Are bare adverbial responses derived via ellipsis? Definitely.

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February 23, 2019

Abstract This paper proposes a modified analysis of English bare adverbial responses (BARs), items like *of course* (*not*), *definitely* (*not*), and *probably* (*not*), which can constitute complete answers to polar questions. While previous accounts draw parallels between BARs and polar response particles, arguing that both response types display an ambiguity in responses to negative polar questions (Kramer & Rawlins, 2009), we show that this ambiguity is in fact illusory for BARs. We then show that the distribution and interpretation of BARs can be derived by an elliptical account that relies on independently-motivated processes of antecedent matching and negative concord (Zeijlstra, 2008).

Keywords phrasal ellipsis, polarity ellipsis, fragment answers, negative concord

1 Introduction

Certain adverbs, such as *maybe*, *probably*, and *of course*, are notable in their ability to constitute complete answers to polar questions and to assertions. An example is given in (1).

(1)   A: Did Joan swim on Saturday?

        B: Of course/maybe/perhaps/probably/definitely/certainly.

We call these adverbs *Bare Adverbial Responses*, or BARs. BARs can appear on their own, as in (1), or can appear followed by *not*, as in (2). BARs can thus express positive or negative polarity.

(2)   A: Did Joan swim on Saturday?

        B: Of course/definitely/certainly/maybe/possibly (she did) **not**.

Previous researchers (Kramer & Rawlins, 2009, 2010; Holmberg, 2013) have observed that the interpretation of BARs in responses to polar questions depends on both the polarity of the polar question and the polarity of the BAR. In response to positive polar questions, the interpretation of a BAR response depends on what polarity the BAR expresses. For example, in (3) a positive BAR response to a positive polar question expresses a positive interpretation. By positive interpretation, we mean that the interpretation of the response has a positive polarity reading.

(3)   **Positive Polar Question, Positive BAR Answer**

        A: Does John bathe on Saturdays?

        B. Of course/Definitely. ⤳ John bathes on Saturdays

Similarly, a negative BAR response to a positive polar question expresses a negative proposition, as in (4). By negative proposition, we mean that the interpretation of the response has a negative polarity reading.

(4)   **Positive Polar Question, Negative BAR Answer**

        A: Does John bathe on Saturdays?

        B. Of course not/Definitely not. ⤳ John doesn't bathe on Saturdays

While the polarity of the BARs and the polarity of the interpretations they express are the same in (3) and (4), they are not always the same; we'll see some cases where they pull apart below.

Turning to responses to negative polar questions, the interpretation paradigm becomes more complicated. In English, negation in polar questions may appear as a clitic attached to an auxiliary (high negation) as in (5a), or negation may appear below T (low negation) as in (5b):

(5)   a.   Does**n't** John bathe on Saturdays?

       b.   Does John **not** bathe on Saturdays?

In response to high-negation polar questions, BAR responses receive the same interpretations as in responses to positive polar questions (Ladd, 1981; Kramer & Rawlins, 2009, 2010; Holmberg, 2013). Thus, a positive BAR response to the high-negation polar question in (6) has a positive interpretation, and the negative BAR response to the high-negation polar question in (7) has a negative interpretation.

(6)   **High-Negation Polar Question, Positive BAR Answer**

       A: Doesn't John bathe on Saturdays?

       B. Of course/Definitely. ⤳ John bathes on Saturdays

(7)   **High-Negation Polar Question, Negative BAR Answer**

       A: Doesn't John bathe on Saturdays?

       B. Of course not/Definitely not. ⤳ John doesn't bathe on Saturdays

A different pattern emerges with low-negation polar questions. In response to these questions, BARs with and without *not* have **both** been claimed to express a negative response (Kramer & Rawlins, 2009, 2010). For example, the response *of course* and *of course not* in (8) both express a negative interpretation.

(8)   **Low-Negation Polar Question**

       A: Does John not bathe on Saturdays?

       B: Definitely (not)/Of course (not) ⤳ John doesn't bathe on Saturdays

Kramer & Rawlins call this effect *negative neutralization*. They note that the behavior is also observed in English polarity particles *yes* and *no*, which like BARs can function

as responses to polar questions and receive a propositional interpretation (Ladd, 1981; Krifka, 2013; Holmberg, 2013; Roelofsen & Farkas, 2015).

We show that, in fact, no neutralization of negation takes place. Instead, the apparent exceptional behavior of BARs in response to low-negation polar questions stems only from a failure to control for the scope of negation in these questions. Once the scope of negation is controlled, responses to low-negation polar questions lead to crisp interpretation judgments that obviate analyses of negative neutralization.

We propose to capture the syntactic and semantic facts of BAR responses using an ellipsis account that builds upon the analysis of polarity particle responses given by Kramer & Rawlins (2009). Our analysis draws from existing accounts of clausal ellipsis, such as e-GIVENness (Merchant, 2001, 2004), and from accounts of negative concord manifested as (un)interpretable negation features (Klima, 1964; Giannakidou, 2000; Zeijlstra, 2004; Giannakidou, 2006; Zeijlstra, 2008). Under this analysis, TPs are elided under identity with a question radical antecedent, stranding BAR adverbials and *not* in a high polarity projection. We show that this analysis straightforwardly predicts the syntactic distribution and interpretations of BAR responses. Finally, we argue that this approach provides greater empirical and explanatory power than alternative approaches, in which BARs either mark polarity features (Roelofsen & Farkas, 2015) or function as propositional anaphors (Krifka, 2013).[1]

2   Ellipsis Negative Neutralization

This section discusses an existing approach to analyzing BARs, which we call the *Ellipsis Negative Neutralization* approach (Kramer & Rawlins, 2009, 2010). The account assumes the BAR interpretation pattern given in Table 1. The important observation of this account is the Negative Neutralization pattern discussed in the previous section, namely that the interpretation of positive and negative BARs in responses to low-negation polar questions collapses into a negative interpretation.

Polar Question Type	Definitely	Definitely not
Positive	+	-
High-Negation	+	-
Low-Negation	**-**	**-**

Table 1: BAR Interpretations under Negative Neutralization

The Negative Neutralization account proposes a way to unite polarity response particles and BARs as remnants of fragment ellipsis (Merchant, 2004). The account consists of the following core proposals:
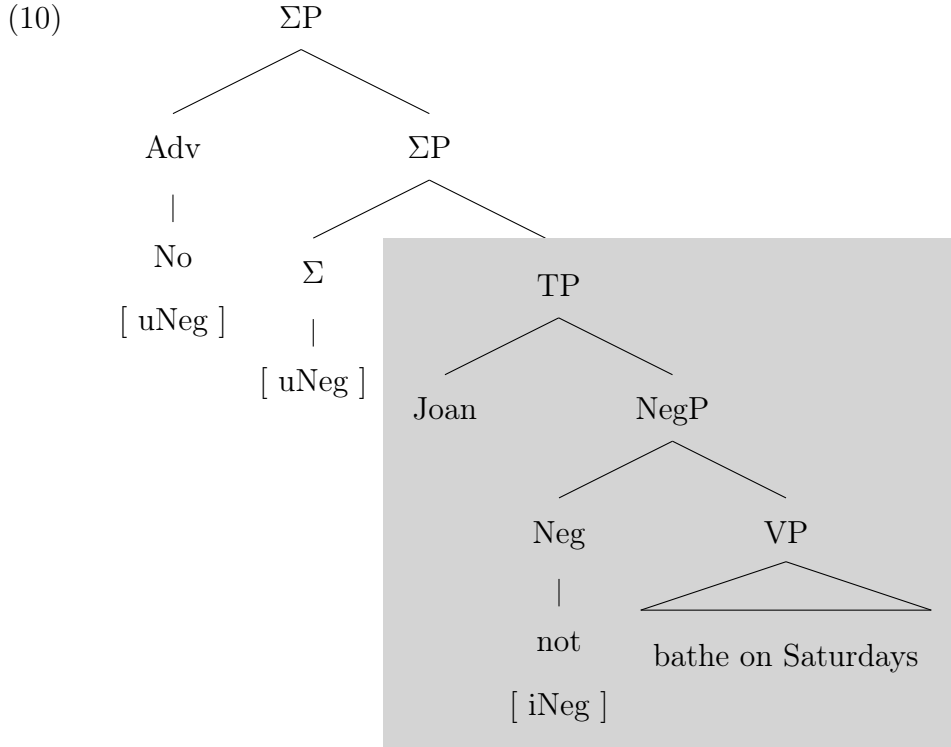
1. BARs and polarity particles adjoin as adjuncts to Σ.[2]

2. Polarity particles, Σ, and clausal negation participate in a negative concord relationship involving multiple Neg features, exactly one of which must be interpretable.

3. BARs and polarity particles are derived by TP ellipsis, licensed by an E feature. Deletion of a TP occurs under identity with an antecedent, as proposed under e-GIVENness (Merchant, 2001, 2004).

Let's first take a look at the predictions of the account with a negative polarity particle response to a low-negation polar question, given in (9) and (10).

(9)   **Low-Negation Question, Negative Polarity Particle Answer**

        A: Does Joan not bathe on Saturdays?

        B: No $\rightsquigarrow$ Joan doesn't bathe on Saturdays

(10)

```
                          ΣP
                   ┌───────┴───────┐
                  Adv             ΣP
                   │         ┌──────┴──────┐
                  No         Σ            TP
               [ uNeg ]      │      ┌──────┴──────┐
                          [ uNeg ] Joan         NegP
                                          ┌───────┴───────┐
                                         Neg             VP
                                          │          ┌────┴────┐
                                         not      bathe on Saturdays
                                       [ iNeg ]
```

There are two main things to notice in (10). First, the polarity particle *no*, the Σ head, and the low clausal negation Neg head participate in a negative concord relationship. Recall the account requires that exactly one feature in the chain must be interpretable; in this case, the theory proposes that it is the feature on the low clausal negation. The second thing to notice is that the TP is deleted under identity with its antecedent, the question radical *Joan not bathe on Saturdays*. We indicate ellipsis here with a shaded box.
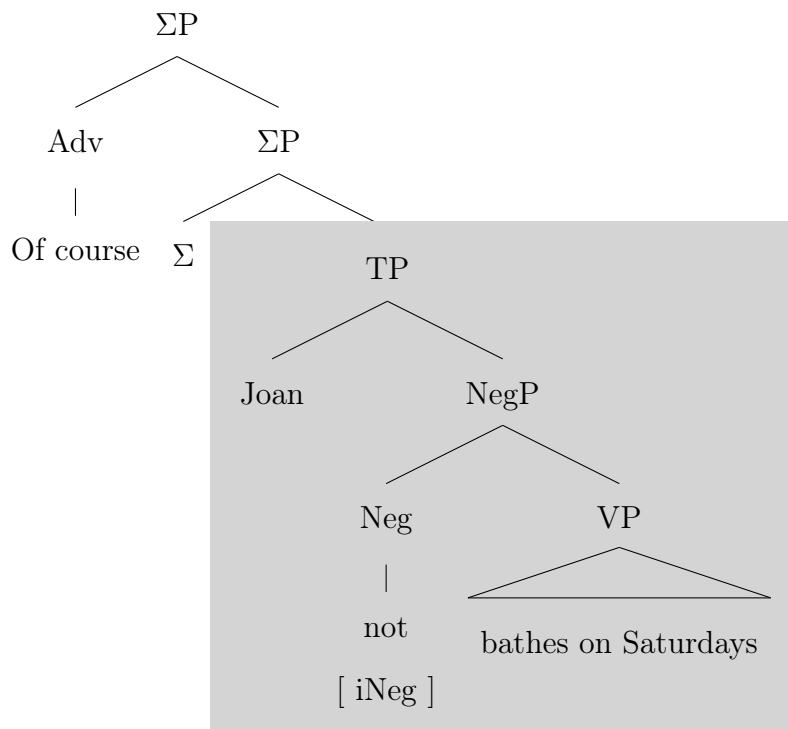
The Negative Neutralization account's analysis of polarity particles extends naturally to a positive BAR response to a low-negation polar question, as shown in (11) and (12).

(11)   **Low-Negation Question, Positive BAR Answer**

A: Does Joan not bathe on Saturdays?

B: Definitely/Of course ⤳ Joan doesn't bathe on Saturdays

(12)

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                        ΣP
                   ┌─────┴─────┐
                  Adv          ΣP
                   │      ┌─────┴─────┐
               Of course  Σ          TP
                             ┌────────┴────────┐
                            Joan              NegP
                                         ┌─────┴─────┐
                                        Neg          VP
                                         │        ╱──────╲
                                        not    bathes on Saturdays
                                      [ iNeg ]
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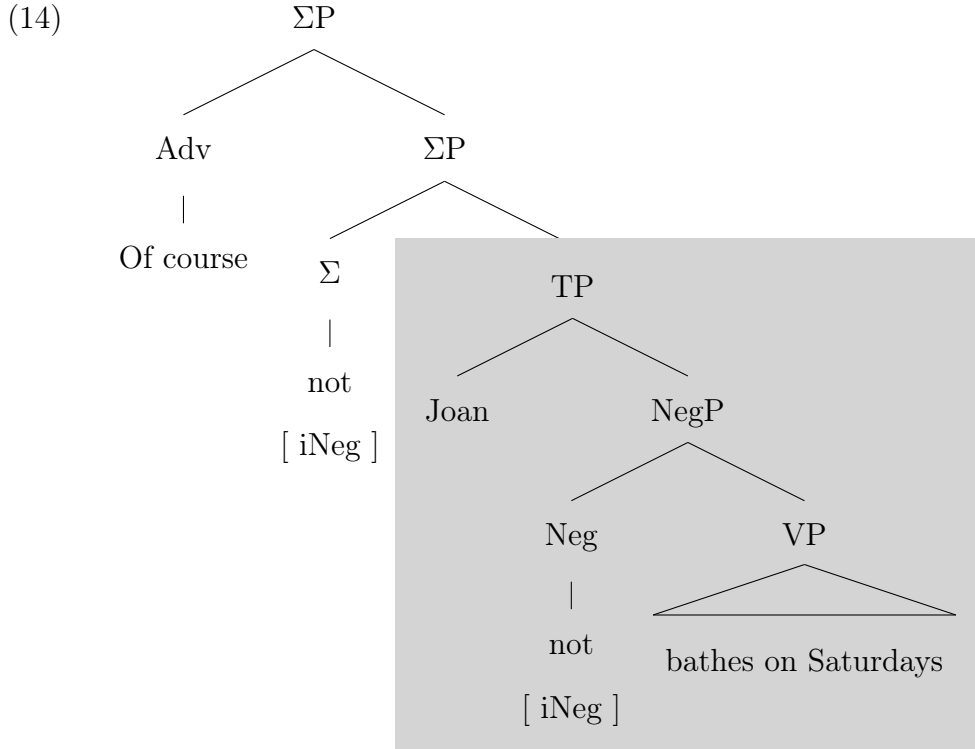
However, the account runs into a problem with negative BAR responses to low-negation polar questions. As Kramer & Rawlins point out, while polarity particles do not appear to license overt Σ, BARs do license an overt realization of the head. This is illustrated in (14).

(13)   **Low-Negation Question, Negative BAR Answer**

A: Does Joan not bathe on Saturdays?

B: Definitely not/Of course not ⤳ Joan doesn't bathe on Saturdays

(14)

ΣP
- Adv — Of course
- ΣP
  - Σ — not [iNeg]
  - TP
    - Joan
    - NegP
      - Neg — not [iNeg]
      - VP — bathes on Saturdays

In (14), the account is forced to posit two interpretable negation features — one on the low clausal negation head, and one on the high Σ head — contrary to the stipulation that exactly one feature in the concord chain must be realized. To address this concern, Kramer & Rawlins suggest that while polarity particles agree with a high Σ head, BARs instead spell out their features independently of the high head. While this may be so, the account fails to provide an independent motivation or explanation for why polarity particles and BARs differ in this way.

We show that the concern about agreement and spell-out is rendered irrelevant once the BAR data are properly controlled. In the next section, we demonstrate that once the possible interpretations of negation are controlled, the negative neutralization judgments no longer hold. We then propose an analysis of the data that builds off the many successes of the Negative Neutralization proposal, but requires no stipulations regarding the (un)interpretable features of the negative concord chain.

3 Analysis

3.1 Revisiting Negative Neutralization

This section shows that the negative neutralization effect discussed above is in fact a consequence of failing to control for the scope of negation in low-negation polar questions (following Holmberg (2013)). The negative neutralization pattern is illustrated again in (15).

(15)   **Negative Neutralization:**

   A: Does John not bathe on Saturdays?

   B: Definitely/Of course ⇝ John doesn't bathe on Saturdays

   B': Definitely not/Of course not ⇝ John doesn't bathe on Saturdays

As Holmberg observes, the apparent neutralization of the responses in B and B' is due to the possibility of two interpretations of negation: the question in A can be interpreted either as a high-negation polar question, or as a low-negation polar question. This ambiguity can be controlled by inserting a low adverb like *always* above the negation. This forces the negation to be interpreted in its low position.

(16)   **No Negative Neutralization:**

   A: Does John always not bathe on Saturdays?

   B: Definitely/Of course ⇝ John always doesn't bathe on Saturdays

   B': Definitely not/Of course not ⇝ John sometimes bathes on Saturdays

We want to emphasize here that the BAR responses *themselves* are not ambiguous. The ambiguity of the interpretation in (15) stems from the entertainment of two possible negation positions in the polar question. Once the high-negation reading is removed, by forcing the negation to be interpreted under the adverb, the question itself is no longer ambiguous.[3]

Controlling for the scope of negation yields the empirical facts given in Table 2.

The important difference between these facts and the judgments given under the Negative Neutralization account is that a negative BAR response to a low-negation polar question now yields a positive interpretation. We derive these data in the following subsection.

Polar Question Type	Definitely	Definitely not
Positive	+	-
High-Negation	+	-
Low-Negation	-	+

Table 2: BAR Interpretations Controlling for Negation Scope

3.2   Raising the BAR

Building off the successes of the Negative Neutralization account, we propose a modified analysis with the following main claims:

1. BARs adjoin as adjuncts to a high polarity head Pol, which hosts *not* (Laka, 1990; Ladusaw, 1992; Zanuttini, 1997; Vicente, 2006; McCloskey, 2017).

2. A high and a low polarity head participate in a negative concord relationship involving Neg features, following Zeijlstra (2008).

3. BARs are derived by TP ellipsis, in which deletion of a TP occurs under identity with an antecedent, as proposed under e-GIVENness (Merchant, 2001, 2004; Kramer & Rawlins, 2009; Holmberg, 2013; Gribanova, 2017; McCloskey, 2017). e-GIVENness is defined below.

(17)   **Theory of e-GIVENness** (Merchant, 2001):
        Focus condition on TP-ellipsis: A TP α can be deleted only if α is e-GIVEN.
   **e-GIVENness**: An expression counts as e-GIVEN iff E has a salient antecedent A and, modulo $\exists$ type-shifting, i) A entails F-clo(E), and ii) E entails F-clo(A).[4]

    Let's first look at the predictions of the account for a positive BAR response to a high-negation polar question.

(18)   **High-Negation Question, Positive BAR Answer**

A: Doesn't Joan always bathe on Saturdays?

B: Definitely/Of course ⤳ Joan always bathes on Saturdays

(19)
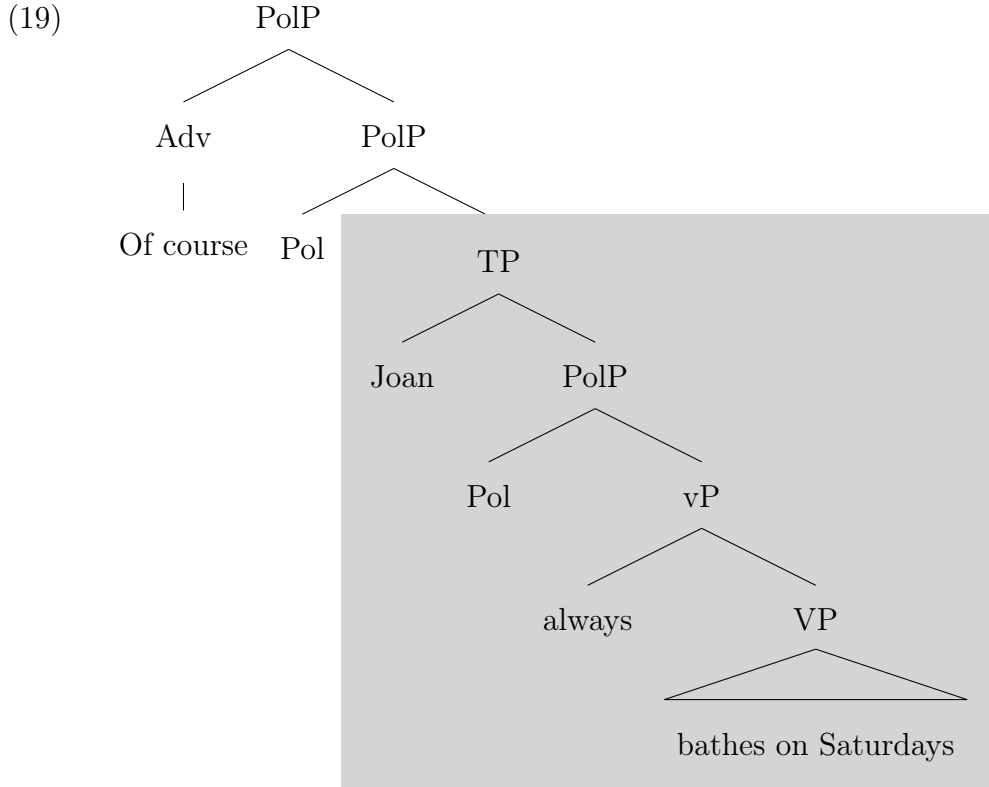
In (19), *of course* is adjoined as an adjunct to the high Pol head. We remain agnostic here on where exactly different adverbials are base generated. We assume they are either merged high in this position, or are base generated within TP and move to a clause-peripheral position within the functional projection PolP prior to ellipsis. Either analysis is compatible with our claims in this paper.[5]

Recall that because (18) is a high-negation polar question, the question radical does not contain the high negation. We therefore have the question radical *Joan always bathe on Saturdays.* The question radical and the TP expressing the proposition *Joan always bathe on Saturdays* satsify e-GIVENness, as the two propositions mutually entail one another (they express the same proposition). We predict then that the TP can be felicitously elided under identity with the question radical *Joan always bathes on Saturdays* (Ladd, 1981; Holmberg, 2013). We follow previous authors in assuming an E

feature licensing the ellipsis of the TP. See Merchant (2001), Kramer & Rawlins (2009), a.m.o. for further discussion. In this instance, our account makes no substantively different predictions than the Negative Neutralization account.

Next, let's look at the predictions of the account for a positive BAR answer to a low-negation polar question, given in (20).

(20)   **Low-Negation Question, Positive BAR Answer**

A: Does Joan always not bathe on Saturdays?

B: Definitely/Of course ⤳ Joan always doesn't bathe on Saturdays

(21)
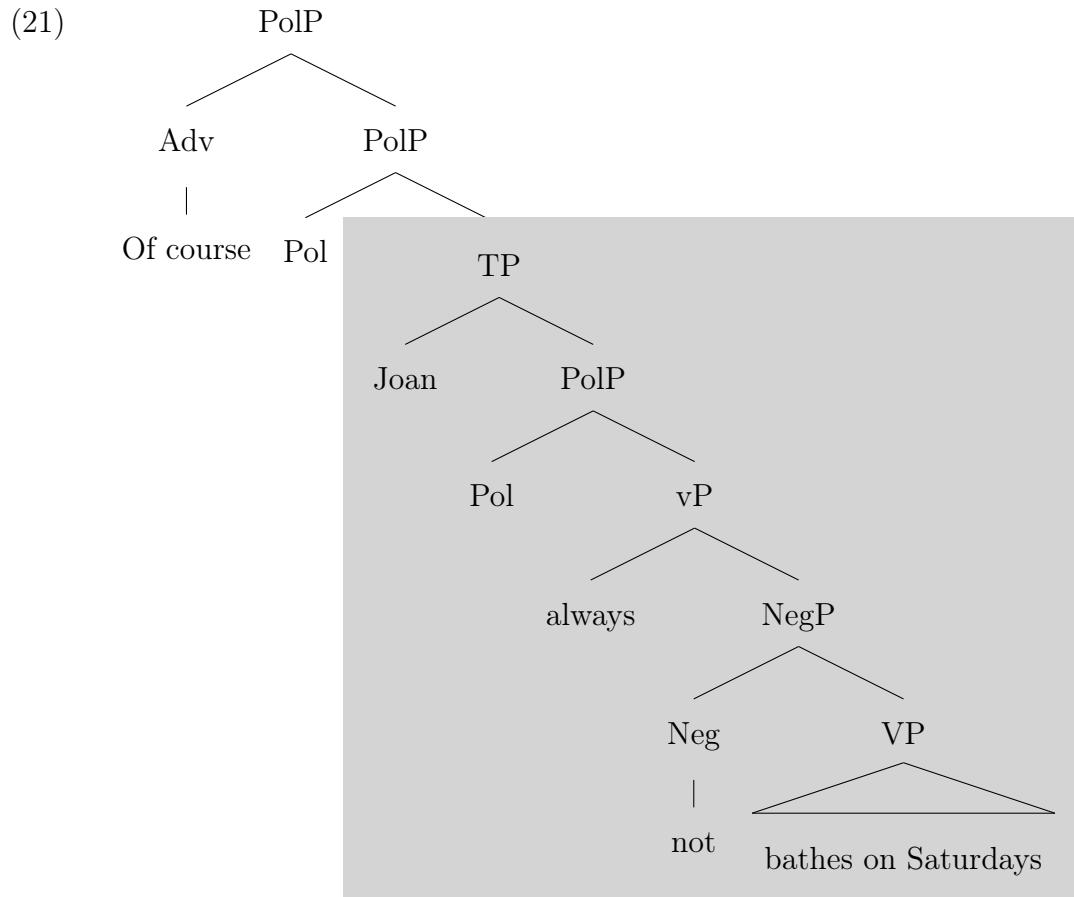
The BAR *of course* is again adjoined to the high Pol head. Because (20) is a low-negation polar question, the question radical contains the low clausal-negation, yielding the question radical *Joan always not bathe on Saturdays*. The question radical and the TP expressing the proposition *Joan always not bathe on Saturdays* satisfy e-GIVENness, as the two propositions mutually entail one another (they express the same proposition).
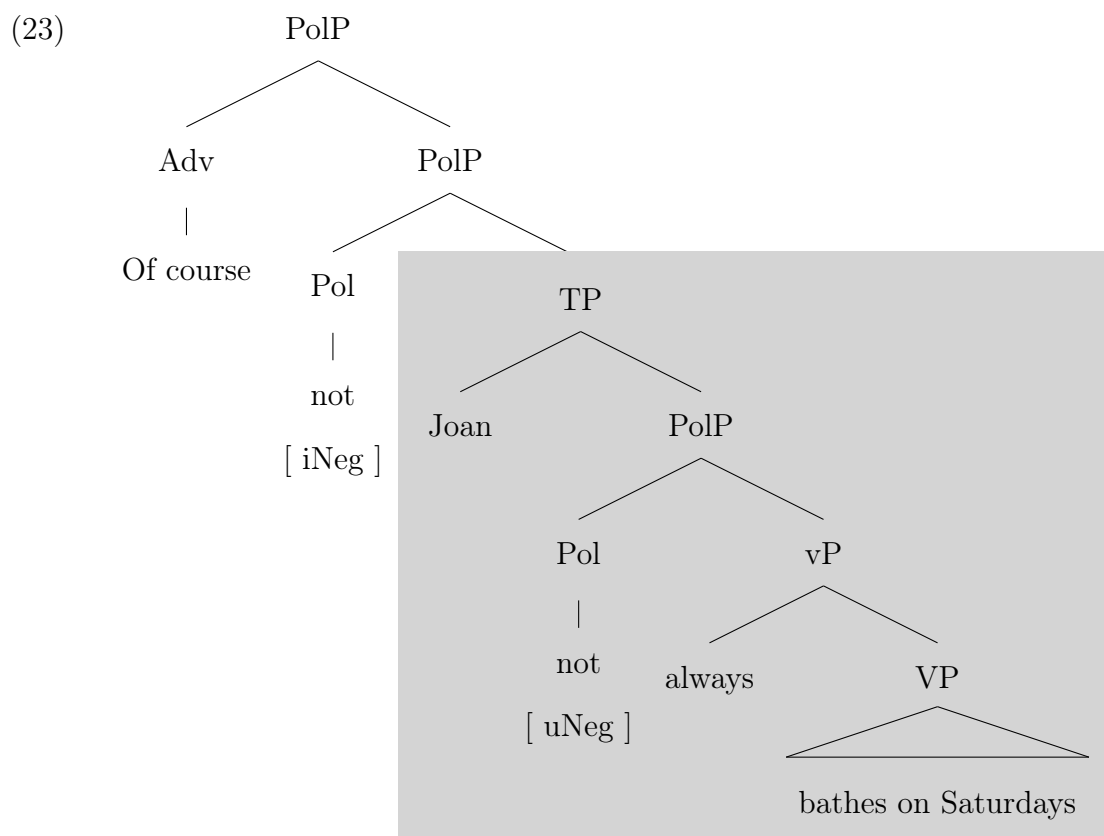
We then predict that the TP in (21) can be felicitously elided under identity with the question radical *Joan always not bathe on Saturdays*

In example (22), we turn to a negative BAR response to a high-negation polar question. This example illustrates how the requirements of e-GIVENness interact in substantive ways with our theory of negative concord.

(22)   **High-Negation Question, Negative BAR Answer**

A: Doesn't Joan always bathe on Saturdays?

B: Definitely not/Of course not ⤳ Joan doesn't always bathe on Saturdays

(23)

```
                        PolP
                     /        \
                  Adv          PolP
                   |          /     \
              Of course    Pol          TP
                            |         /      \
                           not     Joan        PolP
                         [ iNeg ]            /      \
                                          Pol          vP
                                           |         /     \
                                          not     always     VP
                                        [ uNeg ]            /‾‾‾‾\
                                                        bathes on Saturdays
```

The derivation in (23) differs from previous examples in that it contains two negations: a negation realized on the high Pol head, and an additional negation realized on the low Pol head. We derive the realizations of these negations in the following way. First, the BAR *of course* is adjoined above the high Pol head.[6] The TP expressing the full response *Joan not always bathe on Saturdays* is constructed. At this point, we cannot

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felicitously elide the TP under semantic identity with its question radical antecedent. The question radical antecedent expresses the proposition *John always bathe on Saturdays*, while the TP expresses the proposition *Joan always not bathe on Saturdays*. Because the two propositions express opposite polarity, they do not satisfy the bidirectional entailment conditions of e-GIVENness.

We propose that the low Pol head enters into an Agree relationship with the high Pol head, allowing the interpretable negation feature to appear outside the ellipsis site; this interpretable negation feature manifests as *not* (Zeijlstra, 2004, 2008; Kramer & Rawlins, 2009; Hofmann, 2018). Because uninterpretable negation features in a negative concord chain do not contribute semantic negation (Ladusaw, 1992), the TP now expresses the proposition *Joan always bathe on Saturdays*. This proposition satisfies the entailment conditions of e-GIVENness, and therefore can be felicitously elided under identity with its antecedent, which is the question radical *Joan always bathe on Saturdays*.

In the last example, we claimed that the pattern of negative and positive BAR responses is derived partially by the identity requirements on eliding a TP. If this is the case, then we expect to see differences in the interpretations of BAR responses and responses expressing a full clause. This is indeed what we find. In (22), we claimed that the *not* in the negative BAR response is an expression of the negation feature originating from the elided TP. Because the unelided form of the response does not need to meet identity requirements, our account predicts that the unelided form of the sentence will be felicitously uttered with negation in its low position. That is in fact what we find in the full response, repeated in (24).[7] [8]

(24)   **High-Negation Question, Negative BAR Answer, Revisited**

      A: Doesn't Joan always bathe on Saturdays?

      B: Of course Joan doesn't always bathe on Saturdays.

We find further confirmation of this pattern when considering a full response to a

low-negation polar question, as in (25). B's response cannot be interpreted as meaning that Joan sometimes bathes on Saturdays.

(25) **Low-Negation Question, Positive BAR Answer, Revisited**

      A: Does Joan always not bathe on Saturdays?

      B: Of course ⤳ #Joan doesn't always not bathe on Saturdays.

The bare response in B is infelicitous because the high interpretable negation—expressed in the auxiliary clitic—is absent in the antecedent, violating e-GIVENness. Note, however, that the full response **is** felicitous, as it is not subject to the ellipsis constraint.

(26)   A: Does Joan always not bathe on Saturdays?

      B: Of course Joan doesn't always not bathe on Saturdays.

Our account therefore derives the differences between responses that express a full TP and BAR responses: because the responses expressing a full TP are not subject to the ellipsis identity requirements, negation is realized in its base position below the TP. It is only when the TP must meet an identity requirement with its antecedent that negation is required to be realized above the TP clause.

Finally, we consider a negative BAR response to a low-negation polar question. Recall that in these examples, the Negative Neutralization account and the current account diverge in their predictions. While the Negative Neutralization account predicts that a negative BAR response to a low-negation polar question expresses a negative interpretation, we have shown that this outcome is undesirable. Instead, our account predicts the positive interpretation given in (27).

(27) **Low-Negation Question, Negative BAR Answer**

      A: Does Joan always not bathe on Saturdays?

      B: Definitely not/Of course not ⤳ Joan sometimes bathes on Saturdays

The prediction in (27) follows straightforwardly from the principles of the account. Consider the unelided form of the response in (28). B's response contains two nega-
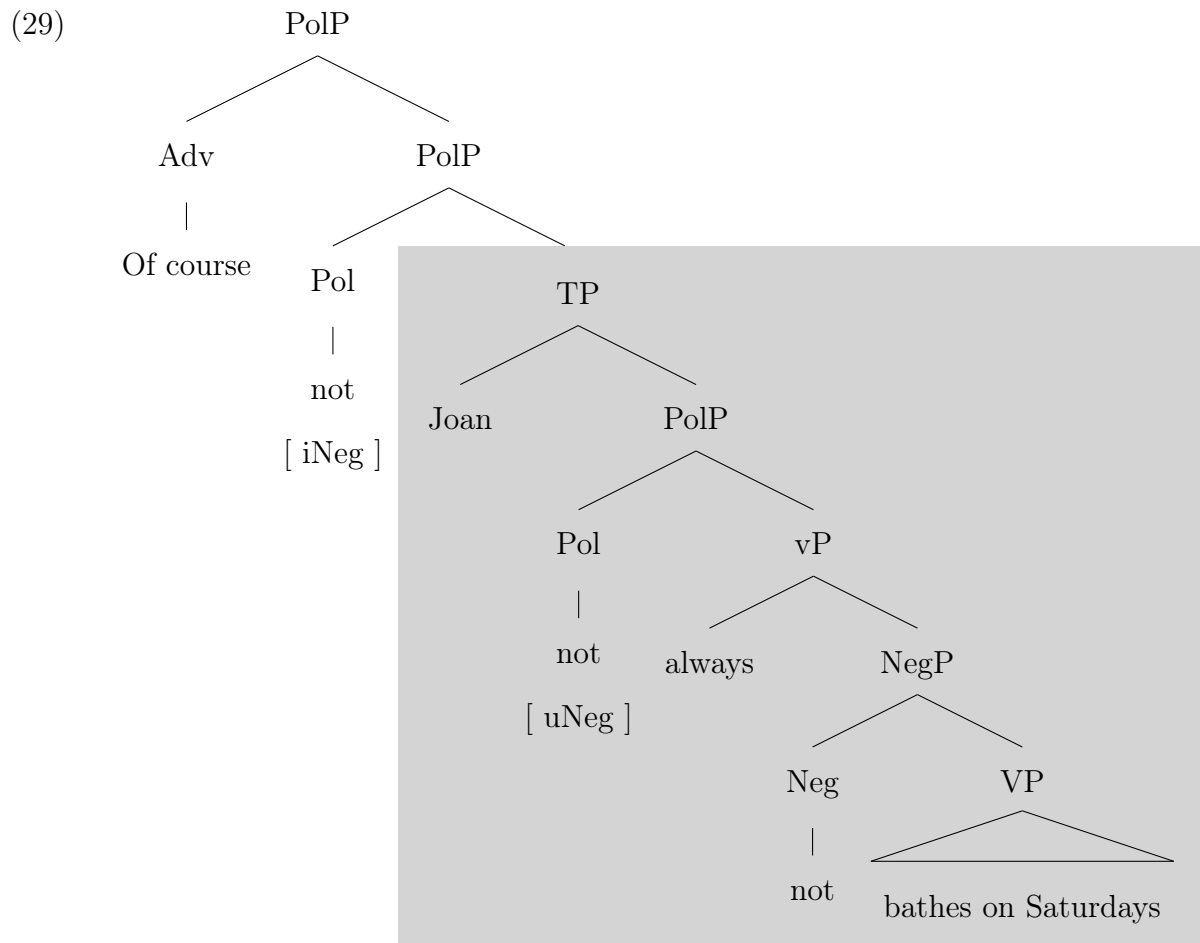
tions: a high clitic negation on the auxiliary, and low pre-verbal clausal negation. Because both of these negations are interpretable, the two negations cancel each other out (as in a standard logic).

(28)   How many negations?

A: Does Joan always **not** bathe on Saturdays?

B: Of course Joan does**n't** always **not** bathe on Saturdays. ⇝ Joan sometimes bathes on Saturdays.

Our prediction for the BAR response to a low negation question is shown in (29).

(29)

```
                          PolP
                         /    \
                      Adv      PolP
                       |      /    \
                  Of course  Pol      TP
                             |       /  \
                            not   Joan   PolP
                          [ iNeg ]      /    \
                                      Pol      vP
                                       |      /  \
                                      not  always  NegP
                                   [ uNeg ]       /    \
                                               Neg      VP
                                                |      /  \
                                               not  bathes on Saturdays
```

Low constituent negation **not** is deleted under semantic identity with the antecedent question radical *Joan always not bathe on Saturdays.* Low Pol negation **not** cannot be deleted under identity, so, as shown above, it enters into an Agree relationship with the high Pol head and is realized as *not* outside of the ellipsis site. The TP

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expressing the proposition *Joan always not bathe on Saturdays* can then be deleted under identity with its question radical antecedent.

3.3 Interim Conclusion

There are several benefits of the analysis outlined so far. First, it requires no stipulations about where interpretable negation features are realized: they are realized on overt negation and on negation that is elided under identity with an antecedent. There is also no mystery as to where the negation features originate, as all originate from the content of the elided TP. The account also requires no additional machinery or assumptions beyond those already independently motivated in the literature. Last, the analysis successfully derives the acceptability differences between bare adverbial responses and responses expressing a full TP. In the next section, we compare the analysis presented here with alternative existing accounts in the literature that propose to analyze BAR responses as feature spell-outs or as propositional anaphora.

4 Alternative Analyses

This section examines the predictions of two possible alternative approaches to the BAR data. Both accounts have been proposed as analyses for polar response particles (PRPs), which exhibit broad similarity to BARs. We consider two such accounts here: a feature-marking analysis (Roelofsen & Farkas, 2015) and a propositional-anaphora analysis, e.g. that of Krifka (2013). We show that these families of approaches are dispreferred to our account, as both have less explanatory power than the ellipsis account proposed here.

4.1 Feature-Marking

Roelofsen & Farkas (2015, R&F), building on work by Farkas & Bruce (2010) and references therein, propose that polar response particles like *yes* and *no* mark features of their propositional arguments (*prejacents*) along two dimensions:

- The **relative** features [AGREE] and [REVERSE] mark a response respectively as agreeing with or reversing the antecedent possibility, both in terms of content and in terms of polarity (R&F: 384).

- The **absolute** features [+] and [-] mark whether a response is positive or negative (i.e., whether it contains negative polarity).

The prejacent of a PRP may either be overtly expressed, or it may be an elided clause that is recovered from the context. In response to polar questions, the elided clause that serves as the prejacent for a PRP is called the 'highlighted alternative'. The highlighted alternative for a PRP is argued to be constant across each type of polar question: it is p in the case of positive polar questions, and $\neg p$ in the case of low-negation polar questions.

Given the superficial similarities between BARs and PRPs, it is plausible to suggest that BARs, rather than being adverbial remnants of ellipsis per se, simply realize similar features as PRPs. Table 3 reconceptualizes the BAR interpretations of positive and low negation polar questions in terms of relative and absolute polarity features. Note that a response of *definitely not* will necessarily be a [-] response, as it always exhibits negative polarity.

Polar Question Type	Definitely	Definitely not
Positive	[AGREE,+]	[REVERSE,-]
Low-Negation	[AGREE,-]	[REVERSE,-]

Table 3: BAR responses conceptualized as realizing R&F features

R&F do not discuss which alternative is highlighted in a high-negation polar question. However, no matter which alternative we choose, serious issues arise. If we as-

sume that the highlighted alternative is $\neg p$, then a positive BAR realizes [REVERSE,+], because it involves ellipsis of a proposition without negation:

(30) **High-Negation Question, Positive BAR Answer**

    A: Doesn't Joan always bathe on Saturdays?

    B: Of course [~~Joan always bathes on Saturdays~~].   [REVERSE, +]

(31) **Low-Negation Question, Positive BAR Answer**

    A: Does Joan always not bathe on Saturdays?

    B: Of course [~~Joan not bathes on Saturdays~~].   [AGREE, -]

Because of this contrast, a positive BAR would need to be capable of being used as a [REVERSE, +] and [AGREE, -] response; there is therefore no non-trivial set of features a BAR could realize.

However, we might alternatively assume that the highlighted alternative of a high-negation polar question is positive. In this case, positive BARs in response to high-negation polar questions are in fact AGREEing responses. We would then find ourselves with the generalization of positive BARs realizing [AGREE] and negative BARs realizing [REVERSE,-].

While this would capture the relevant interpretive facts about BARs in different contexts, an independent syntactic analysis is necessary to explain why *not* may occur with BARs, which a feature-based account can itself not offer. Specifically, such an analysis raises compositionality concerns, as it is not obvious how to compositionally derive why a BAR by itself would realize [AGREE], but a BAR + *not* would realize [REVERSE,-].

Given that some mechanism of ellipsis is a necessary component of a feature-marking approach anyway, there is no empirical advantage to treating BARs as feature-marking. By contrast, our analysis offers an explanation for both the range of interpretations and the surface form of BAR utterances.

4.2 Anaphora

An alternative approach to PRPs that could plausibly be extended to BARs is one in which they function as propositional anaphors. In Krifka's (2013) account, PRPs are phrases which pick up salient propositional discourse referents. In the cases of English PRPs, Krifka analyzes them as speech act phrases (ActP), for which *yes* asserts a salient proposition p and *no* asserts the negation of a salient proposition, $\neg p$.

We do not ascribe an anaphoric treatment of BARs to Krifka himself. Indeed, he also assumes that BARs are derived elliptically, though with no explicit justification or discussion. Nevertheless, given that BARs, like polarity particles, may appear either with or without a pronounced prejacent, it is at least plausible to consider what consequences would arise from treating BARs as anaphors. If we assume that BARs refer to a salient propositional antecedent in the discourse, instead of taking a prejacent clause as an argument as in the feature analysis, we run into a problem. In order to account for the fact that PRPs can occur with an overt clause (*yes, he did*), Krifka's approach takes the overt clause and the PRP as two parallel speech acts. We cannot extend this property to BARs, as they can occur in non-edge positions in an utterance.

(32)   A: Is Susan coming?

         B: She definitely is.

To account for the ability of BARs to be embedded into another speech act, we are forced into positing systematic polysemy among BARs, namely that they have separate lives as adverbs and as response particles.

However, even with this stipulation, the account would come up short. If we assume that in a negative sentence both p and $\neg p$ are available as antecedents, then we predict that BARs have the potential to be ambiguous in response to negative questions, which as we saw in §3 is not the case. Furthermore, if BARs and polar response particles alike are proposition denoting, it is unclear why a BAR can appear with *not* but a PRP cannot:

(33) A: Is Susan coming?

B: Of course not/*yes not/*no not.

An anaphoric account of BARs is therefore less parsimonious and less empirically adequate than the ellipsis proposal given here.

5 Conclusion

This paper has sought to make both an empirical and a theoretical contribution to the debate over fragment adverbial responses. We have shown that once the scope of negation in English negative polar questions is controlled, the negative neutralization judgments considered in the literature no longer hold. We have additionally shown that an ellipsis account using an identity condition such as e-GIVENness and a negative concord agreement such as that in Zeijlstra (2008) derives the interpretations of BAR responses to polar questions without stipulations. This account also explains when and why negation appears, and why we see interpretation differences between bare responses and responses expressing a full TP.

Finally, we showed that an ellipsis account such as that proposed here has greater explanatory coverage for BAR responses than alternative accounts such as feature systems or anaphoric systems. Future directions for this project include how well (if at all) the analysis can be extended to English polarity particles, and to BARs in languages other than English.

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Notes

[1]A note on the intended scope of this project: Much work has been done on so-called fragment responses and their syntactic and prosodic properties (Merchant (2004); Stainton (2006); Weir (2015); Shen (2018); AnderBois & Jacobson (2018), a.o.). Whether the analysis here can be extended beyond BARs to a greater class of responses remains a path for future research.

[2]We do not attempt here to adjudicate between the presence of a Σ head and a Pol head. We assume only that there is a high and low polarity head, as well as unrestricted clausal negation (Klima, 1964; Laka, 1990; Ladusaw, 1992).

[3]It has also been claimed that high negation polar questions are ambiguous between 'inner' readings– ones in which negation is in some sense 'in' the proposition being questioned–and 'outer' readings, where the negation is interpreted outside this proposition (Ladd, 1981; Romero & Han, 2004; Goodhue, 2018, a.o). Inner negation questions license NPIs like *either*, and outer negation questions license PPIs like *too*. However, both kinds of questions in English license BAR responses with the same interpretation:

(34)   Doesn't John bathe on Saturdays too/either?

    a.   Definitely. ⤳ John bathes on Saturdays

    b.   Definitely not. ⤳ John does not bathe on Saturdays

Whatever the difference between these two types of questions, this evidence suggests that they both make only the positive alternative available as an antecedent for ellipsis. For this reason, we treat high negation questions uniformly.

[4]Existential closure is a type-shifting operation that raises expressions to type t by existentially binding unfilled arguments (Schwarzschild, 1999).

[5]In unelided forms, BARs sometimes prefer to sit TP internally: *Joan definitely bathes on Saturdays*, ?*Definitely Joan bathes on Saturdays*. This suggests that BARs may sometimes undergo focus movement (Merchant, 2004) above TP. See Kroll & Roberts (To appear) for an argument that these BAR positional effects are due to prosodic factors.

[6]We are not making substantive claims about the time course of the derivations here, for which we do not have adequate evidence. We are merely spelling out the necessary steps of the derivation.

[7]Note that caution is required when considering the prosody of these examples. Although such an example may become felicitous with comma prosody after the BAR, this is a different derivation and one that likely contains two separate speech acts.

[8]We additionally see that the high expression of polarity is infelicitous:

(i) *Of course not Joan bathes on Saturdays.

We can explain this infelicity by positing a parsimony constraint in which negation does not enter into an Agree relationship unless prompted by some requirement of the derivation.