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Negative concord in fragments: Reexamining the evidence against the negativity of negation markers

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I argue that particular restrictions on the recoverability of elided negation in fragment answers in negative-concord languages follow from the semantics of questions. Drawing parallels with other ellipsis phenomena, I also highlight the role of Agree in making certain elided heads recoverable. This invalidates a major argument against the analysis of negative-concord items as universal quantifiers scoping above negation.

1 Background

Neg-words in negative-concord languages have been analysed as indefinites in the scope of negation (henceforth '¬∃-approaches', e.g. Zeijlstra 2004; Penka 2011; Merchant 2013b; Gribanova 2017; Szabolcsi 2018; Erschler 2023), nonnegative universal quantifiers scoping above negation ('∀¬-approaches', e.g. Szabolcsi 1981; Giannakidou 2000; Abels 2005; Shimoyama 2011; Rossyaykin 2020) or the carriers of semantically interpretable negation (Haegeman & Zanuttini 1996; Watanabe 2004). Because of the logical equivalence in (1), the issue of which approach is the correct one cannot be decided on the basis of the truth conditions, and other, satellite, phenomena must be examined in search of evidence.

(1) $\neg\exists x : P(x) \equiv \forall x{:}\neg P(x)$

Since at least Watanabe (2004) and Zeijlstra (2004), the literature has viewed the ability of neg-words to serve as fragment answers as decisive evidence against the ∀¬-theories.

The present paper aims to revisit Watanabe's (2004) original argument against the negativity of negation markers, and the concomitant nonnegativity of neg-words, based on fragment answers, which is summarised in Section 2. Section 3 shows that the unavailability of certain interpretations attributed by Watanabe (2004) to a violation of the semantic identity condition on clausal ellipsis follows independently from the semantics and pragmatics of questions and answers. Section 4 then argues, by considering the relation between the fragment and the ellipsis site, that featural dependencies resulting from Agree make certain elided heads unambiguously recoverable. It further shows that the same holds of a wide range of other varieties of ellipsis: VP-ellipsis, nominal ellipsis, and clausal ellipsis. Section 5 summarises the discussion by concluding that fragment answers do not pose a challenge for ∀¬-approaches.

2 Watanabe's argument

As mentioned in the introduction, since at least Watanabe 2004, fragment answers have been viewed as a testing ground for the theories of negative concord. In particular, the ability of neg-words in strict negative concord languages to appear without the accompanying sentential negation, as in the Russian example (2), has distinct consequences for different approaches to the meaning of neg-words and negation markers.[1]

[1] While Watanabe uses Japanese data, my data come from Russian. As far as I can tell, the point to be made applies equally to Japanese. I use the Library of Congress romanisation conventions for Russian and the following gloss abbreviations: 1 = First person, 3 = Third person, ACC = accusative, COMP = complementizer, DAT = dative, DECL = declarative, GEN = genitive, HON = honorific, INF = infinitive, INS = instrumental, N = neuter, NEG = negative, NOM = nominative, PL = plural, PRS = present, PST = past, Q = question particle, SG = singular.

(2) A: Kogo tȳ videl? — B: Nikogo [~~ya~~ ~~ne~~ ~~videl~~].
who.ACC you saw No one I not saw
'Who did you see? — Nobody.'

In (2), an item traditionally analysed as a negative concord item (NCI), *nikogo* 'nobody', appears as the only surviving remnant in a fragment answer, even though in all other environments it must cooccur with clausal negation.

Watanabe (2004) analyses fragment answers like (2) above as instantiating clausal ellipsis and argues that they should be subject to the same identity conditions between the ellipsis site and its antecedent as other instances of ellipsis in order for ellipsis to be recoverable. Watanabe (2004), following Merchant (2004), explicitly adopts the semantic identity approach: for ellipsis to be recoverable, the elided proposition should be in a mutual entailment relationship with its antecedent proposition.

The ∀¬-approach requires that the negation marker occurring in the ellipsis site (e.g. *ne* 'not' in (2) above) should correspond to semantic negation. Because the antecedent proposition does not contain negation, the semantic identity condition is violated and negation cannot be recovered. Watanabe (2004) further argues that, if negation *were* allowed to be recovered from a nonnegative proposition, as required by the ∀¬-theories, it would make wrong empirical predictions. In particular, he claims that negation is then predicted to be as easily recoverable for non-NCI fragment answers such as (3) below.

(3) A: Kogo tȳ videl? — B: Mashu.
who-ACC you saw Masha.ACC
'Who did you see? — Masha.'

Allowing elided negative propositions to be recovered on the basis of nonnegative antecedent propositions, according to Watanabe 2004, predicts the fragment answer in (3) to be semantically ambiguous between an affirmative fragment answer, *I saw Masha*, schematised in (4), and a negative fragment answer, *I didn't see Masha*, schematised in (5).

(4) **Affirmative Fragment Answer**
A: Kogo tȳ videl? — B: Mashu [~~ya~~ ~~videl~~].
who-ACC you saw Masha.ACC I saw
'Who did you see? — (I saw) Masha.'

(5) **Negative Fragment Answer**
A: Kogo tȳ videl? — B: Mashu [~~ya~~ ~~ne~~ ~~videl~~].
who-ACC you saw Masha.ACC I not saw
('Who did you see? — (I didn't see) Masha.')

In actuality, however, the only available interpretation of (3) is the affirmative one. Watanabe thus interprets the unavailability of the negative fragment answer interpretation of (3) as entailing the nonnegative status of negation markers.

Two points of logic must be highlighted before I address Watanabe's (2004) argument. Firstly, the affirmative fragment answer in (4) and the (unavailable) negative fragment answer in (5), as well as the actual NCI fragment answer in (2) must be treated on a par with respect to the semantics of questions and answers for the argument to be valid. Put differently, they should all belong to the same theoretically homogeneous set. Secondly, in order for the argument to work, the NCI remnant *nikogo* 'nobody' in (2) and the non-NCI remnant *Mashu* 'Masha' in (3) must also be viewed as making an identical contribution to the recoverability of ellipsis. I now show that neither premise is justified and the entire argument just presented is therefore invalid.

3 Fragment answers vs. fragment responses

I begin with the premise that the NCI fragment answer in (2), the affirmative fragment answer in (4) and the (unavailable, but allegedly predicted to be available) negative fragment answer in (5), as well as the non-elliptical sentences underlying them, have the same theoretical status. Now, when a cooperative speaker utilises ellipsis, they expect the addressee to be able to recover it. This requires that the addressee, too, should form particular hypotheses as to the intentions of the speaker based on the semantics of the question, the common ground, information structure, discourse structure and conversation flow. I argue that it is precisely these considerations that set the unavailable negative fragment answer interpretation in (5) apart from (2) and (4), undermining Watanabe's (2004) argument.

A natural place to start is the semantics of questions and the relation between them and their answers. While it is not my intention to survey all of the existing theories of the semantics of questions and answers (see Cross & Roelofsen 2022 and Dayal 2016 for useful overviews), I take it as established consensus that answers to questions are more than mere assertions of a proposition but rather assertions to the effect of the proposition being a complete answer to the question posed (Dayal 2016: 63, paraphrasing Spector 2007).

In the interest of brevity but also representativity, let us consider the meaning of the question in (6) from the point of view of two approaches: the Hamblin/Rooth approach based on alternative propositions, and the Groenendijk & Stokhof approach based on partitions.

(6) Who did you see?

In a simple model with just two individuals, Masha and Natasha, the meaning of A's question in (6) addressed to B would be something like (7) in Hamblin's (1973) and Rooth's (1985) terms, and something like (8) on Groenendijk & Stokhof's (1984) approach.

(7) a. ⟦Who did you see⟧ = {saw(B, x) | people(x)},
where *people* ranges over possibly empty sums of individuals m and n.

b. $\left\{\begin{array}{l}\text{B saw } m\\ \text{B saw } n\\ \text{B saw } m \oplus n\\ \text{B saw nobody}\end{array}\right\}$

According to the Hamblin-Rooth approach to the semantics of questions (and focus), the meaning of the question *Who did you see?* is the set of alternative propositions instantiating possible answers to the question. In the set in (7b), these are *B saw Masha*, *B saw Natasha*, *B saw everyone* (the sum of individuals Masha and Natasha), and *B saw nobody* (the empty sum of individuals).[2]

(8)

$w : \lambda x$[saw(B, x)(w)] = { m, n, $m \oplus n$ }	$w : \lambda x$[saw(B, x)(w)] = { m }
$w : \lambda$[saw(B, x)(w)] = { n }	$w : \lambda x$[saw(B, x)(w)] = ∅

The four cells in (8) correspond to four distinct *partitions* on the set of worlds instantiating possible exhaustive answers to the question in (6). The upper left hand cell, for example, corresponds to the worlds where the property of being seen by B holds of Masha, Natasha and nobody else (i.e. *B saw everyone*), whereas the lower left hand cell corresponds to the worlds where B saw Natasha and nobody else. Ditto for the remaining exhaustive answers.

As can be seen from the semi-formal representations above, both the *I saw Masha* and *I did not see anyone* propositions belong to the core meaning of the question in (6) and instantiate legitimate answers to it (see Giannakidou 2006 for a similar reasoning). So do the fragment answers in (2) and (4).[3]

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[2] The status of the proposition based on the empty sum is, in fact, controversial because it denies the presupposition argued by some researchers to be an inherent part of a question's meaning (see Fitzgibbons 2013 for an approach to negative fragment answers along these lines). In technical terms, dealing with this presupposition requires an additional stipulation or mechanism removing the empty sum from the range of the predicate. See the discussion in Beaver & Clark (2008: 26–27) and Dayal (2016: §3).

[3] Aware of this possibility, Watanabe (2004) objects that the antecedent for an elided constituent must be a linguistic expression as opposed to an abstract object such as a proposition. This seems too restrictive in the face of the existence of felicitous dialogues such as (i) below, set at a bakery or a café, inspired by Weir (2014), and what Stockwell (to appear) dubs 'metalinguistic ellipsis' — instances of ellipsis in which antecedents are supplied by metalinguistic means.

(i) A: Chem mogu pomoch'? — B: Von tu bulochku, pozhaluĭsta.
what.INS can.FSG help yonder that.ACC roll.ACC please
'How may I be of assistance? — That (cinnamon) roll there, please.'

The accusative case on the fragment uttered by B in (i) above signals the presence of elided syntactic structure. Crucially, however, that syntactic structure lacks an antecedent that is a linguistic expression, since A's question, which

Things are different, however, when it comes to the unattested negative fragment answer interpretation in (5). I suggest that the primary reason behind its unavailability is the oddity of the dialogue in (9), which does not even involve ellipsis:

(9) #A: Who did you see? — B: I didn't see Masha.

If the meanings of questions are sets of alternative propositions that could serve to answer those questions (or particular partitions on a set of worlds), then B's response in (9) does not resolve the issue raised by A. The meaning of the question does not contain the proposition *B didn't see Masha*, see (7), or a corresponding partition on the Groenendijk & Stokhof approach in (8). The response in (9B), then, is not *stricto sensu* an answer since it merely asserts a proposition without simultaneously answering the question posed. Intuitively, (9B) can be thought of as answering a different question than (9A), and requires an inference to establish its relation to the actual question in (9A), akin to what is happening in (10).[4]

(10) A: Who is coming? — B: John is sick. (Merchant et al. 2013: 22)

Turning now to ellipsis, Watanabe (2004) follows Merchant 2004 in treating ellipsis as applying to a fully constructed syntactic structure, which is also the view I adopt. It is also reasonable to suppose that clausal ellipsis, besides purely grammatical constraints, is further subject to pragmatic constraints (Kroll & Rudin 2017; Rudin 2019; Kroll 2020), in that a cooperative speaker 'will only elide material if their interlocutors will be able to recover the intended interpretation' (Kroll & Rudin 2017: §5). If (9B), without ellipsis, is not an appropriate way to answer the question (9A), there is in fact no expectation that (5B), involving ellipsis, should be. There is neither any reason for A to expect a negation in (5B) nor any reason for B to expect A to be able to recover it. And, just like (9B) is not an answer to (9A), the ellipsis remnant in (5B) is not a fragment answer but a fragment response/indirect answer. According to Merchant et al. (2013: 21–22), fragment responses/indirect answers, unlike fragment answers, need not answer the question directly or exhaustively but do require an inference.

A true, direct, fragment answer, in contrast, does not require an inference by virtue of already being present in the meaning of the question at hand. But there is nothing in the remnant, *Mashu* 'Masha', in (5) that would indicate that such an inference is even necessary, since the same

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is the only linguistic expression besides B's response in the present discourse, does not have the syntax capable of licensing accusative case on the internal argument.

[4] An anonymous reviewer objects that the negative answer in (9) can actually be argued to instantiate legitimate answers on the partition approach to questions and answers because of the exhaustive character of the partitions (Groenendijk & Stokhof 1984). That is, in a model with just two individuals, M and N, the negation of seeing M denotes the same set of worlds as seeing N. While that is correct, such a theory still requires an external mechanism to explain the heavy preference for the direct answer as opposed to the indirect answer, which is equivalent to what I say in the main text above. Furthermore, when it comes to fragment answers, the information as to which fragment results from which proposition is simply not available to the hearer.

string already serves as a different, and genuine, affirmative fragment answer in (4B). As there is no reason to deviate from the hypothesis of formal identity between the antecedent and the ellipsis site, the inference that could eventually result in recovering an elided negation is simply not triggered, and that is why the negative fragment answer interpretation in (5) is unavailable. In Section 4.2 below, I return to this issue and consider several cases of clausal ellipsis when a negative interpretation might be preferred over the nonnegative one.[5]

Summarising the discussion in this section, I have shown that negative NCI-fragments, affirmative fragments and negative non-NCI fragments do not form a homogeneous class, displaying fundamental differences from the point of view of the semantics of questions and answers. The unavailability of the negative non-NCI fragment interpretation forming the core of Watanabe's (2004) argument against ∀¬-approaches thus has an independent explanation.

4 Relation between fragment answer and ellipsis site

Having addressed the first premise of Watanabe's (2004) argument, we are now in a position to consider the second one. The premise is this: for the argument based on the data in (2), (4) and (5) to be valid, the surviving remnants of clausal ellipsis should be making an equal contribution to the recoverability of ellipsis. Watanabe (2004) appears to interpret the condition on the recoverability of elided material as relying solely on identity with the antecedent, without taking into account the relationship between the remnant and syntactic material properly contained in the ellipsis site. I argue in this section that the relationship between the remnant and a head inside the ellipsis site matters for recoverability in that a featural dependency resulting from Agree enables elided material to be unambiguously recovered.

4.1 Syntactic dependency and unambiguous resolution

Firstly, let us establish how the structure of sentences with negative concord would look on a nonnegative approach to the meaning of neg-words, assuming their licensing is syntactic and reduces to an application of Agree (Chomsky 2001). If the internal argument carries an unvalued

[5] Weir (2018) suggests a different implementation of this idea: according to him, '[t]he backgrounds of short answers must be in a subset relation to the background of their antecedent questions' (Weir 2018: 1289). This effectively formalises the intuition that, to be felicitous, short answers must be directed at answering precisely the question asked rather than a different question, however similar that question might be to the original one. Failure to satisfy this requirement results in the unavailability of fragment answers, as shown below:

(i) a. A: Which pastries did he eat? — B: #All the food on the table.
b. A: Which pastries did he eat? — B: He ate all the food on the table. (Weir 2018: 1291)

I argue that the unavailable negative non-NCI fragment interpretation in (5) belongs to the same family of phenomena as (ia). The only difference between them concerns the acceptability of the fragment in (5) and its unacceptability in (ia), which is explained by the fact that the acceptable fragment is in fact identical to the affirmative fragment answer in (4). On the intended interpretation, however, it is as unacceptable as (ia).

polarity feature, [Σ:_] (Laka 1990), and the negation marker a valued one, [Σ:¬], then the fragment answer in (2) would have the simplified structure in (11). To be explicit, I assume, with Merchant (2004); Watanabe (2004);Weir (2020), the movement approach to fragment answers, noting in passing that the issue is not settled (see Griffiths et al. 2023 for a recent discussion). Following the valuation of the polarity feature, the NCI is fronted to a left-peripheral position, and the material to its right is elided.[6]

(11) Nikogo$_{[\Sigma:\neg]}$ [~~ya~~ ~~ne~~$_{[\Sigma:\neg]}$ ~~videl~~]. (AGREE)
No one I not saw
'(Who did you see?) — Nobody.'

Regardless of how one analyses feature valuation (i.e. as copying, feature sharing, feature union etc.), the ellipsis remnant in (11), by virtue of morphologically reflecting an Agree dependency with a goal internal to the ellipsis site, unambiguously identifies the presence of that goal, allowing ellipsis to be recovered even in the presence of a polarity mismatch. It is this featural dependency between the remnant and negation that sets the negative fragment answer apart from the nonnegative ones, as I discuss in §4.2 below.

To lend credence to the idea that agreement, broadly construed, is significant for the recoverability of elided material, it would now be instructive to abstract away from negative concord and NCI licensing and view the structure in (11) in a generalised form. This is shown in (12) without reference to any particular linguistic phenomenon.

(12) $\underbrace{\ldots \text{XP} \ \ldots \text{YP} \ldots}_{\text{antecedent}} - \underbrace{\text{Probe}_{[F:\alpha]}}_{\text{remnant}} \ [\ \underbrace{\text{~~}\ldots \text{Goal}_{[F:\alpha]}\text{~~} \ldots}_{\text{ellipsis site}}\ ]$ (AGREE)

If [F:α] in (12) is a semantically contentful feature, then its appearance on a goal properly included in the ellipsis site amounts to a semantic mismatch between the antecedent proposition and the elided proposition. As I show directly below, this configuration characterises such routinely available varieties of ellipsis as VP-ellipsis, NP-ellipsis and sprouting.

Example (13) below, adapted from Merchant (2013a: 539, ex. 4a), involves a number mismatch in the antecedent and ellipsis site.

(13) In my room there was a minibar available, but in my friends' rooms there weren't.

[6] I take no stand on the issue of the directionality of Agree here, as it is immaterial for the validity of the argument whether probing proceeds upwards and feature valuation downwards (Szabolcsi 2018), or the other way round (Abels 2005; Rossyaykin 2022; Rudnev 2024). What matters is that the dependency between the NCI and the negation marker is a syntactic one.

The singular-plural mismatch between the antecedent and the ellipsis site in (13) is a genuine semantic mismatch from the point of view of e-GIVENness, since the two propositions (or, rather, their F-closures, see Merchant 2001) are not in a mutual-entailment relation. Whilst the existence of several minibars entails the existence of one, the opposite is not true. Other mechanisms of ensuring semantic identity in the face of an apparent *φ*-feature mismatch, such as Referential Parallelism (Fox 2000), also fail, since the mismatching singular and plural NPs do not have the same referent.

The Russian example (14) illustrates the same mismatch but one that involves an agreeing lexical verb rather than an auxiliary. Again, as above, the two propositions are not in a mutual entailment relation: the reception of one invitation does not entail the reception of multiple invitations.

(14) Vsem prishl-**i** priglasheni-**ya**, a mne ne prishl-**o** ~~priglashenie~~.
all.DAT came-**PL** invitation-**PL** and me.DAT not came-**N.SG** invitation.N.SG
'Everyone got their invitations but I didn't.'

The relevant configuration is the desired one irrespective of the particular analysis of (14) in terms of argument ellipsis, represented in (15), or verb-stranding VP-ellipsis, represented in (16).[7]

(15) $[\underbrace{\ldots\ V_{[\varphi:\text{PL}]}\ \ldots\ NP_{[\varphi:\text{PL}]}\ \ldots}_{\text{antecedent}}] \text{ — } [\underbrace{\ldots\ V_{[\varphi:\text{N.SG}]}}_{\text{remnant}}\ \ldots\ \underbrace{\sout{NP_{[\varphi:\text{N.SG}]}}}_{\text{ellipsis site}}\ \ldots]$ (AGREE)

In (15) representing the argument-ellipsis analysis, the singular neuter morphology on the finite verb *prishlo* 'came' in the remnant allows for the identification of the singular neuter NP *priglashenie* 'invitation' in the ellipsis site, making it recoverable. The same applies to the analysis in (16), with the main difference being the size of the elided constituent.

(16) $[\ldots\ \underbrace{[_{\text{VP}}\ V_{[\varphi:\text{PL}]}\ \ldots\ NP_{[\varphi:\text{PL}]}\ ]}_{\text{antecedent}}\ldots] \text{ — } [\ldots\underbrace{[_{\text{FP}}\ \text{V-F}_{[\varphi:\text{N.SG}]}}_{\text{remnant}}\ \underbrace{\sout{[_{\text{VP}}\ t_{\text{V}}\ NP_{[\varphi:\text{N.SG}]}\ \ldots]}\ ]}_{\text{ellipsis site}}$ (AGREE)

We have seen that the presence of overt *φ*-features on a valued clausal probe in the ellipsis remnant aids in recovering its valuer in the ellipsis site even in the face of a semantic mismatch in number. A minimally different case involves the interaction of agreement on prenominal modifiers and nominal ellipsis, illustrated in (17) below.

[7] For the sake of argument, I set aside the alternative analysis of unpronounced arguments as resulting from null anaphora/*pro*-drop, but see Duguine 2014 for an approach reducing *pro*-drop to ellipsis.

(17) Vashi priglasheni-**ya** na tseremoniyu prishl-**i**, a mo-**ë** Δ ne prishl-**o**.
your invitations-**PL** on ceremony came-**PL** and my-**N.SG** not came-**N.SG**
'Your invitations to the ceremony have arrived but mine hasn't.'

An agreeing possessive pronoun, *moë* 'my.N', in the ellipsis remnant overtly realises the singular neuter agreement features of the head noun *priglashenie* 'invitation' inside the elided NP 'invitation to the ceremony', notated by the Δ. As above, semantic identity is violated because of a lack of mutual entailment between the antecedent and the ellipsis site.

A final example of successful ellipsis resolution in the presence of a syntactic and semantic mismatch is presented by sprouting/sluicing, on the C′-deletion approach to clausal ellipsis (Heck & Müller 2007; Thoms 2010; Messick & Thoms 2016). Sluicing is the kind of ellipsis which involves a wh-expression in the ellipsis remnant — *whose* in (18) and (19) — while the rest of the clause is elided; in regular sluicing, the surviving wh-expression normally has an overt indefinite correlate in the antecedent. In sprouting, the antecedent contains no correlate. Example (18) below illustrates matrix sprouting, whereas example (19) illustrates embedded sprouting.

(18) A: John's just left. — B: In whose car?

(19) John's just left but I don't know in whose car.

If finite declarative clauses are CPs, then the antecedent in (19) and (20) is a declarative clause headed by a non-interrogative complementiser, $C_{[decl]}$ in (20), which is a simplified structural representation of (18). The sprout, on the other hand, is a question, either a matrix or an embedded one, headed by an interrogative complementiser, $C_{[iQ]}$, whose specifier is targeted by wh-movement. We thus witness a clause-type mismatch on the semantic side, yet ellipsis is licensed without any difficulty. The same applies to the embedded sprouting structure in (21) *modulo* T-to-C movement.

(20) [$C_{[decl]}$ John's just left.] — In whose$_{[uQ]}$ car [~~has + $C_{[iQ]}$ he just left~~] ?
AGREE

(21) John's just left but I'm not sure in whose$_{[uQ]}$ car [~~$C_{[iQ]}$ he's just left~~]
AGREE

The clause type mismatch in the sprouting examples is exactly parallel to the polarity mismatch in the negative concord example above and to the number mismatches in VP- and NP-ellipsis.[8]

[8] An anonymous reviewer observes that the sprouting examples may not in fact instantiate a semantic mismatch on the Q-equivalence analyses of sluicing and fragment answers whereby clausal ellipsis is anaphoric to a Question Under Discussion. If such an analysis is right, this might be true, though sprouting in particular appears to pose several serious challenges to Q-equivalence (see Barros & Kotek 2019 for extensive discussion), which might indicate that some version of syntactic identity, rather than semantic identity, is called for. One challenge is the intuition that *John's just left* does not in fact raise the question of what car he left in.

Here too, the ellipsis site contains a head that was absent from the antecedent: the interrogative $C_{[iQ]}$ in sprouting mismatches the declarative $C_{[decl]}$ in the antecedent just as the negative [Σ: ¬] in the fragment answer mismatches the affirmative polarity in the antecedent and the plural *φ*-features on the agreement-controlling NP in the antecedent mismatch the singular *φ*-features on the elided agreement-controlling NP in the ellipsis site. Crucially, however, the presence of the elided heads or features is signalled, in overt morphology, by the elements that have entered into an Agree relationship with them. The wh-item *whose* is in a featural relationship with $C_{[iQ]}$ in (21) just as the neg-word/NCI *nikogo* 'nobody' is in a featural relationship with [Σ: ¬] in (11) or the agreeing finite verb is in a featural relationship with the elided clausal subject in (13), (15) and (16). This appears to be sufficient for successfully, and unambiguously, recovering the elided material in the absence of a full formal semantic or syntactic identity with the antecedent.

4.2 No unambiguous resolution

Unlike the NCI-fragment answer, in which an ellipsis remnant is featurally linked to a negative element inside the ellipsis site, morphologically spelling out the features of the elided Neg head, non-NCI fragment answers and responses involve no such featural dependency. In particular, the referential remnant, *Masha*, in (3), carries no unvalued features that could be valued by the Neg head's [Σ: ¬] feature and receive morphological realisation, signalling the presence of Neg in the ellipsis site. Even if the elided part of the sentence contained negation, it would not be recoverable for the addressee, which is why there would be no reason for the speaker to recourse to an elliptical response in these circumstances.

Contemporary literature on the identity and recoverability of ellipsis has identified several contexts in which elided negation is recoverable, on the basis of a nonnegative antecedent, even in the absence of a featural relationship between negation and the remnant (Kroll & Rudin 2017; Rudin 2019; Kroll 2020; Ranero 2021). As mentioned in the previous section in the context of fragment responses, this polarity mismatch also requires there to be an inference for ellipsis to be felicitous. An example is given in (22) involving a nonnegative antecedent proposition, *Iraq will comply with the mandate*, embedded under a lexical negation verb *doubt*. The bracketed antecedent clause does not contain an overt negation, yet sluicing can be recovered as containing such a negation.

(22) We doubt that [Iraq will comply with the mandate], but we don't know why [~~Iraq won't comply with the mandate~~]. (Kroll 2020: 43)

Given the presence of negation in the ellipsis site and the nonnegative character of the bracketed antecedent, the inference required to make ellipsis recoverable could amount to establishing a loose equivalence relation between *doubt that p* and *believe that ¬p*.[9]

[9] I speak here of a *loose* equivalence relation between *doubt that p* and *believe that ¬p*, rather than the lexical decomposition of *doubt* providing a negation in the antecedent clause, as suggested by an anonymous reviewer, because

Something similar could be argued to obtain in (23), which involves a tense mismatch (future in the antecedent as opposed to the past in the ellipsis site) in addition to the polarity mismatch.

(23) We're here to do or die. Ohio, Ohio. **We'll win the game** or ~~[if we don't]~~ know the reason why [~~we did **not** win the game~~]. (adapted from Kroll 2020: 4)

The inference making the elided negation recoverable could amount to postulating an additional unpronounced conditional, as schematised in (23) above, which does contain negation and could be viewed as the actual antecedent for the elided negative proposition (see Stockwell 2022 for such an approach to licit voice mismatches under sluicing made recoverable by double ellipsis).[10]

As a final example of a polarity mismatch in the absence of an Agree dependency let us consider the cooccurrence restrictions imposed on the Korean adverbial *acik* 'still/yet'. As shown in (24), *acik* 'still/yet' is compatible with what can pretheoretically be described as 'continuous' predicates, such as *iss-* 'stay', but incompatible with 'noncontinuous' predicates such as *tochakha* 'arrive'.

(24) Mary-ka acik cip- ey iss- ta /*tochakha- ess-ta. [Korean]
Mary-NOM still home-at stay-DECL arrive- PST-DECL
'Mary still stays at home/*has arrived.' (adapted from Chung 2012: 551)

Negating a 'noncontinuous' predicate such as *tochakha* 'arrive' from above yields a 'continuous' predicate, with which *acik* 'still/yet' is also compatible, as shown in (25).

(25) Mary-ka acik tochakha-ci ani- ess- ta. [Korean]
Mary-NOM still arrive- INF NEG- PST- DECL
'Mary has not arrived yet.' (adapted from Chung 2012: 552)

Now, *acik* 'still/yet' can be used as a fragment answer to a nonnegative yes/no-question involving both a 'continuous' and a 'noncontinuous' predicate. Again, I illustrate this in (26) using the same verbs, *tochakha* 'arrive' and *iss-* 'stay', as before. As shown in (26B) and (26B′), the fragment can only be interpreted as a negative answer if the elided verb is *tochakha* 'arrive' and as an affirmative answer if the elided verb is *iss-* 'stay'.

(26) A: John-i tochakha-ess- ni / cip- ey iss- ni? [Korean]
John-NOM arrive- PST- Q home-at stay- Q
'Has John arrived/Is John home?'

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polarity reversals under sluicing similar to (22) are attested with other verbs, too, such as *remember*, which cannot plausibly be lexically decomposed in such a way as to contain negation, and a variety of licensing contexts. See Kroll (2020) for a comprehensive discussion.

[10] The facts are actually more complicated, as observed by an anonymous reviewer, since other continuations than *know the reason why* are actually infelicitous: *#or know for what reason/how*. Perhaps additional factors external to the grammar are at play here, such as the fact that the acceptable continuation rhymes with what precedes it whereas the unacceptable ones do not.

B: **Acik** [~~tochakha-ci~~ ~~ani-~~ ~~ha-~~ esse-] yo / #[~~cip-~~ ~~ey~~ ~~epse-~~] yo.
still arrive-INF NEG-do-PST- HON home-at not;stay- HON
'Not yet/#He still isn't.'

B': **Acik** [~~cip-~~ ~~ey~~ ~~isse-~~] yo / #[~~tochakha-esse-~~] yo.
still home-at stay- HON arrive- PST- HON
'He still is/#He already has.' (*ibid.*)

We can make sense of the contrast in (26B) and (26B′) by appealing to what we have already established for the other fragments above. The adverbial remnant *acik* 'stll/yet' is similar to the non-NCI fragment *Masha* in (3) and the wh-remnant in the sluicing examples (22) and (23) in not being featurally connected to a negation inside the ellipsis site. The 'continuous' predicate *iss-* 'stay' works precisely like the *Masha* examples (4) and (5): *acik* 'stll/yet' being compatible with both the affirmative and negative instances of this predicate and there being no negation present in either the antecedent or the ellipsis remnant, just as in (5B), the inference necessary for the recovery of potentially elided negation is simply not triggered. The hearer has no evidence on which to base a departure from the null hypothesis of full identity between the antecedent and the ellipsis site. Consequently, the only available interpretation is that of an affirmative fragment answer. Because the affirmative-answer interpretation would result in an incompatibility of *acik* 'still/yet' and the 'noncontinuous' predicate *tochakha* 'arrive', on the other hand, it is discarded, and the only remaining interpretation is that of a negative answer.

Now, if elided negation can be recovered on the basis of an inference, the question arises why such an inference is unavailable when it comes to NPI fragments. This is the point made by Weir (2020) in the context of negation accommodation: why is elided negation not accommodated in 'the presence of (something which is unambiguously) a negative polarity item' (Weir 2020: §25.2), as shown in (27) for English and (28) for Russian?

(27) A: Did you catch any fish? — B: #Some small ones, but/and any big ones.
(Weir 2020: ex. 17)

(28) A: Kogo tȳ videl? — B: *Kogo-libo [~~ya~~ ~~ne~~ ~~videl~~].
who-ACC you saw *anybody.ACC I not saw
('Who did you see? — *Anybody.')

While a unified principled explanation for the unacceptability of *all* NPIs as fragment answers would be preferable to each separate language being considered on a case-by-case basis, it should suffice to say for my present purposes that additional considerations contribute to making NPIs in English and Russian poor fragment answers. For the purposes of the present paper, I hypothesise that an important additional consideration is the overall makeup of the polarity system in individual languages. The negative answer to a wh-question can receive multiple surface realisations, and it is often the case that several quantificational expressions overlap in

their distribution. In English, *I did not see anyone* is generally truth-conditionally equivalent to *I saw no one* but one of them will consistently win over the other in particular circumstances. The negative quantifier *no one* (as well as *never, nowhere* etc.) being restricted to exactly one environment and more informative than the NPI *anyone* (and *ever, anywhere* etc., respectively) ensures that the negative quantifier will always win over the NPI in exactly those cases where that stronger, more specific, component is necessary. Negative fragment answers to nonnegative questions are one such environment. Besides, some NPIs serving a double duty as Free Choice Items creates additional ambiguities in elliptical contexts, thus obfuscating the necessary inference that could otherwise lead to the recovery of the elided negation.

Likewise, in Russian, *libo*-NPIs such as *kogo-libo* 'anyone' in (28) are subject to competition with NCIs, a state of affairs known as the 'bagel problem' (Pereltsvaig 2006), since 'the distribution [of *libo*-NPIs] is that of negative polarity items, but with the central core missing. The apparent source of the bagel problem is the existence, in Slavic, of negative concord, which takes precedence over alternative types of exponence involving indefinite polarity items under the scope of negation' (Hoeksema 2010: 838).

This competition-based view makes two predictions. The first prediction concerns languages whose polarity systems have no negative quantifiers of the English type and also no NCIs of the Russian (and perhaps also Romance) type, such as Irish. In the absence of a stronger expression, either a negative quantifier or an NCI, regular NPIs in such a polarity system are predicted to be acceptable as fragment answers. This is a correct prediction. Example (29) illustrates the occurrence of an NPI, *duine ar bith* 'anyone', in a nonnegative interrogative environment (see Acquaviva 1996 and Irslinger 2013 for a detailed discussion of the inexistence of negative indefinites/quantifiers and NCIs in Irish and Bernini & Ramat 1996; Willis 2013 and especially McCloskey 2023 for evidence of the *ar bith* indefinites being NPIs, such as their incompatibility with *almost*-modification).[11]

(29) An bhfuil duine ar bith ann? [Irish]
Q be.PRS.TSG person on world there
'Is there anyone there?' (Willis 2013: 287)

[11] As correctly observed by an anonymous reviewer, this view predicts, all else being equal, there to be many more languages allowing NPI fragment answers by virtue of not possessing either negative quantifiers or NCIs. Yet, while this particular question has not been investigated in detail, some relatively well-studied languages, e.g. Mandarin Chinese and Hindi, disallow NPI fragment answers despite having no negative quantifiers or NCIs in their polarity systems. This restriction ought to follow from the constraints on NPI licensing in individual languages and does not simply reduce to recovering the licensing operator. In Mandarin Chinese, for instance, NPIs may not precede negation (Wang & Hsieh 1996; Vu 2020), which by definition renders them poor fragment answers on the move-and-delete approach. Hindi does not prohibit NPI fronting but that fronting, as well as NPI licensing more broadly, is subject to constraints that are currently poorly understood (Kumar 2006). At the same time, languages that allow NPI fragment answers are Okinawan (Hiraiwa 2019), Turkish (Gould & Alxatib 2023) and Korean (Cho 2016).

Example (30) shows that the same type of NPI can appear as a fragment answer in the absence of negation in the antecedent.

(30) Q: Caidé (a) cheannaigh tú? — A: Rud ar bith.
what COMP bought you thing on world
'What did you buy? — Nothing.' (Merchant 2005: 692)

The second prediction of the competition-based view outlined above is that, even in languages like English and Russian, where NPIs consistently lose to stronger competitors, it should be possible to override this constraint in precisely those circumstances where using the stronger competitor would no longer be advantageous. Again, this seems like a correct prediction. As observed by den Dikken et al. (2000); Weir (2020) and as brought to my attention by an anonymous reviewer, NPIs may instantiate felicitous fragment answers to *negative* questions for some speakers. I provide two illustrations in (31) and (32) below.

(31) %A: What didn't John buy? — B: Any wine.
(adapted from den Dikken et al. 2000: 45)

(32) %A: Chego tȳ tam ne uvidel? — B: Chego-libo interesnogo.
what.GEN you there not saw anything.GEN interesting.GEN
'What didn't you see there? — Anything of interest.'

The negation in the English question (31A) and the Russian question (32A) deprives the negative-quantifier answer in English (*no wine*) and the NCI answer in Russian (*nichego interesnogo* 'nothing of interest') of any advantage over the NPI answer. The situation is somewhat similar to the Irish cases above but it obtains locally within an environment rather than globally within a language. That said, the fact that some speakers still dislike NPIs as fragment answers to such negative questions suggests that more factors are at play here than the recoverability of negation. It appears, then, that the inability of English and Russian NPIs to surface as fragment answers ought to be explained by the overall makeup of the polarity systems and the constraints characterising these particular items in these particular languages, rather than purely by what is inside the ellipsis site.

By way of summary, we have considered two premises that must hold for Watanabe's (2004) argument against the ∀¬-theories to be valid. We have seen that the unavailability of the negative fragment answer interpretation in the absence of an NCI in the remnant follows independently from the semantics of questions and answers. We have also seen that NCI fragments, and not non-NCI fragments, make an additional contribution to the recoverability of an elided head by morphosyntactically signalling an Agree dependency with that head.

5 Theoretical consequences

The discussion in the preceding sections has implications for the theory of identity and recoverability of ellipsis as well as for the analysis of negation and (strict) negative concord.

As regards identity and recoverability, the facts discussed in this paper are best compatible with approaches allowing certain deviations from strict syntactic or semantic isomorphism between elided material and its antecedent but still requiring some looser form of syntactic identity. Because Russian negation is typically analysed as being generated above vP/VoiceP (Slioussar 2011; Bailyn 2011; Gribanova 2017), the polarity mismatch required by the nonnegative approaches to neg-words for enabling NCI-fragment answers is compatible with Rudin's (2019) head-based (syntactic) identity approach. If affirmative polarity equals the absence of a [Σ:¬] feature, moreover, the polarity mismatch causes no feature conflicts, thus also being compatible with Ranero's (2021) non-distinctness approach to syntactic identity. Both of these approaches to syntactic identity have the machinery for allowing a narrowly circumscribed subset of deviations from strict syntactic identity but are arguably restrictive enough to disallow the unattested ones such as voice mismatches under clausal ellipsis. Furthermore, the contribution made by Agree to the recoverability of ellipsis in the face of non-identity could be argued to support the separation of identity from recoverability (see also Stockwell 2022, *pace* van Craenenbroeck & Merchant 2013: 710).

Turning to the debate between the ∀¬- and ¬∃-theories of negative concord, nothing said so far speaks in favour of the ∀¬-approach; instead, I have demonstrated that the purported argument *against* the ∀¬-approach has no force. Fragment answers, just like truth conditions, do not speak in favour of, or against, either the ∀¬-approach or the ¬∃-approach, being compatible with both. In fact, in the light of the Irish facts we have considered as well as comparable patterns from Okinawan, it is not even clear that fragment answers are a reliable way of distinguishing between NPIs and NCIs. A careful consideration of other empirical domains (e.g. *almost*-modification, scope interactions, *donkey*-anaphora), as well as of the internal consistency of the individual proposals, is required to settle the debate.

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The author has no competing interests to declare.

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