

Negated Fragments: A Direct Interpretation Approach*

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Kim, Jong-Bok. 2020. Negated fragments: A direct interpretation. *Korean Journal of English Language and Linguistics* 20, 427–449. Fragment answers, involving a type of ellipsis that occurs in answers to questions, appear very frequently in dialogue in varied forms. This paper focuses on negated fragment answers including the negator *not*. The key question for the analysis of negated fragments (e.g., *Not money*) is then how to resolve their sentential meaning from incomplete syntax. There have been two main strands: deletion-based sentential and direct interpretation-based non-sentential approaches. The former seeks matching correspondences from the postulation of putative clausal sources and then allows mismatching by deletion processes. Meantime, the latter licences non-correspondences at syntax but achieves the effects of correspondences from the structured discourse interacting with syntax and semantics. This paper offers a direct interpretation approach that can avoid the pitfalls sentential approaches could encounter from the postulation of clausal sources for negated fragments.

Keywords: fragment answer, deletion-based, direct interpretation, negated fragment, discourse-based

1. Introduction

Fragment answers are non-sentential utterances that occur in answers to questions. They are prevalent in daily use of dialogue, occurring in a variety of grammatical forms, as seen from the following:

- (1) a. Who told you that? Dr. David. (Subject)
- b. What do they want? The book. (Object)

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- c. What did you try to do? Fix the hard drive. (VP complement)
- d. Whose house is this? My brother's. (Possessor)
- e. When did they arrive? At noon. (PP adjunct)
- f. How did he run? Very fast. (AdvP adjunct)
- g. Why does anybody lie? To get what they want. (VP adjunct)

In addition to these varied forms, fragment answers can also occur with the negator *not*, as observed from the following attested data:¹

- (2) a. What was his motive? Not money.
- b. How much have you had to drink? Not enough.
- c. Does it make her a good person? Not particularly.
- d. Where is he at right now? Not on the phone.

The key question for such positive and negated fragment answers is then how to obtain a sentential meaning from the incomplete sentence forms. For instance, fragment answers in (1a) and (2a) would mean something like the following:

- (3) a. Dr. David told me that.
- b. His motive was not money.

The focus of this paper is how to obtain readings like (3b) for negated fragments in (2).

As suggested by Merchant (2004) and Weir (2014), there are two possible directions to obtain sentential meanings for (positive) fragments: deletion-based sentential approaches and WYSWYG-based (what you see is what you get) non-sentential approaches. Deletion-based analyses derive fragments from the clausal sources via a process of ellipsis that deletes everything except a focused constituent (Merchant 2004, Morgan 1973, Weir 2014). For instance, the fragment *the book* in (1b) could be derived from the

¹ As pointed out by a reviewer, similar to the negated fragments discussed here, English allows a negative quantifier or an NPI (negative polarity item) to function as a fragment answer (Weir 2020).

- (i) a. What did you eat? Nothing/*Anything.
- b. What didn't you catch? Any big fish.

As seen in the examples, an NPI cannot serve as a fragment answer to a positive *wh*-question, but it can to a negative one. For the discussion of NPIs or NCIs (negative concord items) as fragment answers, see Weir 2020.

following two possibilities:

- (4) a. ~~They want~~ the book ~~from us~~. (in-situ deletion)
 b. [_{CP} [the book]_i [_{IP} ~~they want~~ ~~from us~~]]. (move-and-delete)

The in-situ approach involves no movement but just ellipsis of the expressions in the clausal source except the fragment (see Abe 2016). The move-and-delete approach first moves the focus *the book* to the left peripheral position and deletes the remaining clause. Both of these deletion-based approaches posit full sentential sources and allow nonpronunciation of part of the sentential source. The meaning for a fragment is then derived from a sentential source, preserving the canonical mapping between syntax and semantics. The deletion-based approaches thus complicate the syntax while obtaining the semantics of fragments by direct mapping from the corresponding syntactic structures.

Meanwhile, WYSWYG or direct interpretation (DI) non-sentential approaches posit no deletion processes for fragments (Culicover and Jackendoff 2005, Ginzburg and Sag 2000, Jacobson 2016, Kim 2015a, Kim and Abeillé 2019, Stainton 1995, 2006). The approaches generate short or fragment answers ‘directly’ with no postulation of clausal sources.

- (5) [_S [_{NP} The book]]

This kind of direct interpretation approach assumes that the syntax of a fragment is its own categorial phrase projection, and its meaning is licensed by the surrounding discourse. On this direction, a fragment gives rise to a proposition, requiring a special mapping between syntax and semantics while the syntax of fragments remains simple (see Section 3 for further details).

The prevailing analyses are deletion-based sentential analyses with support from connectivity effects in case-matching, preposition stranding, and others (Merchant 2004). For instance, consider the following contrast showing syntactic parallelism between a fragment and its antecedent (correlate), with the putative sources in the brackets:

- (6) a. A: Is Pat giving his money away?
 B: *Yes, charity < Pat’s giving his money away to >.
 b. A: Is Pat giving his money away?
 B: Yes, to charity < Pat’s giving his money away>.

The antecedent clause has an implicit PP argument (called ‘sprouting’) and the fragment needs to match with this PP. Such a connectivity effect seems to be in favor of the existence of silent sentential structure, as given in the brackets. However, as noted by Ginzburg and Sag (2000) and summarized in Kim and Nykiel (2020), there are numerous cases where such connectivity effects are overridden, which we will also observe in negated fragments (see Section 3). This paper discusses empirical and theoretical issues for the deletion-based analyses for negated fragments. Section 2 reviews two possible directions of the deletion-based analyses: constituent negation and sentential negation approaches, and looks into empirical data that challenge deletion-based sentential approaches. This leads to argue for a DI analysis of negated fragments in English. Section 3 discusses a DI approach of fragments couched upon the structured discourse and then extends this direction to negated fragments. The section incorporates structured discourse into the present analysis, which allows to develop a uniform account of positive and negated fragments that avoids problems the deletion-based approach could face. Section 4 concludes the paper.

2. Deletion-based Sentential Analyses

The deletion-based sentential analyses for fragments just sketched in the previous section can be extended to negated fragments. As noted by Merchant (2003) and Weir (2020), the deletion-based view could generate negated fragments in two different ways: constituent negation and sentential operator (negation) approaches. Consider the following negated fragment example from Weir (2020):

- (7) A: What did John give to Mary?
 B: Not flowers.

The constituent negation approach, with the negator forming a constituent with the remnant, can have two possible derivations, as given in (8a) and (8b), respectively:

- (8) a. ~~John gave~~ [not [flowers]] ~~to Mary~~. (in-situ deletion)
 b. [[Not [flowers]] [~~John gave~~ ~~to Mary~~]] (move-and-delete)

In (8a), the fragment is in situ and the remaining expressions are deleted. In (8b), the negator with the remnant together moves to the left periphery position and the remaining clausal expression is deleted. The sentential operator (or left-peripheral) approach, placing the negator in a left peripheral position, can also have two possible derivations:²

- (9) a. [Not [~~John gave~~ [flowers] to Mary]]. (in-situ deletion)
 b. [Not [flowers; [~~John gave~~ to Mary]]]. (move-and-delete)

As given here, the in-situ approach places the remnant *flowers* in situ and deletes all the other expressions, while the move-and-delete approach moves the remnant *flowers* to the left peripheral focus position and then applies the deletion of the subsequent clause.

As such, the deletion-based approaches, either taking the negator as constituent or sentential operator, posit clausal sources to derive negated fragments. However, neither of these two analyses is satisfactory, when considering their possible clause sources (data from Weir 2020):

- (10) a. *John gave not flowers to Mary.
 b. *Not flowers John gave to Mary.
 c. ??Not flowers did John give to Mary.
 d. *Not John gave flowers to Mary.

As observed, the possible sentential sources introduced by the constituent or the sentential operator approaches do not have typical word order in English. When considering that an example like (10a) can be acceptable with the negator being contrastive, the constituent negation approach may gain more support than the sentential operator approach (Weir 2020):

- (11) John gave not flowers but chocolates to Mary.

Further, the constituent negation may account for varied forms of the negated fragment since the negator can be used as constituent negation in varied syntactic environments (Klima 1964, Kim 2000, Kim and Sag 2002):

² As noted by a reviewer, the sentential negation in-situ approach would posit *John did not give flowers to Mary* as its source.

- (12) a. It's just going to make you feel [not [good]].
 b. I have noticed [not [many other people]] believe in this.
 c. "We Were Soldiers" was a [not [bad movie]].
 d. [Not [far from here]] is the White House.
 e. He would've been admitted there [not [long ago]].

The negated fragments also occur with a various type of head (remnant) expression, as seen from the following attested data:

- (13) a. Do you think authors need blogs nowadays? Not really.
 b. Who knew the date of her birthday apart from her family? Not many people.
 c. I have news. What sort of news? Not bad news.
 d. Where's your brother? Not at home.

However, there are also possible issues for the constituent negation approach. For example, Merchant (2003) points out that it is possible for the negator in the fragment to have a wide scope reading, as in the following:

- (14) A: What did Beth say she wanted to study?
 B: Not French.

The negated fragment *Not French* here can be ambiguous: it can mean that Beth said that she wanted to study not French but another language, or that Beth didn't say that she wanted to study French. The constituent negation approach would not predict the latter reading.

Another possible issue for the constituent negation approach arises from negated fragments like the following (Weir 2020):

- (15) a. Is he coming? Possibly not.
 b. Will she keep it? Almost certainly not.

These negated fragments have the negator following the remnant, unexpected from the typical distribution of constituent negation in English. For such reverse ordering of the negator, one might adopt in-situ sentential approaches, as sketched in the following derivations:

- (16) a. Possibly ~~he is~~ not ~~coming today~~.
 b. ~~She will~~ almost certainly not ~~keep it~~.

However, note that this alternative is not a plausible option when the remnant functions as the subject as in (17).

- (17) Who danced with Mary? Not John/*John not.

The deletion-based constituent negation ellipsis approach is unavoidable to assume an illegitimate source like (18a) for the fragment in (17). The deletion-based sentential negation approach also requires one with a different order, as given in (18b):

- (18) a. *Not John danced with Mary.
 b. John did not dance with Mary.

As a solution, Merchant (2003) and Vicente (2006) hint that the negation in such a context is hosted in a left-peripheral NegP (or Σ P/PolP) above the Focus position and to this position, the remnant is moved, as illustrated in (19):

- (19) [_{NegP} Not_i [_{FocP} John_j [~~— did — dance with Mary~~]]]

The question then arises if English allows movements with crossing paths and further how to deal with constituent negation. For instance, examples like (20) (also (13b)) seem not to be involving sentential negation:

- (20) a. What's wrong with you? Not a thing.
 b. But was Johnson impressed? Not with anyone but himself.
 c. Does he always talk to you like this? Not always but mostly.

The negator here behaves like constituent negation with contrastive information. The putative source of (20a) would be something like not a thing is wrong with me, and the negator is constituent negation. The contrastive meaning of (20b) and (20c) is marked by the following conjunct marker *but*. There are thus clear cases where the negator in negated fragments functions as constituent negation.

As discussed here, the deletion-based approaches can take the negator *not* in the

negated fragment either as constituent negation or left-peripheral sentential negation. As we have seen, both directions can cover only a subset of negated fragments. In what follows, I suggest a hybrid approach in which the negator in negated fragments can be either constituent or sentential negation. I also argue for a non-ellipsis approach for negated fragments that introduces no putative sentential sources to resolve their propositional meaning.

3. A Direct Interpretation Analysis

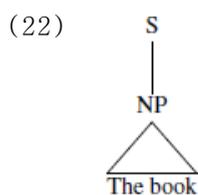
3.1 Direct Interpretation of Fragments

Departing from the deletion-based approaches that posit a clausal source for fragment answers, the direct interpretation (DI) approach generates the meanings of the unpronounced material with no underlying syntactic structures (Ginzburg 2012, Kim 2015a, Kim and Abeillé 2019, Sag and Nykiel 2011). Within the DI approach, there is no syntactic structure at the ellipsis site and fragments are the sole daughter of an S-node, directly generated from the following construction (Ginzburg and Sag 2000, Kim 2015b, Kim and Nykiel 2020):

(21) Head Fragment Construction:

Any category can be projected into a NSU (non-sentential utterance) when it functions as a salient utterance (SAL-UTT).

The construction thus allows any maximal projection (functioning as a salient utterance) to serve as an NSU (non-sentential utterance) with no reference to ellipsis. This simple syntax, following the philosophy of Simpler Syntax Hypothesis (Culicover and Jackendoff 2005, Ginzburg and Sag 2000), posits no syntactic structure at the ellipsis site of fragments. The fragment itself is the sole daughter of an S-node:



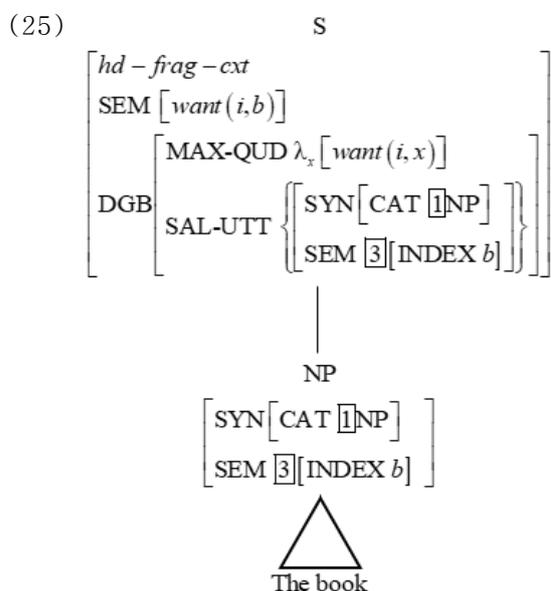
The resolution of the NSU is achieved by discourse-based machinery. That is, the interpretation of a fragment depends on the notion of ‘question-under-discussion’ (QUD) in the dialogue. Dialogues are described via a Dialogue Game Board (DGB) where the contextual parameters are anchored and where there is a record of who said what to whom, and what/who they were referring to (see Ginzburg 2012). DGB monitors which questions are under discussion, what answers have been provided by whom, etc. The conversational events are tracked by various conversational ‘moves’ that have specific preconditions and effects. The main claim is that non-sentential utterances, functioning as salient utterances, are resolved to the contextual parameters of the DGB. Since the value of QUD is constantly being updated as the dialogue progresses, the relevant context offers the basis for the interpretation of fragments. In this system, DGB is part of the contextual information and has at least the attributes SAL-UTT (salient-utterance) and MAX-QUD (maximal-question-under-discussion), given in (23).

$$(23) \left[\text{DGB} \left[\begin{array}{l} \text{SAL-UTT ...} \\ \text{MAX-QUD ...} \end{array} \right] \right]$$

The feature MAX-QUD, representing the question currently under discussion, takes as its value *questions*. SAL-UTT, taking as its value syntactic as well as semantic information, represents the utterance which receives the widest scope within MAX-QUD. For example, uttering the question *What do they want?* in (1a) will activate the feature structure with the appropriate DGB information, as in (24):

$$(24) \left[\begin{array}{l} \text{FORM} \langle \text{What do they want?} \rangle \\ \text{SYN S} \\ \text{SEM } \lambda_x [\text{want}(i, x)] \\ \text{DGB} \left[\begin{array}{l} \text{MAX-QUD } \lambda_x [\text{want}(i, x)] \\ \text{SAL-UTT} \left[\begin{array}{l} \text{SYN} | \text{CAT NP} \\ \text{SEM } x \end{array} \right] \end{array} \right] \end{array} \right]$$

The *wh*-question thus asks what they want (QUD) and this information linked to the *wh*-phrase (the index value) functions as the SAL-UTT. The fragment answer *the book* is providing its value (Ginzburg and Sag 2000, Kim 2015a, 2015b). Since the fragment answer functions as a salient utterance, it can be projected as a head-fragment construct together with the relevant dialogue information, as given in the following:



The fragment answer is a well-formed stand-alone clause licensed by the Head-Fragment Construction that requires the CAT value of the fragment to be matched to that of the SAL-UTT. As noted, this fragment is preceded by the question *What do you want?*, which introduces a QUD questioning a value for the object that they want ($\lambda_x[want(i,x)]$). The fragment *the book*, functioning as a salient utterance, then provides a value for this variable. This resolution process is equivalent to the view that the meaning of a question is a function that yields a proposition when applied to the meaning of the answer, as given in the following (Ginzburg and Sag 2000, Jacobson 2016, Krifka 2001):³

- (26) a. Meaning of the Q: $\lambda_x[want(i,x)]$
 b. Meaning of the fragment: b
 c. Question applied to the answer: $\lambda_x[want(i,x)](b) = [want(i,b)]$

The fragment answer is properly resolved to yield a propositional meaning. The analysis, requiring neither clausal sources nor movement operations, utilizes the information evoked from the context.

³ This ‘structured meaning’ approach differs from the ‘prepositional set’ approach where the meaning of questions denotes sets of propositions (see Groenendijk and Stokhof 1984, Hamblin 1973, Karttunen 1977). See Krifka (2001) for the comparison of these two approaches.

3.2 Negated Fragments: A Direct Interpretation Non-sentential Approach

The DI approach we just sketched can be applied to negated fragments accompanying the negator *not*. Consider the following attested example:

(27) Who would clean it up? Not Dad. He was too busy down at O'Grady's.

The DI, directly generating fragment answers, can license two possible structures for this negated fragment: This 'structured meaning' approach differs from the 'prepositional set' approach where the meaning of questions denotes sets of propositions (see Groenendijk and Stokhof 1984, Hamblin 1973, Karttunen 1977). See Krifka (2001) for the comparison of these two approaches.

- (28) a. [_{NP} Not [_{NP} Dad]].
 b. [_S Not [_S [_{NP} Dad]]]

In (28a), the negator is constituent negation, modifying the head NP *Dad* while in (28b), the NP *Dad* projects into a NSU (non-sentential utterance) which in turn combines with the sentential operator *not*. As noted in (12), English allows constituent negation in varied environments including those like (28a). The negation structure in (28b) is also possible, since the NP *Dad* can be the head NP of a head-fragment construction projecting a NSU and can combine with the negator *not* functioning as a sentential operator.

In English, sentential negation typically accompanies a finite auxiliary (Kim 2000, Kim and Michaelis 2020, Kim and Sag 2002):

- (29) a. He will not back down on principle.
 b. Basic human rights should not be up for debate.
 c. We could not get wireless in our classrooms.

However, historically, sentential negation used to take a finite S as its argument, as evidenced from corpus data of Middle English. Following examples are from the corpora of the historical American English, COHA and EEBO.⁴

⁴ The corpus COHA (Corpus of Historical American English) contains 400 million words of text from the 1810s to the 2000s while EEBO (Early English Books Online) contains 755 million words in

- (30) a. not I started to run. (COHA 1938 FIC)
 b. Let them come to you for orders, not you go to them. (COHA 1867 FIC)
 c. not she plays the Slav Queen. (COHA 1907 NEWS)
- (31) a. not I believe in the holy Catholique church. (EEBO 1651)
 b. not I put the lords oath upon you, (EEBO 1660)
 c. not they meet in silence, and they will speak or pray unless they be moved
 (EEBO 1694)

Further note that the negator *not* alone can be used as a propositional anaphor referring to a clausal antecedent provided by the context:

- (32) a. Is our air traffic system connected to the internet? I sure hope not.
 b. Does Detroit have the worst crime problem among mid size cities? I think not.
 c. Are you saying that wouldn't have upset Miss Kingsley? She says not.

The negator *not* in each of these examples functions as a sentential operator referring to a sentential antecedent. For example, the negator *not* in (32a) means the negation of the sentential anaphor 'our air traffic is connected to the internet'. A similar anaphoric use can be also found with expressions like *so* occurring in the same environment:

- (33) a. Does the constitution force me to vote? I don't think so.
 b. I think he probably learned his lesson from all this. At least I hope so.
 c. If you have a problem with it, say so.

The expression *so* here refers to a sentential antecedent. For example, *so* in (33a) refers to the positive value of the proposition that the constitution forces me to vote. The only difference between *so* and *not* is that the former refers to a positive proposition while the latter refers to a negative one. With these observations, we can assume that the negator in negated fragments refers to the negation of a propositional anaphor.

The clear uses of *not* as a propositional anaphor in negated fragments can be found in examples like (15) with the reverse word of the negator. Consider similar attested examples:

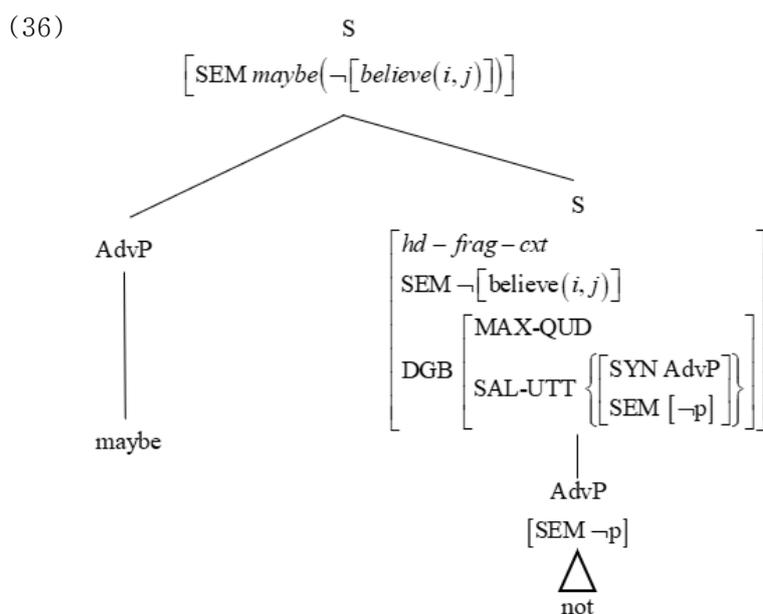
25,368 texts from the 1470s to the 1690s.

- (34) a. Will they believe it? Maybe not.
- b. Will we be able to convince them to go? Probably not.
- c. Can I have some time to think about it? Afraid not.

The negated fragments here have the negator that refers to a propositional antecedent. For example, in (34a), the polar question will introduce a QUD like the following:

$$(35) \quad [\text{MAX-QUD } \lambda\{ \} [\text{believe}(i, j)]]$$

The polar question in (34a) thus asks whether it is true or not that they believe it. The fragment answer *Maybe not* then means that it is possibly not the case that they believe it, as seen from the following structure:



As such, the negator here can function as negating a propositional anaphor (p) referring to the proposition such that they believe it.

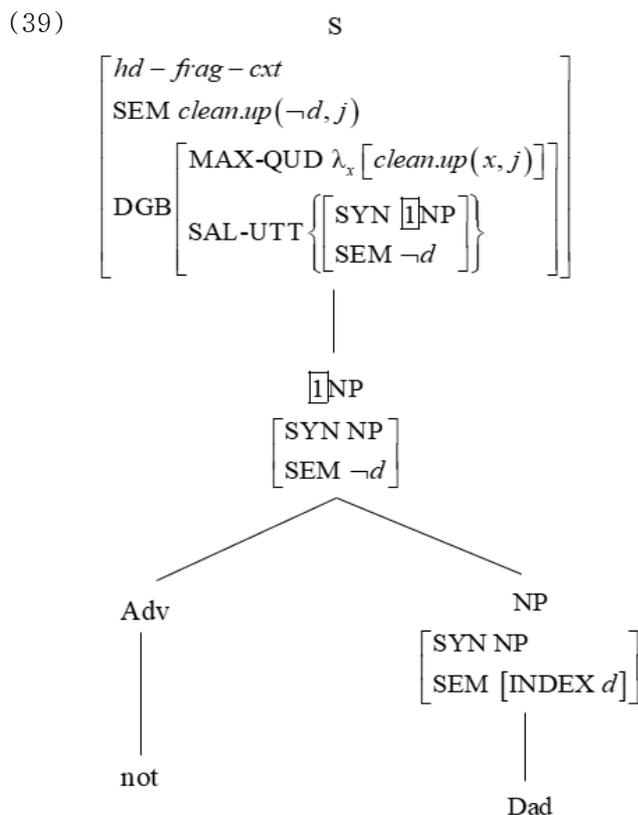
Now let's go back to the example in (27) with the negated fragment *Not Dad*. For the generation of the negated fragment *Not Dad*, the deletion-based approaches would require to posit an unacceptable sentential source like the following:

- (37) *Not Dad would clean it up.

The DI analysis, positing no sentential structures, licenses the negated fragment *Not Dad* in two different ways: the negator as constituent or as sentential negation. Consider the constituent negation structure first. The preceding *wh*-question evokes a QUD together with the *wh*-phrase as a focus establishing constituent, as illustrated in the following:

$$(38) \left[\begin{array}{l} \text{FORM} \langle \text{Who would clean it up?} \rangle \\ \text{SYN S} \\ \text{SEM } \lambda_x [\text{clean.up}(x, j)] \\ \text{DGB} \left[\begin{array}{l} \text{MAX-QUD } \lambda_x [\text{clean.up}(x, j)] \\ \text{SAL-UTT } \left\{ \begin{array}{l} \text{[SYN NP]} \\ \text{[SEM } x \end{array} \right\} \end{array} \right. \end{array} \right]$$

This basically asks a value (x) for the person that would clean it up, making the NP *who* as a salient utterance. The fragment answer *Not Dad* is linked to this value.

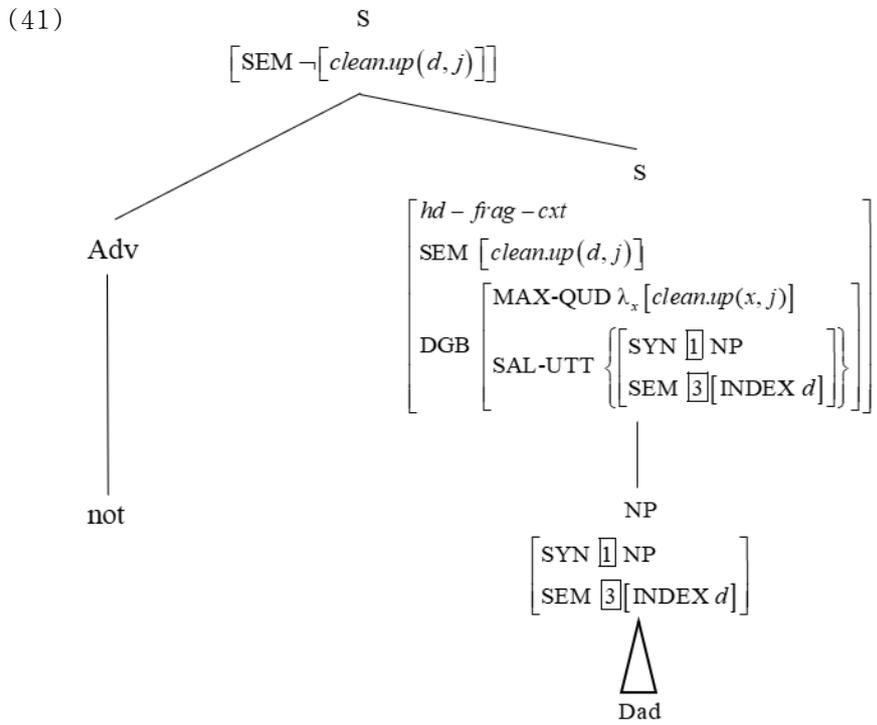


Syntactically, the negator *not* combines with the NP *Dad*, forming constituent negation. This resulting NP ($\neg d$) serves as a salient utterance establishing a focus constituent, and thus can be projected into a sentential utterance as a head-fragment construct. This view is equivalent to the view that the meaning of a question is a function that yields a proposition when applied to the meaning of the answer, as given in the following (Ginzburg and Sag 2000, Jacobson 2016, Krifka 2001):

- (40) a. QUD: $\lambda_x[\text{clean.up}(x,j)]$
- b. Meaning of the negated fragment: $\neg d$
- c. Question applied to the answer: $\lambda_x[\text{clean.up}(x,j)](\neg d) = [\text{clean.up}(\neg d,j)]$

The fragment answer thus properly offers a value for the focused *wh*-expression: it is not referring to Dad, but someone else.

Observe that the present system can license another structure in which the negator functions as sentential negation, as represented in the following:



The NP *Dad*, functioning as a salient utterance, is a well-formed NSU licensed by the Head-Fragment Construction. This NSU (head-fragment construct) is in turn modified by the sentential negator *not* and yields the meaning such that it is not the case that Dad would clean it up. This meaning resolution can be represented as following:

- (42) a. QUD: $\lambda_x[\text{clean.up}(x,j)]$
 b. Meaning of the NSU after its application to the fragment: $[\text{clean.up}(d,j)]$
 c. Meaning of the negated fragment: $\neg [\text{clean.up}(d,j)]$

As such, the present analysis can give us two possible readings for the negator in negated fragments. The disambiguation would be determined by the context. When it bears contrastive focus, the negator functions as constituent negation; when it functions as a sentential operator taking an S or an NSU, it behaves like sentential negator.

3.3 Advantages of the Direction Interpretation Approach

There are several advantages that the present analysis can offer. The present analysis first implies that any maximal projection can be negated by *not* and functions as a negated fragment answer. This can be observed from the following attested data:

- (43) a. Where's your brother? Not at home.
 b. Has she mentioned anything? Not to me.
- (44) a. How's the hike been? Not too bad.
 b. You're not having breakfast? Not really hungry.
- (45) a. Do you hear about this in Western news? Not really.
 b. You haven't seen him today, have you? Not today.
- (46) a. And when would you be back? Not coming back.
 b. Who is to be Astronomer Royal? Not decided yet.

All these are well-formed head-fragment constructs since the negated fragments here can bear salient discourse information. As observed here, each of the negated fragments is a salient utterance, providing an answer to the variable of a QUD evoked by the preceding

context. For instance, the antecedent clause in (43a) evokes a QUD like $\lambda_x \text{at}(b, x)$, asking a value for the place variable (x). The fragment PP *not at home* is a salient utterance functioning as a focus establishing constituent and thus can be a well-formed head-fragment construct. This value is applied to the QUD, yielding the propositional meaning, $\text{at}(b, \neg x)$.

Another advantage of the analysis is its possibility to offer a uniform analysis for negated fragments with different word orderings of the negator. As noted, the negator can either precede or follow a remnant:

- (47) a. Do you remember our world? Not clearly.
 b. Now, was that civilized? Clearly not.

The difference of the two can be seen from the following:

- (48) a. [_S [_{AdvP} Not [_{AdvP} clearly]]].
 b. [_S Clearly [_S [_{AdvP} not]]].

In (48a), the fragment AdvP *not clearly* is projected into a head-fragment construct, while in (48b), it is the negator *not* that functions as a propositional anaphor, which is selected by the evidential adverb *clearly*. This negator would not be interpreted as constituent negation, since, as suggested by Kim and Sag (2002), the negator functioning as constituent negation requires its argument expression.

Note that the DI approach can also address connectivity effects concerning the presence of prepositions. The preposition of fragments needs to match that of the overt or covert preposition antecedent, as noted by Merchant (2004) and others:

- (49) A: Who was Peter talking with.
 B: (With) Mary/*Of Mary.

In languages like English, a bare DP fragment is permissible since it allows preposition stranding. Further, the preposition of the fragment needs to match that of the antecedent if it is present. A similar requirement also occurs in negated fragments:

- (50) a. Has she mentioned anything? Not to me./*Not with me.
 b. Were you scared? Not of her./*Not with her.

The predicate *mentioned* of the antecedent clause in (50a) selects an implicit PP[*to*] argument and *scared* in (50b) selects an implicit PP[*of*] argument. The fragments here need to have identical preposition values. This connectivity effect has provided a motivation to assume a putative clausal source, as seen from the following:

- (51) a. She did not mention anything to me/*with me.
 b. I am not scared of her/*with her.

The present analysis, in which contextual update plays a key role in the licensing of fragment answers, can also capture such a matching effect. In these examples, the preceding antecedent clause includes no overt correlate (antecedent) for the fragment. The correlate is implicitly provided by the argument structure of the predicate *mention* and *scare*. Adopting the analysis of Ginzburg and Sag (2000) and Kim (2015b), for instance, we could take the unrealized oblique argument of *scared* as an instance of indefinite null instantiation (*ini*), as represented in the following:

- (52) Lexical item for *scared*:

$$\left[\begin{array}{l} \text{FORM} \quad \langle \textit{scared} \rangle \\ \text{ARG-ST} \quad \left\langle \text{NP}_i \left(\text{PP} \left[\begin{array}{l} \textit{ini} \\ \text{PFORM of} \\ \text{INDEX } x \end{array} \right] \right) \right\rangle \\ \text{SEM} \quad \textit{scared.of}(i,x) \end{array} \right]$$

The lexical information specifies that the second argument of *scared* can be an unrealized PP. Uttering the antecedent clause would activate this information and the following QUD:⁵

- (53) [MAX-QUD λ_x [*scared.of*(*i,x*)]]

The negated fragment is linked to this variable as a salient expression:

⁵ An indefinite argument can introduce a variable and this can serve as a question value introduced by a QUD.

$$(54) \left[\begin{array}{l} \text{SAL-UTT} \left[\begin{array}{l} \text{CAT} \quad \text{PP} \left[\begin{array}{l} \text{ini} \\ \text{PFORM of} \\ \text{INDEX } x \end{array} \right] \end{array} \right] \\ \text{SEM } \textit{scared.of}(i,x) \end{array} \right]$$

The fragment *not of her* projects a well-formed NSU in accordance with the Head-Fragment Construction. The preposition of the implied PP *of someone* evoked as a variable of the QUD from the argument structure of the predicate *scared* in the antecedent clause thus matches with that of the fragment, and thereby be able to provide appropriate identity information.

This discourse-based approach can also offer another advantage of accounting for the data where the prepositional matching requirement is overridden. Consider the following attested data:

- (55) a. Where will the dish be assembled? Not the kitchen.
 b. Do you date the girls that work in those establishments too? Not the bookstore.

The putative clause sources of the fragments here would be something like the following:

- (56) a. The dish will not be assembled *(in) the kitchen.
 b. I date the girls that work *(in) the bookstore.

As seen here, the issue would be that the possible sources are ungrammatical: the preposition is obligatory here, though it is absent in the negated fragments. The present analysis could avoid such an issue. The QUD that the antecedent clause in (55a) evokes is something like ‘The dish will be assembled at x’. The QUD thus introduces a variable in the discourse. The fragment answer *Not the kitchen* is offering a value for this variable: it says that its value cannot be the kitchen. This resolution process can be given in the following:

- (57) a. Meaning of the Q: $\lambda_x[\textit{be.assembled.at}(d,x)]$
 b. Meaning of the negated fragment: $\neg k$
 c. Question applied to the answer: $\lambda_x[\textit{be.assembled.at}(d,x)](\neg k) = [\textit{be.assembled}(d, \neg k)]$

A similar advantage of the present analysis can be gained from accounting for the absence of connectivity effects in examples like the following:

- (58) a. Who's distracted by drama? Not us/*not we.
 b. Who's paying for these surgeries? Not him/*not he.

The sentential source of the fragment answers, required to introduce in a deletion-based analysis, would be unacceptable:

- (59) a. *Not him is paying for these surgeries.
 b. *Not us are distracted by drama.

The present system that posits no sentential sources for (negated) fragments can expect such a case mismatch. The QUD introduced by the context is asking a value for the variable and the fragment answer is just providing its value. For instance, (58a) would have the following the resolution process:

- (60) a. Meaning of the Q: $\lambda_x[\text{distracted.by}(x,j)]$
 b. Meaning of the negated fragment: $\neg i$
 c. Question applied to the answer: $\lambda_x[\text{distracted.by}(x,j)](\neg i) = [\text{distracted.by}(\neg i,j)]$

The system does not enforce case matching between the fragment and the putative correlate in the context. The unavailability of nominative case is simply due to the general constraint that the nominative case is assigned only to the subject of a finite clause.⁶

A further advantage of the present analysis, where the discourse plays a key role in resolving the propositional meaning of negated fragments, can be found from cases with no overt antecedent:

- (61) a. Do you want to know where I inserted it? Not interested.
 b. So when can I pick him up? Not so easy. What do you mean? Well, Luke doesn't want to come to home.

In both examples, the antecedent cannot be simply found from the preceding discourse. There could be more than one sentential source for each of these examples. For instance,

⁶ This general constraint is instantiated as a constructional constraint. See Kim (2015b) for a construction-based case assignment system.

the sentential source of the fragment in (61b) could be something like the following:

- (62) a. It would be not so easy to pick him up.
b. It is not so easy to tell you when you can pick him up.
c. It is not so easy to figure out when you can pick him up.

The present system just concerns that it is not so easy to provide an answer to the QUD evoked from the context. There is no need to introduce a sentential source. All that is required to resolve the meaning of the fragment is to refer to the structured discourse that tells us what is at issue in the given context.

4. Discussion and Conclusion

We have seen that the intriguing feature of fragments is that they are non-sentential with respect to form values, but they induce a propositional interpretation. This mismatch between form and semantic function has led the development of two main approaches: deletion-based sentential approaches and direct interpretation non-sentential approaches. The deletion-based approach places an emphasis on the sentential syntactic structure of negated fragments, avoiding extra mapping relation from form to meaning. This naturally places burden on the syntax by requiring each fragment to be linked to its full sentential source. Meanwhile, the direct interpretation approach introduces no additional syntax: negated fragments are mapped into non-sentential utterances and induce sentential interpretations from the enriched discourse.

The paper discussed key issues that arise from the postulation of clausal sources for negated fragments, and provided a plausible alternative analysis that requires no postulation of sentential sources. The direct interpretation approach offered here shows us that once we have a system that represents clear discourse structures with the information about salient utterances and question-under-discussion, we can have straightforward mapping relations from negated fragments to propositional meaning. This direct interpretation approach is further supported by the robust account of flexible connectivity effects and other discourse-governed negated fragments.

References

- Abe, Jun. 2016. Make short answers shorter. *Syntax* 19, 223–255.
- Culicover, Peter W. and Ray S. Jackendoff. 2005. *Simpler Syntax*. Oxford: Oxford University Press.
- Ginzburg, Jonathan. 2012. *The Interactive Stance: Meaning for Conversation*. Oxford: Oxford University Press.
- Ginzburg, Jonathan and Ivan A. Sag. 2000. *Interrogative Investigations: The Form, Meaning and Use of English Interrogatives* (CSLI Lecture Notes 123). Stanford, CA: CSLI Publications.
- Groenendijk, Jeroen and Martin Stokhof. 1984. *Studies on the Semantics of Questions and the Pragmatics of Answers*. Doctoral dissertation, University of Amsterdam, Amsterdam, NL.
- Hamblin, Charles. 1973. Questions in Montague English. *Foundations of Language* 10(1), 41–53.
- Jacobson, Pauline. 2016. The short answer: Implications for direct compositionality (and vice versa). *Language* 92(2), 331–375.
- Karttunen, Lauri. 1977. Syntax and semantics of questions. *Linguistics and Philosophy* 1, 3–44.
- Kim, Jong-Bok. 2000. *The Grammar of Negation: A Constraint-based Approach*. Stanford: CSLI Publications.
- Kim, Jong-Bok. 2015a. Fragments in Korean: A direct interpretation approach. *Studies in Generative Grammar* 25, 703–733.
- Kim, Jong-Bok. 2015b. Syntactic and semantic identity in Korean sluicing: A direct interpretation approach. *Lingua* 166(B), 260–293.
- Kim, Jong-Bok and Anne Abeillé. 2019. Why-stripping in English. *Linguistic Research* 36(3), 365–387.
- Kim, Jong-Bok and Laura A. Michaelis. 2020. *Syntactic Constructions in English*. Cambridge: Cambridge University Press.
- Kim, Jong-Bok and Joanna Nykiel. 2020. The syntax and semantics of elliptical constructions: A direct interpretation perspective. *Linguistic Research* 37(2), 223–255.
- Kim, Jong-Bok and Ivan A. Sag. 2002. Negation without head-movement. *Natural Language and Linguistic Theory* 20(2), 339–412.
- Klima, Edward S. 1964. Negation in English. In J. A. Fodor & J. J. Katz, eds., *The Structure of Language: Readings in the Philosophy of Language*, 246–323. Englewood Cliffs, NJ: Prentice-Hall.
- Krifka, Manfred. 2001. For a structured meaning account of questions and answers. In C.

- Féry and W. Sternefeld, eds., *Audiatur vox Sapientiae: A Festschrift for Arnim von Stechow*, 287–320. Berlin: Akademie Verlag.
- Merchant, Jason. 2003. *Remarks on Stripping*. Ms. University of Chicago.
- Merchant, Jason. 2004. Fragments and ellipsis. *Linguistics and Philosophy* 27, 269–289.
- Morgan, Jerry. 1973. Sentence fragments and the notion of sentence. In Braj Kachru, Robert Lees, Yakov Malkiel and Angelina Pietrangeli and Sol Saporta, eds., *Issues in Linguistics*, 719–751. Urbana: University of Illinois Press.
- Sag, Ivan and Joanna Nykiel. 2011. Remarks on sluicing. In Stefan Müller, ed., *Proceedings of the HPSG 11 Conference*, 188–208, Stanford, CA: CSLI Publications.
- Stanton, Robert. 1995. Non-sentential assertions and semantic ellipsis. *Linguistics and Philosophy* 18, 281–296.
- Stanton, Robert. 2006. *Words and Thoughts: Subsentences, Ellipsis, and the Philosophy of Language*. Oxford: Oxford University Press.
- Vicente, Luis. 2006. Short negative replies in Spanish. *Linguistics in the Netherlands* 23, 199–211.
- Weir, Andrew. 2014. *Fragments and Clausal Ellipsis*. Doctoral dissertation, University of Massachusetts, Amherst, USA.
- Weir, Andrew. 2020. Negative fragment answers. In Viviane Déprez and M. Teresa Espinal, eds., *The Oxford Handbook of Negation*, Oxford: Oxford University Press.

Examples in: English

Applicable Languages: English

Applicable Level: Tertiary

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