

# Bare adverbial responses and the typology of polarity ellipsis

Margaret Kroll & Tom Roberts

{margaretkroll, rotom}@ucsc.edu

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**Abstract** This paper proposes an analysis of English bare adverbial responses (BARs) like *of course* (*not*), *definitely* (*not*), and *probably* (*not*), which can constitute complete responses to polar questions and assertions. While previous accounts draw parallels between BARs and polar response particles, arguing that both response types are ambiguous in responses to negative polar questions (Kramer & Rawlins, 2009), we show that this ambiguity is in fact illusory for BARs. Instead, we argue in favor of an ellipsis analysis that derives the distribution and interpretation of BARs through independently-motivated processes of antecedent matching and negative concord (Zeijlstra, 2008). We additionally show that BARs pattern closely with constructions such as stripping, which has been argued to be elliptical (Merchant, 2003). More broadly, we show that once BARs and stripping are treated as related phenomena, an ellipsis analysis that situates both within a broader class of cross-linguistic polarity ellipsis constructions is theoretically parsimonious and empirically justified.

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

# 1 Introduction

It is well-known that certain adverbs, such as *maybe*, *probably*, and *of course*, can 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 utterances *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 **not**.

While BARs are often discussed secondarily in the polarity particle literature, we argue they are distinct from polarity particle responses like *yes* and *no*, and belong to a broader class of polarity ellipses, i.e., constructions in which the complement of a polarity head is elided. Cross-linguistically, polarity heads have been argued to license the elision of different phrasal levels, including the vP level in English (Lobeck, 1995), and the TP level in Irish (McCloskey, 2017) and Russian (Gribanova, 2017).<sup>1</sup> Despite being attested cross-linguistically, polarity ellipsis remains understudied relative to the better-known clausal ellipses of sluicing and stripping. This project aims to fit BARs within the typological landscape of ellipsis in general and of polarity ellipsis in particular. This pursuit, in turn, helps us further understand the syntactic realization of polarity and, more broadly, helps us in the larger goal of establishing the domain of ellipsis within natural language.

## 1.1 How are BARs interpreted?

Previous researchers (Kramer & Rawlins, 2009, 2010; Holmberg, 2013) have observed that the interpretation of BARs as responses to polar questions depends on both the polarity of the 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 response with positive polarity.

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

A: Does John bathe on Saturdays?

B: Of course/Definitely.  $\rightsquigarrow$  John bathes on Saturdays

Similarly, a negative BAR response to a positive polar question expresses a response with negative polarity, as in (4).

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

A: Does John bathe on Saturdays?

B: Of course not/Definitely not.  $\rightsquigarrow$  John doesn't bathe on Saturdays

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. Doesn'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.  $\rightsquigarrow$  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.  $\rightsquigarrow$  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) can both express a negative interpretation.

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

A: Does John not bathe on Saturdays?

B: Definitely (not)/Of course (not)  $\rightsquigarrow$  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 the need for an a mechanism which would allow negative neutralization (see Holmberg 2013).

We show that the syntactic and semantic behavior of BAR responses can be derived elliptically, building on the analysis of polarity particle responses by Kramer & Rawlins (2009). Our analysis combines independently motivated analyses of clausal ellipsis, such as e-GIVENness (Merchant, 2001, 2004), and 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 argue narrowly for this analysis by showing that it straightforwardly predicts the syntactic distribution and semantic interpretations of BAR responses. We argue more broadly in favor of an ellipsis account of BARs in two ways. First, we show that our elliptical analysis provides greater empirical and explanatory power than plausible alternative approaches, such as those in which BARs mark polarity features (Roelofsen & Farkas, 2015).<sup>2</sup> Second, we demonstrate that an ellipsis account of the data is theoretically parsimonious by showing that BARs pattern with stripping, a construction which is largely agreed to involve TP ellipsis, suggesting that the two constructions may be derived by the same mechanism.

## 2 Ellipsis Negative Neutralization

This section discusses an existing approach to analyzing BARs, which we call *Negative Neutralization* following 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	+	-
<b>Low-Negation</b>	<b>-</b>	<b>-</b>

Table 1: BAR Interpretations under Negative Neutralization

The Negative Neutralization account proposes uniting polarity response particles and BARs as remnants of fragment ellipsis (Merchant, 2004). The account consists of the following core proposals:

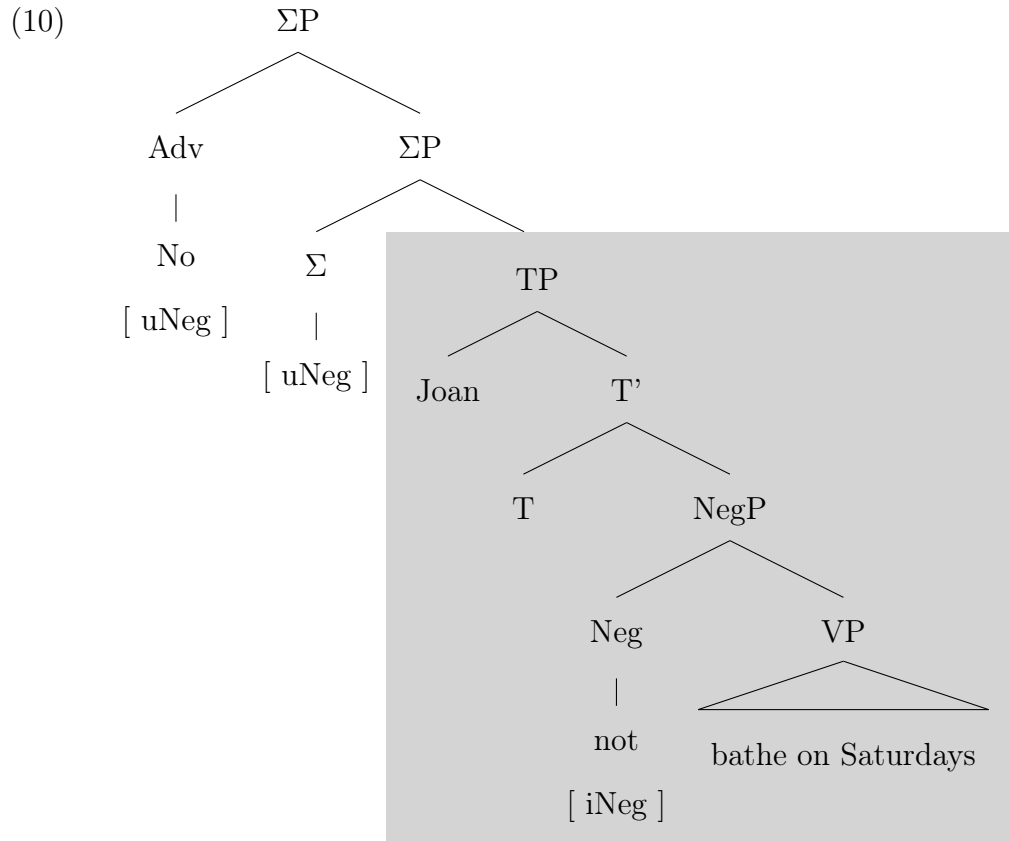
1. BARs and polarity particles adjoin as adjuncts to  $\Sigma$ , a functional head which encodes positive or negative polarity, as in Laka (1990).
2. Polarity particles,  $\Sigma$ , and clausal negation participate in a negative concord relationship involving multiple Neg features, exactly one of which 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



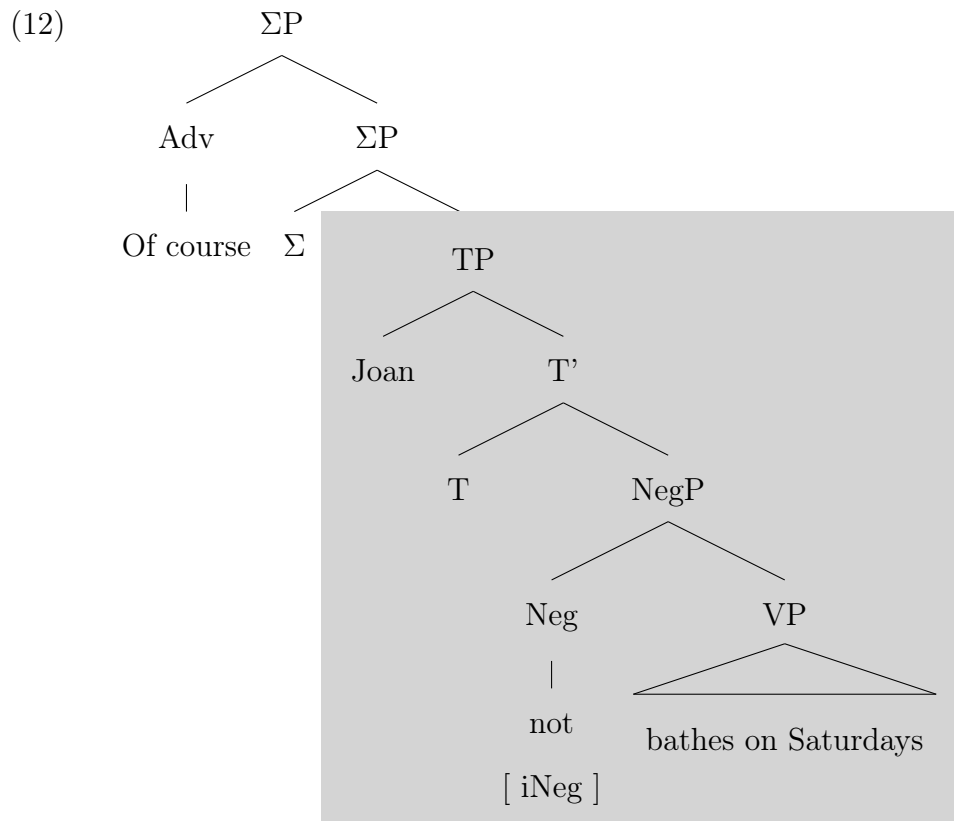
There are two main things to notice in (10). First, the polarity particle *no*, the  $\Sigma$  head, and the low clausal negation Neg head participate in a negative concord relationship. Recall that the account requires that exactly one feature in the chain must be interpretable; in this case, the theory 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  $\rightsquigarrow$  Joan doesn't bathe on Saturdays



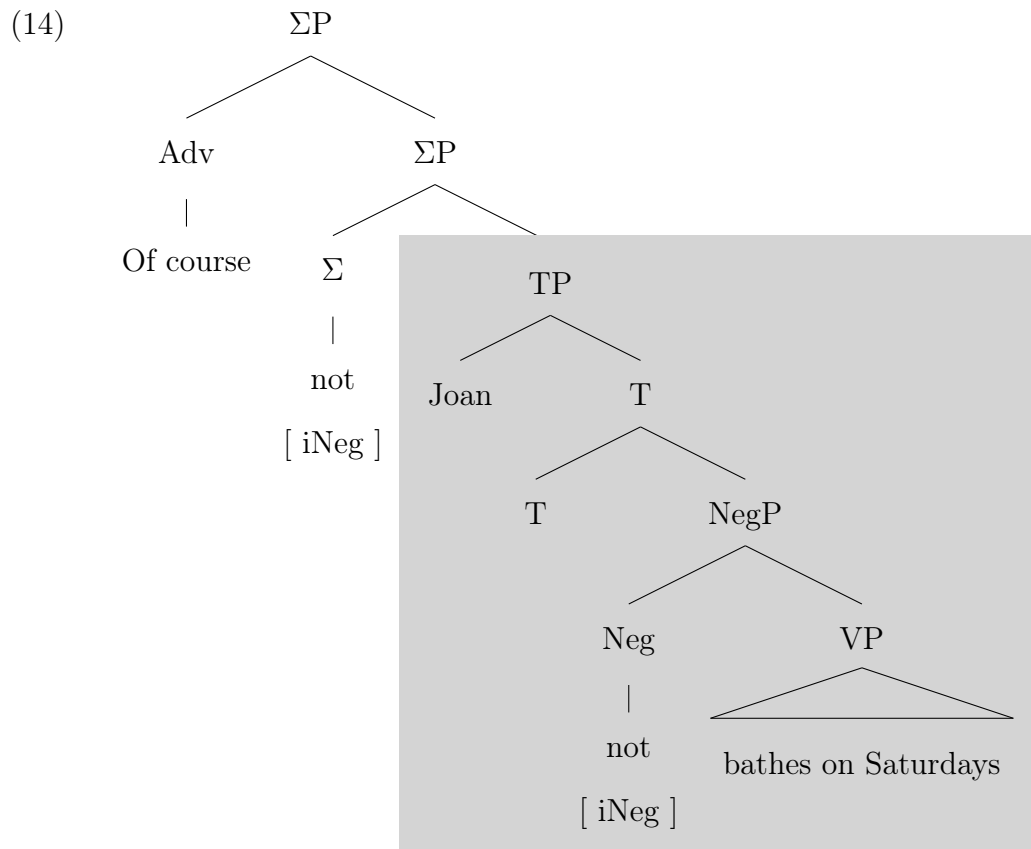
However, the account runs into a problem with negative BAR responses to low-negation

polar questions. As Kramer & Rawlins point out, while polarity particles do not appear to license overt  $\Sigma$ , 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  $\rightsquigarrow$  Joan doesn't bathe 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  $\Sigma$  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  $\Sigma$  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.

In the next section, we show that the concern about agreement and Spell-Out is



rendered irrelevant, because once the position negation in polar questions is 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  $\rightsquigarrow$  John doesn't bathe on Saturdays

B': Definitely not/Of course not  $\rightsquigarrow$  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  $\rightsquigarrow$  John always doesn't bathe on Saturdays

B': Definitely not/Of course not  $\rightsquigarrow$  John sometimes bathes on Saturdays

The ambiguity of the interpretation in (15) stems not from ambiguity of a negative BAR itself, but rather 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.<sup>3</sup>

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	+	-
<b>Low-Negation</b>	<b>-</b>	<b>+</b>

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 to a high polarity head Pol, which hosts *not* (Laka, 1990; Ladusaw, 1992; Zanuttini, 1997; Potts, 2002; Vicente, 2006; McCloskey, 2017).
2. High and low polarity heads 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.g. 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  $\alpha$  can be deleted only if  $\alpha$  is e-GIVEN.

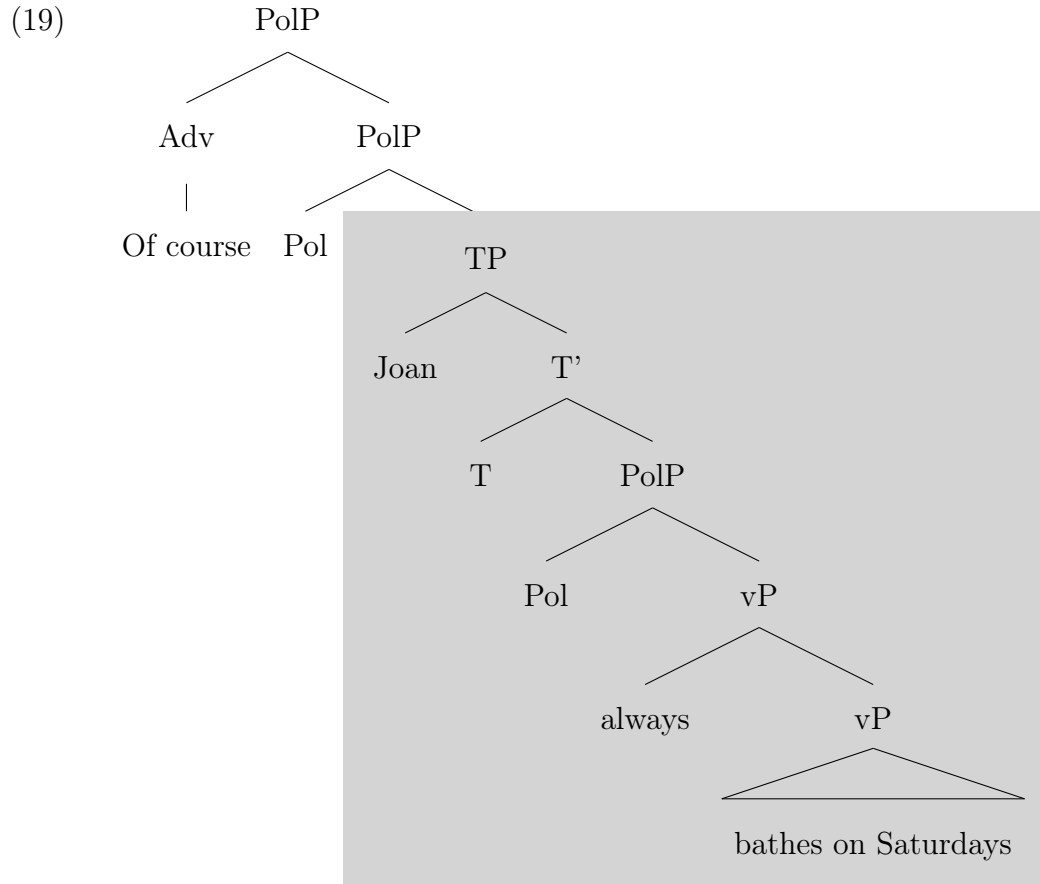
**e-GIVENness:** An expression counts as e-GIVEN iff E has a salient antecedent A and, modulo  $\exists$  type-shifting, i) A entails F-clo(E), and ii) E entails F-clo(A).<sup>4</sup>

We use e-GIVENness here in order to create a maximally predictive account, and because e-GIVENness is well-known within the ellipsis literature. Our analysis, however, is not reliant on any particular implementation of the ellipsis identity condition, and alternative formalizations could easily be used.<sup>5</sup> Let's first look at the predictions of the account for a positive BAR response to a high-negation polar question, as in (18).

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

A: Doesn't Joan always bathe on Saturdays?

B: Definitely/Of course  $\rightsquigarrow$  Joan always bathes on Saturdays



In (19), *of course* is adjoined as an adjunct to the high Pol head. We remain agnostic here on where exactly different adverbials are merged, but assume accounts in which

adverbs are merged in place and do not undergo movement (see Cinque 1999; Ernst 2002; Cinque 2004; Morzycki 2013; Zyman 2019; a.o. for discussion).<sup>6</sup>

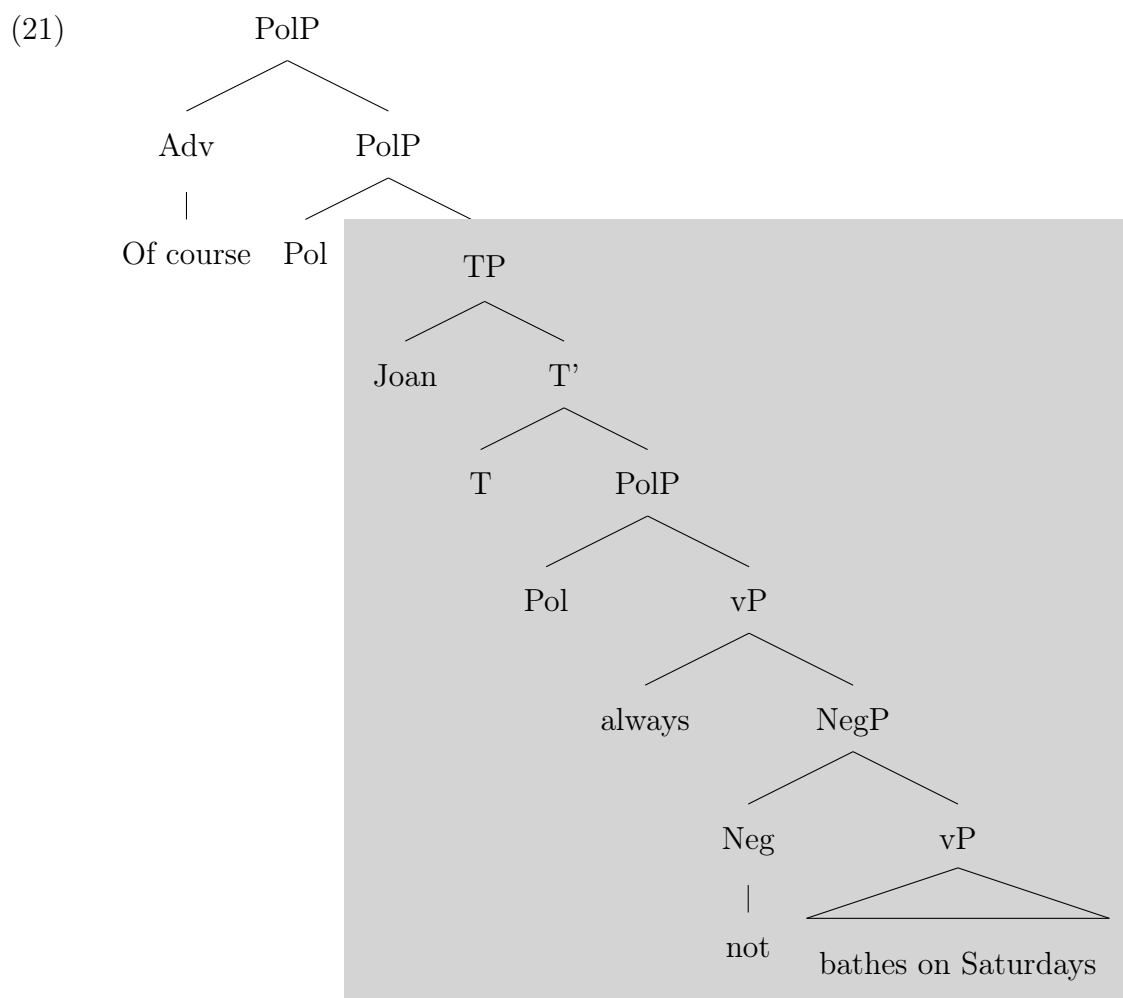
Recall that because (18) is a high-negation polar question, the question radical does not itself contain high negation. We therefore have the question radical *Joan always bathe on Saturdays*. The question radical and the TP expressing the proposition *Joan always bathe on Saturdays* satisfy e-GIVENness, as the two propositions are mutually entailing (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). 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  $\rightsquigarrow$  Joan always doesn't bathe on Saturdays



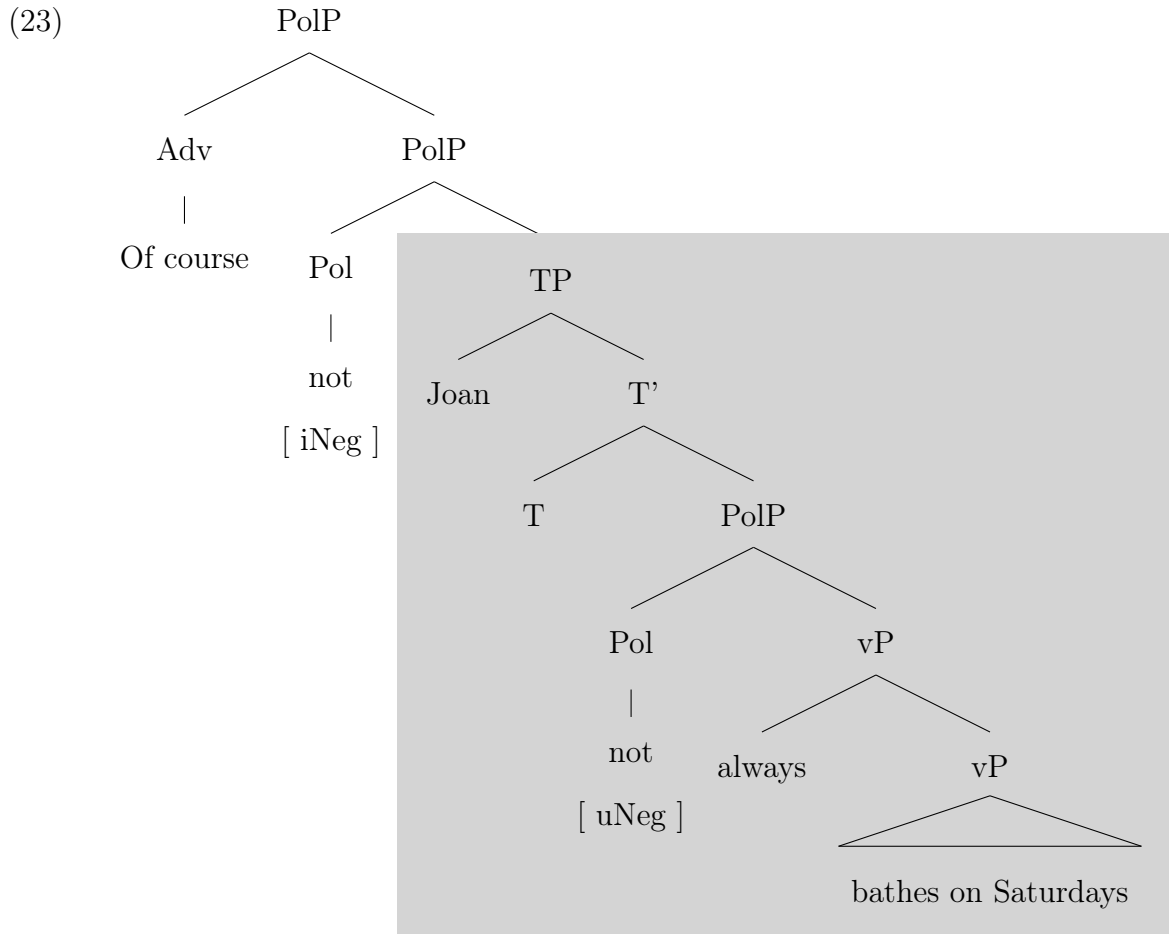
The BAR *of course* is again adjoined to the high Pol head. Because (20) is a low-negation polar question, the question radical contains the low clausal-negation, yielding the question radical *Joan always not bathe on Saturdays*. The question radical and the TP expressing the proposition *Joan always 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 the 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  $\rightsquigarrow$  Joan doesn't always bathe on Saturdays



The derivation in (23) differs from previous examples in that it contains two negations: an interpretable negation realized on the high Pol head, and an uninterpretable negation realized on the low Pol head. We derive the realizations of these negations in the following way. First, the BAR *of course* is merged above the high Pol head.<sup>7</sup> The TP expressing the full response *Joan not always bathe on Saturdays* is constructed. At this point, the TP of the response cannot be felicitously elided under semantic identity with its question radical antecedent. The question radical antecedent expresses the positive proposition *John always bathe on Saturdays*, while the TP of the response expresses the negative proposition *Joan not always bathe on Saturdays*. Because the two propositions express opposite polarity, they do not satisfy the bidirectional entailment conditions of e-GIVENness. An ellipsis analysis at this stage would therefore fail.

We propose that the low Pol head enters into an Agree relation with the high Pol head. This type of relationship is attested cross-linguistically by observations that the morphosyntactic realization of negation need not be isomorphic with the semantic realization of negation. For example, negative concord languages have multiple morphosyntactic realizations of negation with only a single semantic negation (Ladusaw, 1992; Zeijlstra, 2008). Additionally, languages such as Russian, Hungarian, and Italian have *expletive negation*, the morpho-syntactic realization of negation that does not contribute semantic negation (Piñón, 1991; Brown & Franks, 1995; Tovená, 1995; Gribanova, 2017). Compositional analyses of these phenomena explain the mismatch between the presence of morpho-syntactic negation and semantic negation using Agree. Specifically, negative morphemes themselves are not semantically negative elements, but are equipped with either a formal interpretable ([iNeg]) or a formal uninterpretable ([uNeg]) negation feature (Chomsky, 1995; Zeijlstra, 2004, 2008, 2014). Elements carrying an uninterpretable negation feature have the morpho-syntactic properties of negation, but do not contribute negative semantic force.

Once the low Pol head enters into an Agree relationship with the high Pol head in BAR constructions, the identity conditions on ellipsis of the TP are satisfied. The interpretable negation feature that was realized on the low Pol head is realized outside of the ellipsis site on the high Pol head as *not* (Zeijlstra, 2004, 2008; Kramer & Rawlins, 2009; Hofmann, 2018). The low negation then has an uninterpretable negation feature, as shown in (23). It has been prominently argued that elements bearing uninterpretable negation, because they do not contribute semantic negation, are ignored when calculating identity in ellipsis constructions (Chung, 2013; Merchant, 2013; Gribanova, 2017). Therefore, once interpretable negation is realized outside of the ellipsis site on the high Pol head, identity can be successfully calculated between the TP in (23) and its antecedent question radical in (22). That is, when calculating the ellipsis identity condition the elided TP expresses the proposition given by *Joan always bathe on Saturdays*. This proposition satisfies the bidirectional entailment condition of e-GIVENness,

and can be felicitously elided under identity with its antecedent question radical *Joan always bathe on Saturdays*.

This analysis is both compositional and explanatory; there is no need to stipulate when or why negation is realized. The interpretable negation feature that originates on the low Pol head arises from the unelided response to the question in (22). In the BAR response, the high Pol head realizes the interpretable negation feature only because the high Pol head enters into an Agree relation with the low Pol head. The Agree relationship, in turn, is driven *only* by the requirement to satisfy the ellipsis identity condition. As we saw in (20), when both the antecedent and the elided clause contain negation, no Agree relationship holds and no negation is realized outside the ellipsis site, even though the interpretation of the BAR in (20) is negative. In summary, negation always originates in the unelided syntactic and semantic structure; it is only when the structure must be altered to satisfy the identity requirements of ellipsis that we see the interpretable negation feature realized on the high Pol head.

We are claiming that the pattern of high negation in BAR responses is derived partially by the identity requirements on eliding a TP. If this is indeed the case, then we predict BARs to be interpreted differently from corresponding responses without ellipsis. This prediction is borne out. In (22), we claim that the *not* in the negative BAR response is an expression of the interpretable negation feature that originates 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. This is in fact what we see in the full response, repeated in (24).

(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.

B': {Definitely/of course} not.



We additionally see that the high expression of polarity in the unelided response to (24) is ungrammatical, as in (25).

(25) \*Of course not Joan bathes on Saturdays.

This ungrammaticality can be explained by positing a parsimony constraint in which the interpretable negation feature is realized in its originating position unless prompted by the ellipsis identity requirement of the derivation. Alternatively, this observation can be compared to those of so-called obligatory ellipsis, such that once the Agree relationship has been established, TP ellipsis must take place (see e.g. Gribanova 2017 for obligatory contrastive polarity ellipsis in Russian).

We find further confirmation of this pattern when considering a full response to a low-negation polar question, as in (26), in which B's response cannot be interpreted as meaning that Joan sometimes bathes on Saturdays.

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

A: Does Joan always not bathe on Saturdays?

B: Of course  $\rightsquigarrow$  #Joan doesn't always not bathe on Saturdays.

The bare response in B is infelicitous under the given interpretation because the high interpretable negation in the response—expressed in the auxiliary clitic—is absent in the antecedent TP; TP ellipsis would therefore violate identity conditions such as e-GIVENness. Importantly, however, the full response **is** grammatical, as it is not subject to the ellipsis constraint.

(27) 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 overtly express a full TP and BAR responses: because the responses expressing a full TP are not subject to 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. It is furthermore unclear how a non-ellipsis account would derive these facts compositionally, or how such an account would rule out (25) in an explanatory way.

Finally, 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 Negative Neutralization 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 (28).

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

A: Does Joan always not bathe on Saturdays?

B: Definitely not/Of course not  $\rightsquigarrow$  Joan sometimes bathes on Saturdays

The prediction in (28) follows straightforwardly from the principles of the account. Consider the unelided form of the response in (29). B's response contains two negations: 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).

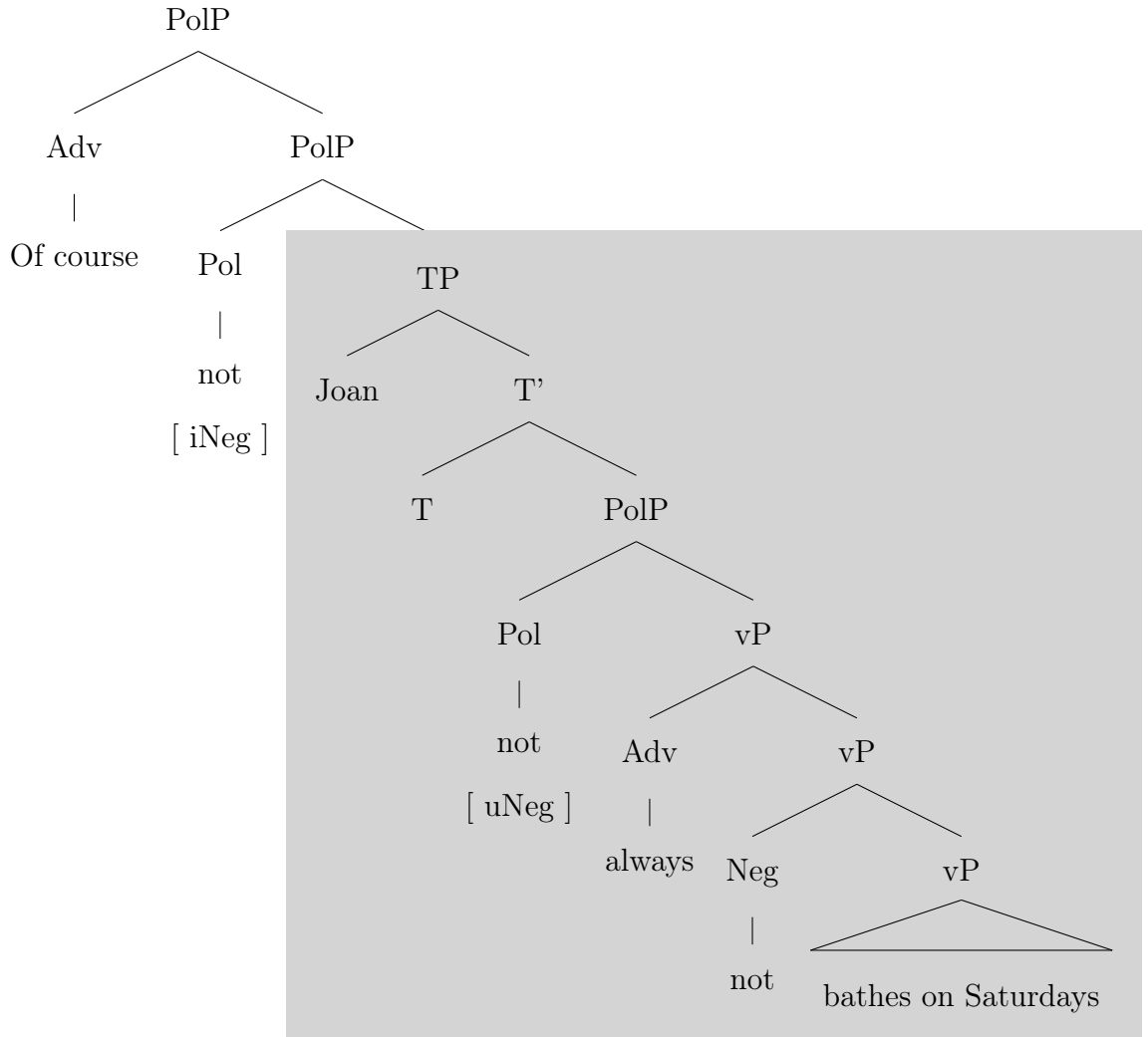
(29) How many negations?

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

B: Of course Joan doesn't always **not** bathe on Saturdays.  $\rightsquigarrow$  Joan sometimes bathes on Saturdays.

Our prediction for the BAR response to a low negation question is shown in (30).

(30)



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 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 the

morpho-syntactic occurrences of negation within the unelided form of a response, unless required by the identity conditions on ellipsis to be realized outside of the ellipsis site. There is also no mystery as to where the interpretable 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 overtly realizing a full TP. In the next section, we provide arguments that our analysis is to be preferred over plausible alternatives which have been profitably applied to polarity particles, namely Holmberg (2013)’s elliptical approach and a feature-marking account like Roelofsen & Farkas (2015).

## 4 Alternative accounts

### 4.1 Comparison to Holmberg (2013)

Holmberg (2013) provides a syntactic account of polarity particle responses like *yes* and *no*, and argues that their variable interpretation in response to negative questions can be chalked up to facts about the position of negation in the question itself. Similar to both Kramer & Rawlins and the present account, Holmberg proposes that *yes* and *no* are merged in a high focus position, and receive propositional interpretations via ellipsis of a TP (PolP in Holmberg’s account), the identity of which determines the possible interpretations of the response.

For Holmberg, polarity particles Merge with FocP (corresponding to high  $\Sigma$ P in Kramer & Rawlins’s and our terms), and encode a focus operator. This operator can be valued as [Aff(irmative)], in the case of *yes*, or [Neg], in the case of *no*. Crucially, an affirmative answer like *yes* is possible only if this [Aff] operator has a variable to bind—i.e., an unvalued Pol head lower in the structure that it can value at LF. If the focus operator instantiated by the polarity particle cannot value the lower Pol head be-

cause it is already valued, then unacceptability results, as in a bare response of *yes* to a high-negation PQ, which elides PolP. This contrasts with a longer response of where material in PolP is overt, but only TP is elided:

(31) Q: Isn't John coming?

A: #Yes.

A': Yes, he is. (Holmberg 2013, ex. 29)

The bare response of *yes* in (31) involves ellipsis of a full PolP, of which the Pol head is negatively valued under identity with the high negation PQ, leaving [Aff] with nothing to bind. On the other hand, the longer response of *yes, he is* has an unvalued polarity feature which can be bound by the affirmative operator. In this way, the (un)acceptability of certain polarity particle answers is contingent upon whether or not low Pol can be valued by a higher operator or not.

While we agree with Holmberg's principal insight that negative neutralization with BARs disappears when controlling for the position of negation in questions, we believe that his account of *yes*- and *no*-responses cannot quite be utilized wholesale to account for the full range of BAR data. Chiefly, this is because there are important empirical differences between BARs and *yes/no*. For one, adverbial responses like *of course* and *maybe* can occur with *not*, but responses of *yes not* and *no not* are sharply ungrammatical. This contrast is not straightforwardly understood if BARs encode focus operators. Holmberg himself does not discuss this contrast, though we could perhaps understand the ban on *yes/no not* if the polarity features of *yes* and *no* either contradict or are redundant with a (negative) polarity feature on *not*.

Because BARs can co-occur with *not*, it seems they need not be packaged with a polarity feature which requires checking. That is, the adverb itself does not encode negative or affirmative force. Such a view seems corroborated by the relative freedom observed in positive BAR responses in comparison with bare polarity particle responses. Holmberg notes that a response of *yes* is infelicitous in response to a negative declar-

ative. As the reasoning goes, the affirmative focus operator [Aff] which a *yes* response instantiates needs an affirmative operator to bind in the ellipsis site. However, in response to a negative declarative, the elided PolP in a *yes* response contains negation, which cannot be bound by [Aff]. Empirically, however, positive BARs differ from *yes* in that they can be used as felicitous responses to negative declaratives:

(32) A: He doesn't drink coffee.

B: #Yes.

B': Of course. (cf. Holmberg 2013, ex. 25)

If a positive BAR must contain an affirmative high Pol, then (32) is not easily explained, since *of course* should be just as bad a response to a negative declarative as *yes*. On the other hand, our account predicts positive BARs to be felicitous in response to declaratives across the board, because they do not come packaged with operators that require an unvalued feature to be bound.

While our approach is similar in broad strokes to Holmberg's, the differences between BARs and polarity particles consequently motivate somewhat different treatments. Crucially, we do not need affirmative features at all; the interpretation of positive BARs is straightforwardly understood without feature-checking whatsoever, and their felicitous distribution is wider than that of *yes*. On the other hand, although we do leverage feature-checking in the case of negative BARs, this is not stipulative, since a similar mechanism for negative concord is independently motivated (Zeijlstra, 2004, 2008).

## 4.2 Feature-Marking

This section considers another alternative account of the BAR construction, whereby BARs can be used to mark absolute and relative polarity 'features'. We consider here the prominent feature-marking analysis of Roelofsen & Farkas 2015, though we believe the arguments outlined here could extend to other feature-marking accounts. The sys-

tem of Roelofsen & Farkas was created to predict the cross-linguistic behavior of polarity particles and could theoretically be naturally extended to cover additional polarity data, such as BAR constructions. We show that while such an account is adequate to capture the interpretations of the BAR data, it relies crucially on a notion of ellipsis anyway, but requires us to stipulate the feature combinations realized by both positive and negative BARs. In our account, on the other hand, the range of interpretations of BARs is compositional, given independently motivated assumptions about what is elided, and is therefore more theoretically parsimonious.

Roelofsen & Farkas, building on work by Pope (1976) and Farkas & Bruce (2010), propose that polar response particles like *yes* and *no* mark features of their propositional arguments (*prejacent*s) 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 ex-

hibits 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

Roelofsen & Farkas do not discuss which alternative is highlighted in a high-negation polar question. However, no matter which alternative we think is highlighted, serious issues arise. If we assume that the highlighted alternative is  $\neg p$ , then a positive BAR realizes [REVERSE,+], because it involves ellipsis of a proposition without negation:

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

A: Doesn't Joan always bathe on Saturdays?

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

(34) **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 composition-



ally 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 clear empirical advantage to treating BARs as feature-marking. By contrast, our analysis offers a unified explanation for both the range of interpretations and the surface form of BAR utterances. In the next section, we further motivate an ellipsis analysis by situating BARs within a broader class of polarity ellipsis constructions, and assess the implications of these proposals for larger questions concerning the interaction between ellipsis and the expression of polarity.

## 5 BARs in the typology of ellipsis

In §3 we argued for an ellipsis analysis of BARs that builds on independently-motivated observations and analyses in the literature. While this argumentation shows that ellipsis is a *possible* account of BARs, it does not in and of itself rule out alternative analyses. A reviewer suggests that one way to motivate an ellipsis analysis of BARs is to use existing diagnostics/tests to probe for ellipsis in BAR constructions. Unfortunately, the existing diagnostics are largely uninformative for BARs, which involve no posited movement and no argument remnants.

We might therefore ask if there is any independent evidence for ellipsis in the BAR cases. While it is difficult to provide direct evidence for ellipsis in BARs, we provide indirect evidence by comparing BARs to the closely related construction *stripping*, which has, in our opinion, been convincingly argued to involve ellipsis (Ross 1967; Hankamer & Sag 1976; Merchant 2003; cf. Lobeck 1995; a.o.). Section 5.1 briefly discusses the argumentation that has been given for an ellipsis analysis of stripping, and the remaining subsections show that BARs and stripping pattern closely together. Because the constructions pattern so closely together, the arguments for an ellipsis analysis of stripping provide an indirect argument for an ellipsis analysis of BARs and suggest

that a unified mechanism underlies both types of constructions.

## 5.1 BARs and Stripping

One way to evaluate an ellipsis account of BARs is to compare the construction to similar, better-studied constructions which more uncontroversially involve ellipsis. The constructions that share the most similarities with BARs are stripping and sluicing. While it is not unequivocal that these constructions involve ellipsis, the prevailing view in the literature is (currently) in favor of ellipsis accounts (Ross 1969, Hankamer & Sag 1976, Sag 1979, Merchant 2001, 2003, Yoshida et al. 2013, Chung 2013, Potter 2017, Rudin 2019, Kroll to appear, a.m.o. cf. Reinhart 1991, McCawley 1991, Lobeck 1995, Chung et al. 1995, Stainton 2006, Barker 2013, a.o.). Because stripping is most similar to BARs, we focus on this comparison here.

Stripping constructions are generally those in which a fragment DP, optionally accompanied in English by *not* and/or an adverb, stands in a contrastive focus relationship to a preceding DP.<sup>8</sup> For example, in (35) (a) receives the same interpretation as the unelided version in (b).

- (35) a. Elizabeth surfed Pleasure Point, but not Mavericks.  
b. Elizabeth surfed Pleasure Point, but she didn't surf Mavericks.

More generally, Hankamer & Sag (1976) define stripping as a rule that deletes everything in a clause under some identity condition with a preceding clause, except for one constituent and optionally a clause-initial adverb or negation. When stripping occurs with an adverb and/or negation, as in (36), it looks very much like a BAR construction:

- (36) Stripping  
a. Elizabeth surfed Pleasure Point, but of course not Mavericks.  
b. Elizabeth surfed Pleasure Point, but of course she didn't surf Mavericks.

Hankamer & Sag (1976) and Lobeck (1995) observed that stripping can also occur across utterances, as shown in (37). We call this version of stripping *matrix stripping*.

(37) Matrix Stripping

A: Susan surfed Pleasure Point.

B: But definitely not Mavericks.

Contemporary ellipsis analyses for stripping rely largely on several core diagnostics, outlined in detail by Merchant (2001). Depiante (2000) and Merchant (2003), for example, analyze stripping as movement of a DP constituent out of TP to Spec, F[ocus]P in the clausal periphery, followed by deletion of the TP.<sup>9</sup> The analysis is motivated by demonstrating that stripping constructions show DP connectivity and binding effects, and obey the so-called p-stranding generalization (Depiante, 2000; Giannakidou, 2000; Merchant, 2003, 2004; Potter, 2017). While space prevents a detailed discussion of each test here, we briefly review two standard tests in order to demonstrate that while both are unable to help us evaluate the (non-)existence of ellipsis in the BAR construction, they have been used to motivate ellipsis accounts of stripping.<sup>10</sup>

Merchant (2001) provided a litany of standard tests to probe the presence of ellipsis in particular constructions. One such test is case-matching, noted for sluicing by Ross (1969) and is discussed at length in Merchant (2001), among others. Case-matching in fragment ellipsis labels the generalization that the morphological case form of a fragment answer is always the same as the case that is found on the corresponding constituent in a fully sentential version of the answer (Merchant, 2004). Merchant shows that this generalization holds for English, as in (38), but also for Greek, German, Korean, Hebrew, Russian, and Urdu. While the case-matching criterion cannot be applied to the BAR construction, because there is no overt DP in BARs to which case is assigned, the empirical generalization holds in sluicing, fragment answers, and in stripping constructions, which do contain an overt remnant. Examples (38) and (39) show a fragment and stripping example in English, and (40) shows a stripping example in German.<sup>11</sup>

(38) Q: Whose car did you take?

A: John's.

A': \*John. (Merchant 2004, ex. 54)

(39) a. We took Maria's car, but not John's.

b. We took Maria's car, \*but not John.<sup>12</sup>

(40) Gestern    abend kaufte Susan ein                    Kanu gekauft,  
yesterday night has    susan a.ACC.NEUT canoe bought  
'Last night Susan bought a canoe,'

a.    aber einen                    Kajak nicht  
      but a.ACC.MASC kayak not  
      'but not a kayak'

b.    aber einen                    Kajak hat Susan nicht gekauft  
      but a.ACC.MASC kayak has Susan not    bought  
      'but Susan didn't buy a kayak'

c.    \*aber ein                    Kajak nicht  
      but a.NOM.MASC kayak not

d.    \*aber ein                    Kajak hat Susan nicht gekauft  
      but a.NOM.MASC kayak has Susan not    bought

Another main test used to evaluate the presence of ellipsis is the p-stranding generalization (Giannakidou 2000; Merchant 2001, 2004; a.m.o.). The p-stranding generalization states that in languages which allow preposition-stranding wh-movement, fragment responses with a bare DP are permissible, as in English in (41). However, in languages that do not allow preposition-standing wh-movement, like German in (42), bare DP fragment responses are not possible. Instead, in those languages the generalization states that the preposition must be included in the fragment response. The observation can be extended to stripping examples, such as (43), in which omitting the preposition degrades the example under the intended reading.<sup>13</sup>

(41) English Fragment

Q: Who was Peter talking with?

A: Mary. (Merchant, 2004, ex. 72)

(42) German Fragment

Q: Mit wem hat Anna gesprochen?  
with whom has Anna spoken?

A: Mit dem Hans.  
with the Hans

A': \*Dem Hans (Merchant, 2004, ex. 78)

(43) German Stripping

Der Hund hat an Anna geschnüffelt, aber nicht ??(an) Franz.  
the dog has on Anna sniffed but not on Franz  
'The dog sniffed Anna, but not Franz.'

This generalization tests for movement, and is not itself a direct test for the presence of ellipsis. Because we propose that no movement has taken place, the p-stranding generalization, as with case-connectivity effects, is not able to help us evaluate the existence of ellipsis in BARs. However, we argue that a unified mechanism should be used to derive both BARs and stripping. The remainder of this section motivates this claim by demonstrating that the two constructions pattern together on a litany of properties.

## 5.2 Co-occurrence with *not*

A salient property of BARs, stripping, and matrix stripping is that all can occur with negation, in English realized as *not* (McCawley, 1991; Merchant, 2003, 2004).

### Stripping

(44) Susan surfed Steamer Lane, but not Mavericks.

### Matrix Stripping

(45) A: Susan surfed Steamer Lane.

B: But not Mavericks.

### BARs

(46) A: Did Susan surf Mavericks?

B: Definitely not.

### 5.3 Interpretation of negation is high

We have argued that the interpretation of negative BAR responses reveals that the scope of negation in BARs is fixed at the location of the overt negative element.<sup>14</sup> This observation is made particularly evident in responses to questions containing scope-taking elements. For example, some modals, including *must* and *should*, obligatorily scope over negation in matrix contexts (Iatridou & Zeijlstra, 2013). But in responses to a polar question with a matrix *must* or *should*, a negative BAR is unambiguously interpreted with negation scoping above the modal. This is unlike an equivalent response with an overt modal, where the opposite holds true:

- (47) A: Must/should John leave?  
 B: Of course not.  $\neg > \Box, *\Box > \neg$   
 B': Of course John must/should not (leave).  $*\neg > \Box, \Box > \neg$

With other operators that may scope above or below negation, such as universal quantifiers, we see again that negative BARs are obligatorily interpreted with negation scoping highest.

- (48) A: Did every student do her homework?  
 B: Of course not.  $\neg > \forall, *\forall > \neg$   
 B': Of course every student didn't do her homework.  $\neg > \forall, \forall > \neg$

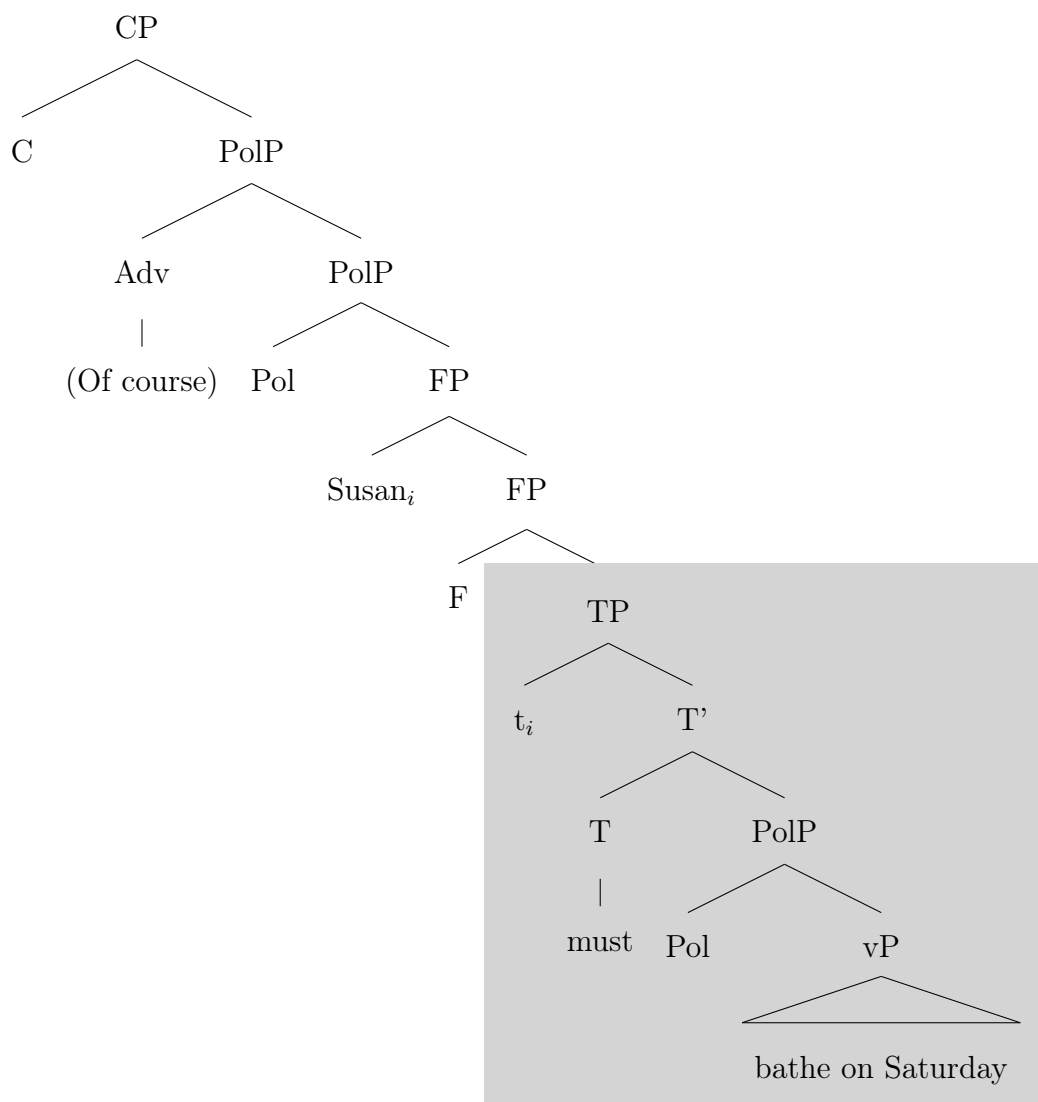
Stripping contexts with modals show the same scope facts, revealing that the interpretable negation in negative stripping is the high, phonologically realized negation. Examples (49)-(52) show that our BAR analysis also derives the correct interpretation for stripping examples. Matrix stripping examples are omitted for reasons of space; however, the exact same analysis can be applied across utterances, as demonstrated in the cross-utterance analysis of BARs given above.

The first example in (49) derives a positive stripping example with a positive antecedent. The DP constituent *Susan* focus-moves to Spec, FP, and the TP is deleted

under identity with the preceding clause (Merchant, 2003).

(49) John must bathe on Saturday, and (of course) Susan, too.

$\rightsquigarrow$  Susan must bathe on Saturday.



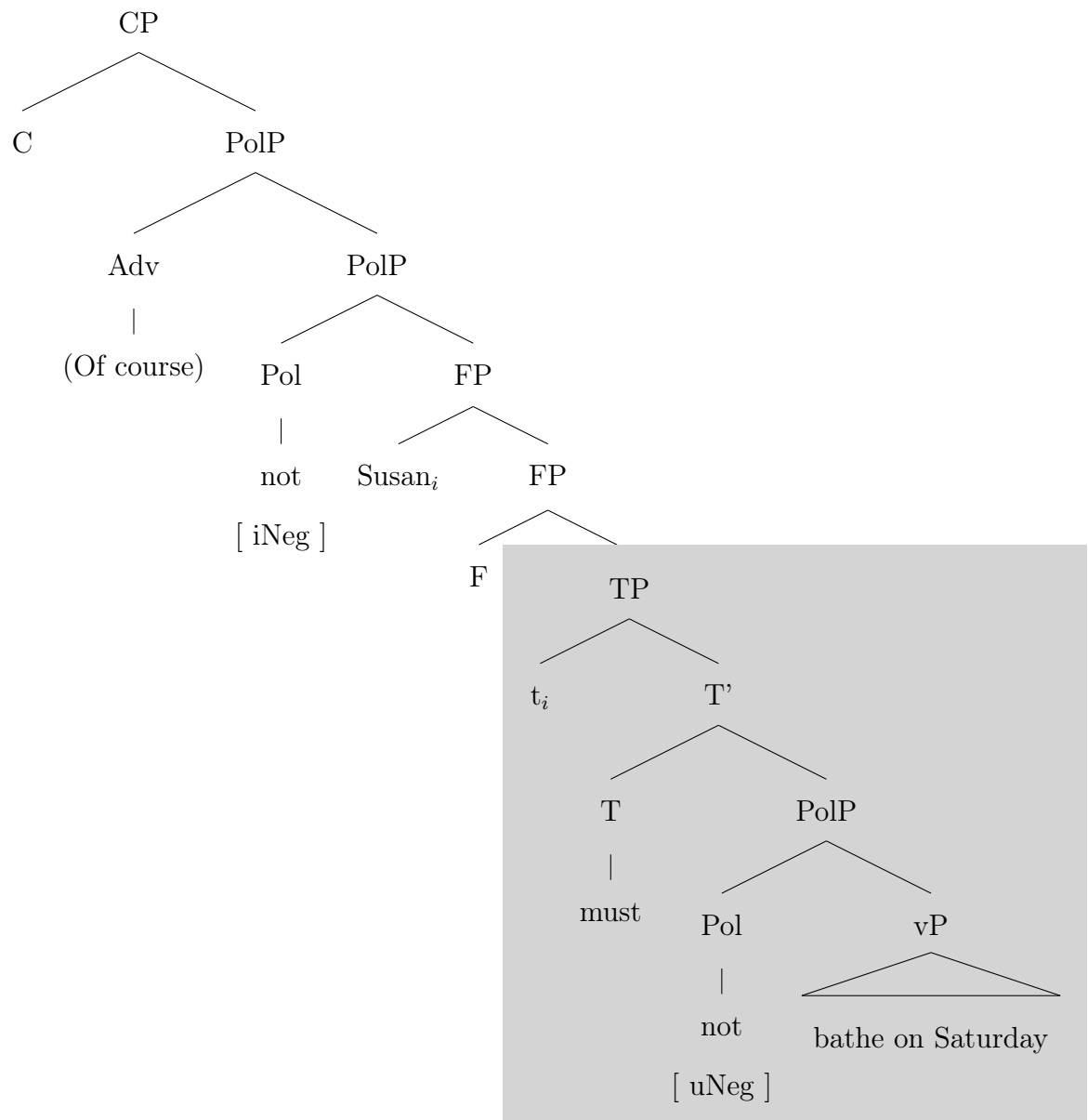
When negation is present in the stripped clause but not in the antecedent clause, as in (50), interpretable negation is realized outside the ellipsis site through an Agree relationship with uninterpretable negation in the elided clause. Recall that the uninterpretable negation in the elided clause originates in the unelided version of the response, just as in the BAR derivation. The possible and impossible interpretations confirm that the high negation is the interpretable negation. Because the negation is realized outside the ellipsis site, the TP is able to be deleted under identity with the antecedent, as we

saw in the BAR examples.

(50) John must bathe on Saturday, but (of course) not Susan.

$\rightsquigarrow$  It's not the case that Susan must bathe on Saturday.

**X**: Susan must not bathe on Saturday.



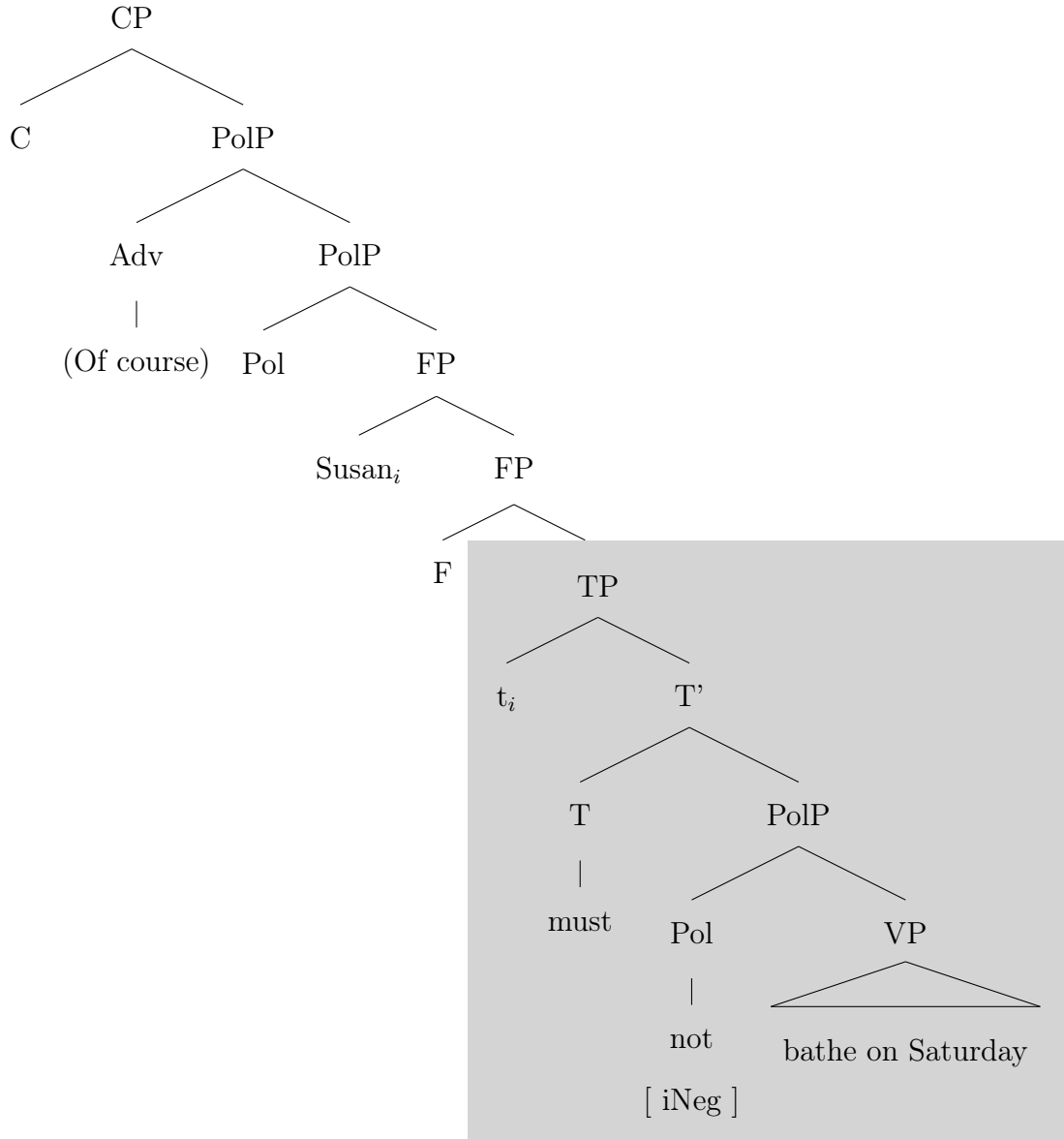
When negation is present in the antecedent and not in the overt stripped clause, as in (51), the stripped clause has a parallel interpretation to the antecedent clause, as the TP is deleted under identity with the antecedent clause.

(51) John must not bathe on Saturday, and (of course) Susan, too.



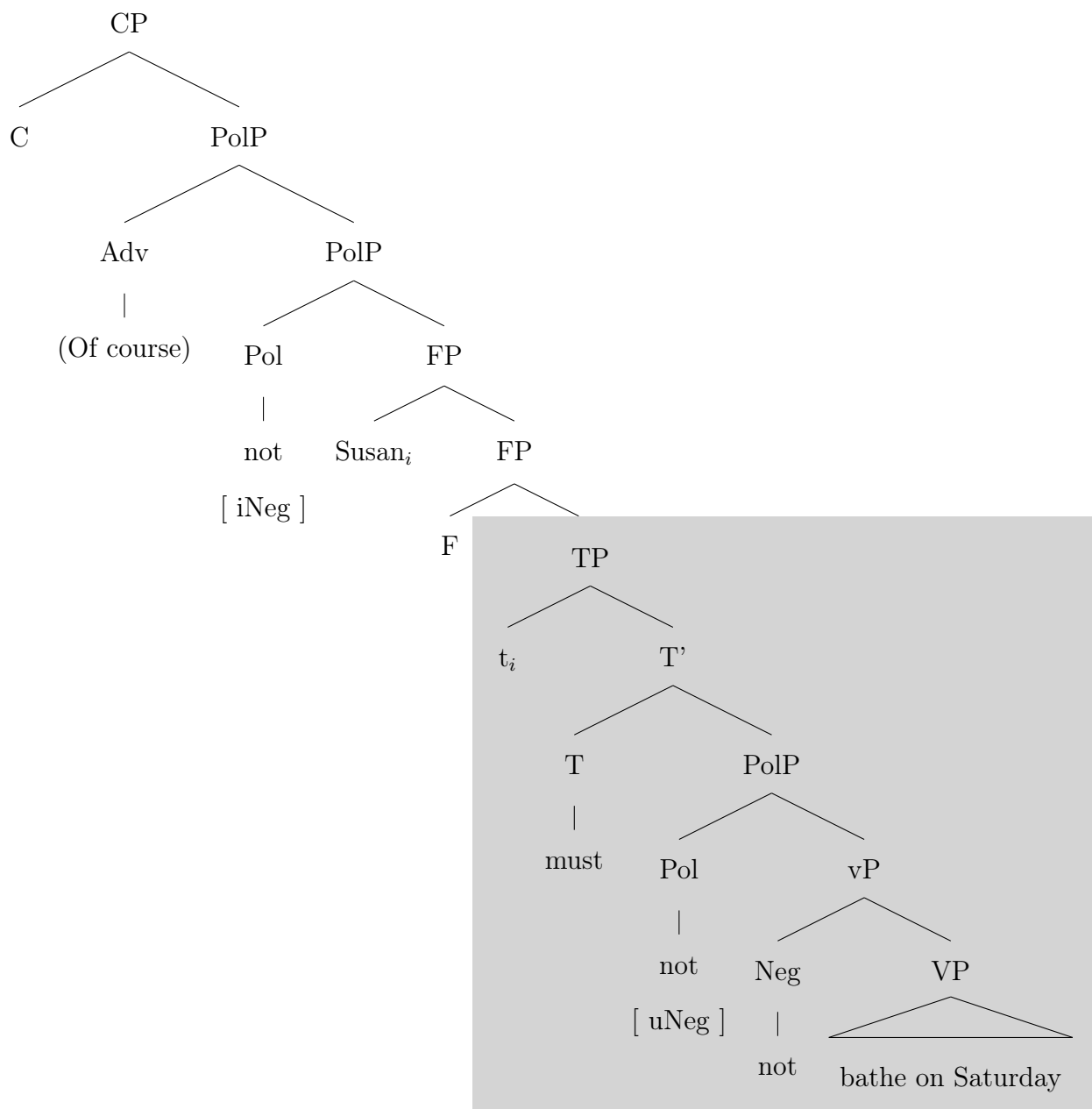
$\rightsquigarrow$  Susan must not bathe on Saturday.

**X**: It's not the case that Susan must bathe on Saturday.



Finally, when both the antecedent and the overt stripped clause contain negation, as in (52), we get deletion of clausal negation under identity with the antecedent clause. The negation that is not licensed by the antecedent (high negation) is realized outside the ellipsis site through agreement with the high PolP head. Although we acknowledge that this example is degraded due to the difficulty of processing multiple negations alongside a modal, the importance of the example is the possible interpretation that the example can have for those who accept it.

- (52) John must not bathe, but (of course) not Susan.  
 $\leadsto$  It's not the case that Susan must not bathe. (Susan can bathe)  
 $\times$ : Susan must bathe  
 $\times$ : Susan must not bathe



The empirical facts of negation in stripping are therefore analogous to those in BAR constructions. Assuming a standard ellipsis account in which TPs in stripping constructions are elided under identity with an antecedent clause (following Hankamer

& Sag 1976; Merchant 2003, a.m.o.), the analysis we have provided for BARs extends naturally to stripping cases, as well.

## 5.4 Co-occurrence with sentential/speaker-oriented adverbs

Stripping, matrix stripping, and BARs may all appear with sentential or speaker-oriented adverbs. While stripping optionally appears with these adverbs, they are required by definition in BAR constructions.

### Stripping

- (53) Susan surfed Steamer Lane, but definitely not Mavericks.

### Matrix Stripping

- (54) A: Susan surfed Steamer Lane.  
B: But definitely not Mavericks.

### BARs

- (55) A: Did Susan surf Mavericks?  
B: Definitely not.<sup>15</sup>

## 5.5 Co-occurrence with coordination structures

Stripping and BARs can occur in a coordination structure, though by definition matrix stripping does not.<sup>16</sup>

- (56) Stripping  
Susan surfed Steamer Lane, but (definitely) not Mavericks.

- (57) BARs  
I thought Susan would try to surf Mavericks, but probably not.

## 5.6 Island insensitivity

Historically, a main diagnostic used to evaluate the existence of ellipsis in a particular construction is island-sensitivity. While island-sensitivity does not show the existence of ellipsis *per se*, it is evidence for movement, which is argued to take place when a remnant or fragment constituent escapes from an ellipsis site (e.g. wh-movement to Spec, CP in the case of sluicing, focus movement to FP in the case of fragment ellipsis (Merchant, 2001, 2004)). Because our analysis does not propose that any movement has taken place in the BAR construction (recall we argue that the adverbials in BARs are merged high in the structure, following Kramer & Rawlins 2009), no island-sensitivity effects are expected to be observed. However, stripping analyses do propose movement and therefore we might expect to see these effects when a DP remnant is present. However, as Potter (2017) observes, stripping does not appear to be island-sensitive (cf. Merchant 2003). For example, speakers judge (58) and (59) to have a reading in which Jack wonders whether Ben graduated, despite the fact that the DP constituent would, following a movement and TP deletion analysis, have moved out of a *whether* island.

(58) Stripping

Jack wondered whether Jane graduated, {and Ben, too/but not Ben}.

(59) Matrix Stripping

A: Jack wondered whether Jane graduated.

B: Ben too. / But not Ben.

Space prevents us from wading into the debate about island (in)sensitivity in ellipsis (we refer the interested reader to discussions in Ross 1969; Pollmann 1975; Erteschik-Shir 1977; Fox & Lasnik 2003; Merchant 2001, 2004; van Craenenbroeck 2010; Barros et al. 2013; Yoshida et al. 2013; Vicente 2014; Griffiths & Lipták 2014; Potter 2017; a.m.o.) We address this point only to note that, although the island insensitivity of stripping may appear to be a counter-example to an ellipsis analysis, the use of island-

sensitivity as a diagnostic to probe the presence of ellipsis is under active discussion in the literature. Because claims about in which instances or whether ellipsis ameliorates island violations are still open questions, we suggest that island sensitivity is not the clearest diagnostic we could currently use to evaluate the presence of ellipsis.

## 5.7 Ability to be embedded

Lobeck (1995) argues that stripping constructions are not embeddable (see also Yoshida et al. 2013), given data like that in (60). However, embedded examples can be constructed with some care, as in (61) and (62) (see also Wurmbrand 2017).

- (60) a. \*John was eating natto, but I think (that) not sushi.  
(Yoshida et al., 2013, ex. 7b)
- b. \*Jane loves to study rocks, and John says that geography, too.  
(Lobeck, 1995, ex. 72b, pg. 27)
- (61) Jane loves chemistry, and I think (probably) geography, too.
- (62) Q: Who's going to surf Mavericks?  
A: Jane is, but I assume (probably) (not) Ben.  
A': I assume (probably) (not) Ben.

Similarly, BARs can also be embedded; however, like stripping they appear to be sensitive to properties of the embedding verb, as shown in (63).

- (63) Q: Is Susan going to surf Mavericks?  
A: I suppose/expect/assume/imagine probably (not).  
A': \*I know/wish/believe probably (not).

Space prevents us from examining this interesting contrast in detail; however, the important point for our purposes is that matrix stripping, stripping, and BARs all demonstrate the ability to be embedded under at least some propositional attitude verbs.

## 5.8 Focus placement

It has long been observed that in responses to constituent questions, focus (realized by focal pitch accent) falls on the constituent that corresponds to the *wh*-word in the interrogative form (Halliday, 1967; Rooth, 1992; Roberts, 1996). This pattern is called Question-Answer Focus Congruence. For example, in (64), focus only felicitously falls on the subject.

- (64) Q: Who surfed Mavericks?  
A: SUSAN<sub>F</sub> surfed Mavericks.  
A': #Susan surfed MAVERICKS<sub>F</sub>.

A main difference between BAR constructions and stripping constructions is the placement of focus. As shown, we argue that the stranded DP in stripping constructions is moved to Spec, FP, and receives focus. It is therefore natural to use stripping constructions when the DP either receives contrastive focus or is used to respond to a QuD which creates the appropriate question-answer congruence, e.g. constituent questions that question the identity of the DP. In contrast, we saw that BARs are used to respond to polar questions or declaratives. Question-answer congruence therefore predicts that focus is realized in BAR constructions as polarity, or verum, focus (Höhle, 1992; Kroll & Roberts, 2019).

Although the exact nature of verum focus is debated, we point out this difference as an explanation for why BARs and stripping share the properties discussed here but have distinct constituents realized outside the ellipsis site. Stripping constructions are predicted to occur only when the stranded DP is felicitously moved to a focus position; however, in BAR constructions there is no DP that receives focus, and therefore no constituent moves to the FP position to be stranded after the TP is elided. Once we take focus placement into account, stripping and BARs can be unified under a single ellipsis analysis. The surface differences, namely which constituents are left stranded outside the ellipsis site, are explained by independently-motivated observations of focus

placement.

## 5.9 Summary

We have shown in this section a cluster of properties that BARs, stripping, and matrix stripping have in common. Although these properties cannot definitively demonstrate that BARs and stripping are generated through the same ellipsis procedure, the fact that the constructions pattern so closely together strongly suggests that the constructions are derived from a single underlying mechanism. Furthermore, an ellipsis account of BARs predicts the similarities that we see between BARs and stripping; alternatively, these similarities remain unexplained or coincidental under non-ellipsis accounts. We have also explained why the two constructions strand different remnants outside the ellipsis site, namely that focus placement dictates which constituents remain unelided. Theoretical parsimony urges that, unless evidence is discovered for why the two constructions should be treated as inherently different, we seek to account for both constructions using the same basic mechanisms.

## 6 Conclusion

This paper has made both an empirical and theoretical contribution to the study of ellipsis. Empirically, we provide an account of the syntax and semantics of the understudied BAR construction. Following Holmberg (2013), we have shown that once the scope of negation in English negative polar questions is controlled for, the negative neutralization judgments considered in the literature for polarity particle responses do not hold for BARs. We have additionally shown that independently-motivated accounts of TP ellipsis, such as e-GIVENness, and negative concord agreement derive the interpretations of BAR responses to polar questions without additional stipulations. Our account explains when and why negation appears, and why we see interpretation differ-

ences between bare responses and responses expressing a full TP.

We additionally argue that BARs are derived through polarity ellipsis, and that they may play an important role in understanding this variety of ellipsis more broadly. BARs pattern closely with the related elliptical construction of stripping on a host of properties, and their differences can be derived by independently motivated theories of focus placement. These empirical similarities between BARs and stripping strongly suggest that the two constructions are derived from a single underlying mechanism. Therefore, although the standard ellipsis tests are unavailable for BARs, their application to stripping provides indirect evidence for the existence of polarity ellipsis in BARs.

Finally, we have shown that our elliptical account has greater explanatory coverage for BAR responses than alternative accounts. While other accounts for deriving BARs may involve similar mechanisms of ellipsis, they are dissimilar from our account in that they are left to stipulate the complex interpretative behavior of BARs. The analysis outlined here leverages independently motivated approaches to polarity ellipsis and negative concord to explain the full range of BAR behavior. 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

<sup>1</sup>See also Holmberg 2001 for similar ellipsis constructions in Finnish.

<sup>2</sup>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); AnderBois & Jacobson (2018), a.o.). We are convinced by Stainton’s arguments that not all fragments involve ellipsis, particularly discourse-initial utterances. Whether our analysis can be extended beyond the empirical domain considered here to a greater class of response fragments remains a topic for future research.

<sup>3</sup>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:

- (65) Doesn’t John bathe on Saturdays too/either?
- a. Definitely.  $\rightsquigarrow$  John bathes on Saturdays
  - b. Definitely not.  $\rightsquigarrow$  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.

<sup>4</sup>Existential closure is a type-shifting operation that raises expressions to type  $t$  by existentially binding unfilled arguments (Schwarzschild, 1999).

<sup>5</sup>Thank you to an anonymous reviewer for suggesting clarification on this point.

<sup>6</sup> In unelided forms, adverbs sometimes prefer to sit TP internally: *Joan definitely bathes on Saturdays*, ?*Definitely Joan bathes on Saturdays*. The ability of adverbs to merge at designated points in the syntactic tree with more or less flexibility has been independently noted and debated in the literature cited here; our data and analysis have nothing new to add to this discussion.

<sup>7</sup>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.

<sup>8</sup>See Yoshida et al. 2013 for a related but distinct phenomenon called *why-stripping*.

<sup>9</sup>Depiante proposes that negation also moves, unlike our analysis here.

<sup>10</sup>The same point extends to the additional tests discussed in Merchant 2001, 2004, and we refer the interested reader to those works for more detailed discussion than we are able to provide here.

<sup>11</sup>Thank you to Kelsey Kraus and Alexander Goebel for German judgments.

<sup>12\*</sup> marks the impossibility of the desired reading in which the second clause has a reading analogous to ‘but not John’s car.’

<sup>13</sup>Our consultants find the non-preposition form degraded, but not completely unacceptable. These judgments hold analogously for the fragment answer in (42).

<sup>14</sup> Further support for the claim that the high negation is the semantically interpretable negation comes from observations that NPIs are licensed by fronted affixal negation in examples such as (ii). (Thank you to Jim McCloskey for this observation. See Laka 1990, pp. 48-49, McCloskey 1996; Kayne 2000, 2005, Roberts 2010, pp. 8-12).

i \*Which student does anybody not like?

ii Which student doesn’t anybody like?

<sup>15</sup>Why English *not* cannot stand on its own is unfortunately a question beyond the scope of the current paper.

<sup>16</sup>Embedded stripping is argued to require a coordination structure. We refer the interested reader to discussions in Hankamer 1979; Kehler 1995; Merchant 2003.