</sub>.  
 b. [t<sub>i</sub> Criticize himself]<sub>j</sub> John said Peter<sub>i</sub> did t<sub>j</sub>.  
 c. [t<sub>i</sub> Into the room nude]<sub>VP</sub> walked John t<sub>VP</sub>.

The raised VP in the Spec of CP includes the trace of the object (37a), the subject (37b), and the verb (37c). Especially, in (37b), though *Peter* is not in a position where it can bind the anaphor *himself*, its trace in the moved VP can bind it (see Huang, 1990).

Some other independent cases of VP-operator movement to a Spec of CP are found in deriving one type of Chichewa causative in Baker

(1985), Yoruba and Korean predicate clefting in Dekydtspotter (1992) and J.-S. Lee (1995), respectively.

It turns out that VP-operator movement is as usual as any other operator movement is. It is also seen that Case can play more roles than it has been known.

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