On Focus of Negation*

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1. Introduction

This paper examines properties of what I call “fragment negation” such as the italicized phrases in the examples in (1).

(1)  a. John wrote the book, not Bill.

b. John ate an apple, not an orange.

c. John studied in this room, not in that room.

Fragment negation attaches to the end of a sentence, contrasted with a specific element in the previous sentence. For example, Bill in (1a) is contrasted with the subject John in the previous sentence, an orange in (1b) is contrasted with the object an apple, and the PP in that room in (1c) is contrasted with the adjunct PP in this room.

In fragment negation, a negation marker not directly attaches to a constituent. However, such negation is impossible in non-elliptical environments, as shown in (2) (Lasnik 1972, Horn 1989).

(2)  a. *Not Bill wrote the book. (cf. Bill didn’t write the book.)

b. *John ate not an orange. (cf. John didn’t eat an orange.)

c. *John studied not in this room. (cf. John didn’t study in this room.)

In full sentences such as (2), the negation marker not/n’t needs to show up as sentential negation and it cannot directly attach to an argument or an adjunct.

In this work, I will show that fragment negation (e.g. (1)) is derived by movement and ellipsis, as illustrated in (3). (See Merchant 2003 and Jones 2004 for similar approaches.)

(3)  [CP not [FP an orange, John ate]] (cf. (1b))

I assume, following the insight of Klima (1964), that negation can be base-generated in the CP-domain. The contrasted phrase an orange moves to the spec of the focus phrase (FP), which is directly below CP. I claim that fragment negation has an underlying sentential structure “John ate an orange,” and that the IP is deleted after the focus movement.

Such a “movement and deletion” type of treatment of fragments is similar to Merchant’s (2001, 2004) treatment of sluicing (e.g. (4a)) and fragment answers (e.g. (4b)). Recently, Yoshida (2008) claims that why-XP fragments (e.g. the utterance of B in (4c)) are also derived by movement followed by ellipsis.

(4)  a. John likes someone, but I don’t know who. (sluicing)

b. A: Who does John like? B: Mary. (fragment answer)

c. A: John likes Mary. B: Why Mary? (why-XP fragment)

* I am grateful to the following people for their helpful comments and advice: Norbert Hornstein, Howard Lasnik, Jeff Lidz, Hajime Ono, Ivan Ortega-Santos, Hiromu Sakai, Masaya Yoshida, the audience at the syntax lunch talk at University of Maryland, and the audience at WCCFL 27.

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Cascadilla Proceedings Project

Completed August 1, 2008
In Section 2 and 3 of the paper, I will point out similarities between fragment negation and these constructions and claim that they all involve the underlying clausal structure. Section 4 considers why the focus movement that I assume in (3) is only observed in fragment environments. I will claim that focus movement in English is usually covert, and that it becomes overt only when the lower copy of the movement is included in the deletion site as shown in (3). Section 5 concludes the paper.

2. Previous studies on fragments

In this section I will review previous analyses of sluicing, fragment answers, and why-XP fragments, and show that they all involve movement and deletion.

2.1. Sluicing

Merchant (2001), following Ross (1969), claims that sluicing such as (5a) is derived from wh-movement followed by IP-deletion, as illustrated in (5b).

(5)  a. John likes someone, but I don’t know who.
    b. … I don’t know [CP [IP who] [John likes t]].

He gives two lines of argument to show that the fragment wh-phrase in sluicing is originally generated inside the underlying IP-structure: (I) Case connectivity and (ii) P-stranding generalization.

First, consider the example (6), which illustrates Case connectivity in German sluicing.

(6)  a. Er will jemandem schmeicheln, aber sie wissen nicht, wem/*wen
    He wants someone.DAT flatter but they know not who.DAT/*who.ACC
    “He wants to flatter someone, but they don’t know who.”
    b. Er will jemandem loben, aber sie wissen nicht, *wem/wen
    He wants someone.ACC praise but they know not *who.DAT/who.ACC
    “He wants to praise someone, but they don’t know who.”

Verbs like ‘flatter’ in (6a) assign Dative Case, and verbs like ‘praise’ in (6b) assign Accusative Case to the NP they subcategorize for. Note that the Case of the sluiced wh-phrase who changes depending on the type of the verb in the antecedent. This fact straightforwardly follows from Merchant’s analysis because he assumes that sluicing has an underlying IP-structure (e.g. (7)): the wh-phrase can get Case from the same verb as in the antecedent clause (e.g. ‘flatter’ in (6a)).

(7)  … sie wissen nicht, [CP wem, [CP who [IP who, flatter]]] (cf. (6a))
    they know not who he wants flatter

If there is no elided structure in sluicing, how the wh-phrase gets the specific Case it does would remain unclear. Thus Case connectivity serves as evidence for the movement and ellipsis approach.

Second, he gives the following generalization, which he calls P-stranding generalization.

(8)  A language L will allow preposition stranding under sluicing iff L allows preposition stranding under regular wh-movement. (Merchant 2001: 92)

In English, for example, P-stranding under regular wh-movement is possible as shown in (9a). In such a language, the preposition does not have to accompany the sluiced wh-phrase, as (9b) shows.

(9)  a. Who was he talking with?
    b. Peter was talking with someone, but I don’t know (with) who.
In German, on the other hand, P-stranding under regular wh-movement is impossible ((10a)), and the preposition has to accompany the sluiced wh-phrase. ((10b))

(10)  a. *Wem hat sie mit gesprochen?
    Who has she with spoken
    “Who has she spoken with?”

     b. Anna hat mit jemandem gesprochen, aber ich weiß nicht *(mit) wem.
    Anna has with someone spoken but I know not with who
    “Anna has spoken with someone, but I don’t know *(with) who.”

Under Merchant’s analysis, the sluiced wh-phrase has undergone wh-movement. Sluicing only the wh-phrase ‘who’ in (10b) would require illicit P-stranding of ‘with’ before deletion of the IP, as shown in (11). Thus the fact in (10b) is naturally accounted for under his analysis.

(11)  …weiß nicht [CP wem₁ [IP Anna hat mit t₁ gesprochen]]
    know not who Anna has with spoken

2.2. Fragment answers

Similarly to his analysis of sluicing, Merchant (2004) claims that fragment answers (e.g. (12a)) are derived by focus movement to [Spec, FP] followed by IP-deletion, as illustrated in (12b).

     b. B:  \[FP Mary₁ \[IP John likes t₁ \].

He shows that (I) Case Connectivity and (II) P-stranding generalization hold for fragment answers, suggesting that they are also derived by movement and ellipsis. (13) illustrates the Case Connectivity effect in German fragment answers.

    Who.DAT follows Hans    The.DAT/*The.ACC teacher
    “Who is Hans following?”   “The teacher.”

    Who.ACC seeks Hans    *The.DAT/The.ACC teacher
    “Who is Hans looking for?”  “The teacher.”

The P-stranding generalization is exemplified in the contrast between (14) and (15): P-stranding languages such as English allow fragment answers of a complement of P only ((14)), while in non-P-stranding languages such as German, P must accompany the fragment answer ((15)).

(14)  A:  Who was Peter talking with?  B:  Mary.
    With whom has Anna spoken    With the Hans The Hans
    “With whom has Anna spoken?”  “With Hans.”   “*Hans.”

In addition to these data, Merchant (2004) gives two more pieces of evidence for his analysis of fragment answers: (III) binding connectivity and (IV) complementizer deletion. Fragment answers show connectivity effects with respect to Binding Condition A, B (e.g. (16a)) and C (e.g. (16b)).

     b. A: Where is he₁ staying?  B:  *In John₁’s apartment.
The anaphor *himself* in (16a) is acceptable even though there is no apparent antecedent to bind it. Under Merchant’s analysis, there is an underlying antecedent *John* in the elided structure and Condition A is satisfied. Similarly, the pronominal *him* in (16a) and the R-expression *John* are unacceptable because they have a binder in the underlying structure (i.e. *John* in (16a) and *he* in (16b)), violating Condition B and C, respectively.

Finally, he points out that complementizer deletion is impossible when a fragment answer is a CP. The complementizer *that* in an embedded clause is optionally deleted, as shown in (17a). When an embedded clause is dislocated as shown in the topicalization example (17b), however, the complementizer is obligatory.

(17)  a. No one believes (that) I’m taller than I really am.
     b. *(That) I’m taller than I really am, no one believes.

A CP fragment answer such as (18B) behaves like a dislocated CP in that it does not allow complementizer deletion. Thus Merchant argues that it is evidence for movement in fragment answers.

(18)  A: What does no one believe?  B: *(That) I’m taller than I really am.

2.3. Why-XP fragments

Yoshida (2008) argues that *why*-XP fragments such as (19B) are also derived by focus movement followed by IP-deletion.

(19)  a. A: John likes Mary.  B: Why Mary?
     b. B: [CP Why1 [FP Mary1 [IP John likes]]]]?

He assumes that *why* is base-generated in the CP-domain (Rizzi 1997), unlike other wh-phrases. He notes that such a fragment construction is impossible with other wh-phrases.


He shows that (I) Case connectivity, (II) P-stranding generalization, and (III) binding connectivity, are observed in *why*-XP fragments, concluding that they are derived in a similar way to fragment answers. First, (21) exemplifies Case Connectivity in *why*-XP fragments in German.

(21)  a. A: Peter will der Sekretaerin gefallen.  B: Warum der/*die Sekretaerin?
     Peter wants the.DAT secretary please
     “Peter wants to please the secretary.”
     b. A: Peter will die Sekretaerin loben.  B: Warum *der/die Sekretaerin?
     Peter wants the.ACC secretary praise
     “Peter wants to praise the secretary.”

Second, P-stranding languages such as English allow the target of a *why*-XP fragment to be the complement of P only as seen in (22). In non-P-stranding languages such as German, on the other hand, the preposition must accompany the XP in *why*-XP fragments as shown in (23).

(22)  A: John talked with Mary.  B: Why (with) Mary?
(23)  A: John hat sich sich auf der Party mit Maria unterhalten.  B: Warum *(mit) Maria?
     John has reflexive at the party with Maria conversed
     “John talked with Mary at the party.”

Third, *why*-XP fragments show connectivity effects with respect to Binding Conditions: (24a) shows the Condition A effect, and (24b) shows the Condition C effect.
In summary, fragments such as sluicing, fragment answers, and why-XP fragments have been analyzed as movement followed by ellipsis, based on data such as (I) Case connectivity, (II) P-stranding generalization, (III) binding connectivity, and (IV) complementizer deletion.

3. Similarities between fragment negation and other fragments

3.1. Fragment negation as movement and ellipsis

In this section, I will show that fragment negation also exhibits the four properties (I) – (IV) above, and thus should be analyzed as an instance of movement and ellipsis. First, Fragment negation exhibits Case connectivity as the German example (25) illustrates.

(25) a. Peter will der Sekretaerin gefallen, aber nicht dem/*den Chef.
   “Peter wants the.DAT secretary please, but not the.DAT/*the.ACC boss"
   b. Peter will die Sekretaerin loben, aber nicht *dem/den Chef.
   “Peter wants the.ACC secretary praise, but not *the.DAT/the.ACC boss"

Second, the P-stranding generalization holds for fragment negation as shown in the contrast between English (e.g. (26)) and German (e.g. (27)) (Depiante 2000, Jones 2004).

(26) John was talking with Mary, but not (with) Susan.
(27) Die Maria hat mit den Hans gesprochen, aber nicht *(mit) den Bill.
   “Mary spoke with Hans, but not *(with) Bill.”
   (Intended reading: “Maria didn’t speak with Bill.”)

Third, fragment negation shows binding connectivity effects: the anaphor in (28a) indicates that Condition A is satisfied, while the pronominal in (28a) and the R-expression in (28b) violate Conditions B and C, respectively.

\[\text{(28)}\]
\begin{align*}
\text{a. John wants to hire } \&_{\text{CNP}} \text{ someone [who speaks a Balkan language], but I don’t know which.} \\
\text{b. John wants to hire someone who speaks French; he doesn’t want to hire someone who speaks German.} \\
\text{b. John wants to hire someone such that s/he speaks French but doesn’t speak German.} \\
\end{align*}

As for fragment negation, my informants give a mixed judgment to sentences such as (iii); some said that the island reading in (iiia) is unavailable, suggesting there is no island-repair phenomenon.

\[\text{(iii)}\]
\begin{align*}
\text{a. John wants to hire someone who speaks French; he doesn’t want to hire someone who speaks German.} \\
\text{b. John wants to hire someone such that s/he speaks French but doesn’t speak German.} \\
\end{align*}

However, in their study on the why-XP construction, Ortega-Santos and Yoshida (p. c.) suggest employing previous contexts where the island reading (iiia) is natural but the irrelevant reading (iiib) is not. More data collection on sentences such as (ii) and (iii) with various contexts is currently underway.

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1 Another widely-assumed diagnostic for movement is island sensitivity. However, it is unclear at this point whether the types of fragments I discuss in this paper behave uniformly with respect to islands. It is well-known that island violations are ameliorated under sluicing, as shown in (i) (Ross 1969, Merchant 2001). On the other hand, Merchant (2004) claims that fragment answers do not ameliorate islands based on the data such as (ii). (He assumes that the denial of part of the previous utterance such as (iiB) is also a type of fragment answer.)

(i) \[\text{John wants to hire } \&_{\text{CNP}} \text{ someone [who speaks a Balkan language], but I don’t know which.}\]

(ii) A: \text{ Does Abby speak } \&_{\text{CNP}} \text{ the same Balkan language [that Ben speaks]? } \\
\text{B: *No, Charlie.} \\
   \text{(Intended reading: “No, she speaks the same Balkan language that Charlie speaks.”)}

As for fragment negation, my informants give a mixed judgment to sentences such as (iii); some said that the island reading in (iiia) is unavailable, suggesting there is no island-repair phenomenon.

(iii) \[\text{John wants to hire } \&_{\text{CNP}} \text{ someone [who speaks French], not German.}\]
   \begin{align*}
   \text{a. John wants to hire someone who speaks French; he doesn’t want to hire someone who speaks German.} \\
   \text{b. John wants to hire someone such that s/he speaks French but doesn’t speak German.} \\
   \end{align*}
(28)  a. He likes Bill, not himself/*him.
    b. *He is staying in Bill’s apartment, not John’s apartment.

Fourth, the complementizer is obligatory in a sentential fragment negation (e.g. (29)), in the same way as a sentential fragment answer.

(29) He believes that I’m tall, but not *(that) I’m taller than I really am.

Based on the above data, I claim that the “movement and ellipsis” analysis should also apply to fragment negation, as Merchant (2003) and Jones (2004) independently suggest. Specifically I assume the structure in (30) (repeated from (3)), where the phrase after negation undergoes focus movement to [Spec, FP] in the same way as fragment answers and why-XP fragments.2

(30) \[
\begin{array}{c}
[CP \text{not} [FP \text{an orange}\{\text{John ate t}\}]]
\end{array}
\]

3.2. Focus sensitivity of not and why

Another similarity between fragment negation and why-XP fragments (Section 2.3.) is that the elements involved in these construction, not and why, are focus-sensitive elements. Bromberger (1991) points out that why-questions are focus-sensitive in that the expected answer changes depending on focus. The why-question in (31) can be answered in various ways: it might be asking for the reason why the whole event happened ((31a)), it might be asking for the reason why it was the apple that Adam ate ((31b)), it might be asking for why Adam ate the apple as opposed to do something else with it ((31c)), or it might be asking for why it was Adam that ate the apple ((31d)).

(31) Why did Adam eat the apple?
   a. Because God intended that to happen.
   b. Because it (the apple) was the only food around. (the reason why it was the apple)
   c. Because he couldn't think of anything else to do with it. (the reason why it was eating)
   d. Because he (Adam) was the one that Eve worked on. (the reason why it was Adam)

Similarly, not can negate any part of the sentence, even when it appears in a sentential negation position. There arises an ambiguity as to which part of the sentence is negated, depending on where the focus is put. For example, in the negative sentence in (32), the subject part might be negated ((32a)), the object part might be negated ((32b)), or the adjunct PP might be negated ((32c)).

(32) John didn’t read the book in this room.
   a. It is not John that read the book in this room; it was Mary.
   b. It is not the book that John read in this room; it was the newspaper.
   c. It is not in this room that John read the book; it was in that room.

On the other hand, there is no such ambiguity with questions other than why. The where-question in (33), for example, is unambiguously asking the location where the event happened.

(33) Where did John read the book?

Given that both why and not are focus-sensitive, it is not implausible that these elements can overtly attract focus as illustrated in (34), and there is no such construction for other wh-phrases (e.g. (20)).

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2 Merchant (2003) posits NegP and Jones (2004) posits ΣP instead of CP in (30). Based on the parallelism between negation and the wh-phrase why in why-XP construction (See 3.2.), I assume that not is base-generated in the same position as why: [Spec, CP].
3.3. Obligatory ellipsis with focus movement

In the analyses above, sluicing is derived by wh-movement and ellipsis. Fragment answers, why-XP fragments and fragment negation are all derived by focus movement and ellipsis. Although their derivations are similar, there is a property which is shared by the latter three constructions and not sluicing: Unlike the fronting of the wh-phrase in sluicing, the fronting of a constituent in the other three fragment constructions is observed only in fragments. In other words, deletion of the clause is optional in sluicing as the parenthesis in (34) indicates. On the other hand, the other fragment structures do not have non-elliptical counterparts, as (35) shows.3

(34)  a.  [CP Why1 [FP Mary1 [IP John likes t1]]]?  (why-XP fragment)
b.  ... [CP not [FP an orange1 [IP John ate t1]]]  (fragment negation)

    b.  A:  John likes Mary.  B:  Why Mary (*John likes)?  (why-XP fragment)
c.  John ate an apple, but not an orange (*John ate).  (fragment negation)

Based on the fact that all three forms in (35) require ellipsis, I suggest that the same type of movement (i.e. focus movement to [Spec, FP]) underlies them, further corroborating the parallelism.

4. Focus movement in fragments and copy theory of movement

Above, we have seen that focus movement in fragment constructions is possible only under ellipsis. In this section, I would like to give a preliminary account of such a distribution of focus movement.

In his analysis of fragment answers, Merchant (2004) claims that the head F has an ellipsis feature [+E], which causes ellipsis of its complement (i.e. IP in (36)).

(36)  [FP Mary1 F[+E] [IP John likes t1]]. (= (35a))

If you assume that F obligatorily has an ellipsis feature, the fact that focus fronting is not available in full sentences as shown in (35) would be accounted for. However, given that ellipsis in sluicing is optional, we would have to assume that the head C in sluicing may or may not have an ellipsis feature for both sentences in (37) to be available. Why [+E] on C is optional, while that on F is obligatory, would still remain mysterious.

(37)  a.  John met someone, but I don’t know [CP who1 C [IP John met t1]],
    b.  John met someone, but I don’t know [CP who1 C[+E] [IP John met t1]].

Below I will give an alternative account of the obligatory ellipsis in (35). Instead of assuming that movement to FP always causes ellipsis, I claim that movement to FP occurs in non-elliptical focus, too. However, it surfaces as overt movement only when ellipsis follows. I assume that there is covert focus movement for in-situ focus such as the bolded phrase in (38).

(38)  A:  What did John eat?  B:  John ate AN APPLE.

This covert movement of a focused phrase is parallel to that of the second wh-phrase in English multiple wh-questions such as (39). Here, the second wh-phrase is assumed to undergo wh-movement,

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3 There are environments where sentences such as “Mary, John likes.” are possible (for example, when the fronted phrase Mary is a topic). Such a fronted phrase, however, cannot be an answer to a wh-question as (35a) shows. This indicates that at least the fronting involved in the derivation of fragment answers is possible only under ellipsis.
but this movement does not surface overtly (See Huang 1982a, b, among others).

(39) Who brought what to the potluck? (*Who what brought to the potluck?)

In both types of movement, the phonological features of the moved element are interpreted in the lower copy position, resulting in covert movement, as shown in (40). (See Ortega-Santos (2006) for a similar proposal for Spanish focused subjects.)

(40) a. \([FP [an\text{-}apple] [IP John ate [AN\text{-}APPLE]]]\) (covert focus movement)
   b. \([CP who, what [IP who, brought what, to the potluck]]\) (covert wh-movement)

In fragment constructions such as fragment answers, however, the clause which contains the lower copy is deleted at PF altogether and the moved element cannot be pronounced in the lower copy position. Adopting the notion of recoverability in (41) (Pesetsky 1997), I assume that a focused phrase, being new or contrasted information, is not recoverable and thus needs to be pronounced in some position.

(41) \textbf{Recoverability} (Pesetsky 1997: 342)
   A syntactic unit with semantic content must be pronounced unless it has a sufficiently local antecedent.

In such a case, the top copy of the movement is forced to be pronounced to satisfy (41), as illustrated in (42).

(42) \([FP [an\text{-}apple] [IP John ate [AN\text{-}APPLE]]]\).

The following data show that the same holds for the case of covert wh-movement. Merchant (2001) shows that multiple sluicing in English is possible, as shown in (43a). Under his analysis of sluicing as wh-movement and IP-ellipsis, the underlying structure is (43b), and the second wh-phrase, which usually must be pronounced in the original position (e.g. (39)), is pronounced outside of IP only when there is IP-ellipsis.

(43) a. (?)Everyone brought something (different) to the potluck, but I couldn’t tell you who what.
   b. … I couldn’t tell you [CP who, what, [IP who, brought what, to the potluck]].

The parallelism between the in-situ wh-phrase in (43) and the focused phrase in (42) supports the covert movement analysis of focus.

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4 Boskovic (2002) shows that there is a contrast between English wh-in-situ and Serbo-Croatian (SC) wh-in-situ with respect to parasitic gap licensing. SC is a multiple wh-fronting language, but when one clause has multiple wh-phrases of the same form (e.g. two occurrences of what in the sentence “What precedes what?”), the second wh-phrase stays in-situ. He points out that such an in-situ wh-phrase licenses parasitic gaps, as the second what in (ia) exemplifies. On the other hand, English in-situ wh-phrases do not license parasitic gaps as shown in (ib).

(i) a. Ce precede ce fara sa influenteze?
   What precedes what without subj.par. influences
   “What precedes what without influencing?”
   b. *Who filed what without reading?

Based on this fact, he claims that in SC wh-in-situ, the whole category moves in the same way as other wh-movement, although the lower copy is pronounced. On the other hand, English wh-in-situ is an instance of covert feature movement (Chomsky 1995). Under this view, only formal features lie in the top copy of the movement in examples in (40). When the lower copy is included in an ellipsis site as shown in (41), the phonological feature would have to move to the top copy position in order to ever be interpreted.
5. Conclusion

In this paper, I argued for a focus-movement analysis of fragment negation, based on its similarities to fragment answers and why-XP fragments. First, the evidence for movement and ellipsis such as connectivity effects and P-stranding generalization applies to fragment negation. Second, the element not in fragment negation is focus-sensitive in the same way as why in why-XP fragments. Third, the movement involved in fragment negation is observed only in ellipsis, in the same way as focus movement in fragment answers and why-XP fragments. To account for the last point, I proposed that focus movement is usually covert in the same way as the movement of English in-situ wh-phrases. In both types of movement, the top copy is pronounced only when the lower copy of the movement is included in an ellipsis site.

References