Polarity particles: an ellipsis account Ruth Kramer (UCSC) and Kyle Rawlins (JHU)

Polarity particles, such as *yes* and *no*, have surprisingly complex behavior – their structural properties and meaning vary greatly in depending on the kind of polar question they respond to, and on whether or not they attach to an overt clause. However, with a few exceptions (Pope 1972; Laka 1990; Bruce and Farkas 2007), their syntax and semantics remains unfortunately understudied. This paper develops a syntactic account of English polarity particles that predicts their behavior in a wider range of environments than have been treated before, building on previous research and also making new connections to recent work on fragment answers to constituent (as opposed to polar) questions (Merchant 2004).

In response to a positive polar question (1), *yes* and *no* are straightforwardly positive and negative, regardless of whether they appear alone or with a following clause. However, when following a polar question with inner negation, a polarity particle appearing alone neutralizes to a negative meaning, as in (2). Neutralization is completely unexpected; either the functions of the two particles should switch (because the question is negative) or they should stay the same (since standardly, denotations of matched positive and negative polar questions are identical (Karttunen 1977; Groenendijk and Stokhof 1984)). An even further surprise is shown in (3). *No* is compatible with both positive and negative explicit continuations.

We propose that this puzzle can be explained under an ellipsis analysis of polarity particles. As a start, we assume *yes* and *no* are adverbials adjoined to a high ΣP (see Ladusaw 1992) on the left edge of the clause. We follow Bruce and Farkas 2007 in assuming that these particles both modify a clause and presuppose that the clause responds to a question under discussion. When the particles appear alone, we claim that they modify an elided TP (following Laka 1990), just as in a fragment answer (Merchant 2004). The meaning neutralization effect then falls out. The identity condition on ellipsis simply requires the inner negation to be present in both responses to (2). This also explains why neutralization is limited to particles appearing alone: these are the cases that involve ellipsis, and therefore they also involve an identity condition.

Assuming the identity condition raises the question of how the *no* answer to the positive question in (1B′) can have a negative meaning. The second component of our analysis is that the head of the high Σ must agree in polarity features with *no*. In a declarative sentence, the negation in high Σ is interpreted as clausal negation, and the inner Neg head must in turn agree with the high Σ; this is similar to negative concord. When inner negation is thus forced by agreement, it is not interpreted, so it does not violate the identity condition on ellipsis (assuming the semantic identity condition of Merchant 2001). Thus, *no* is compatible with a negative continuation in response to a positive polar question.

Further support for the analysis comes from particles such as *maybe*, and responses to preposed negation polar questions. *Maybe* patterns closely with *yes/no* (4-5). It can appear alone or with a continuation, and undergoes negative neutralization. Notably, because particles of this kind do not agree with Σ, they can co-occur with an overt Σ (cf. negative stripping of Merchant 2003). Polar questions with preposed negation pattern exactly with positive polar questions: no neutralization (6). This follows naturally. We know from Romero and Han 2004 that this kind of preposed negation takes scope high in the clause. Therefore, it is entirely unsurprising that an identity condition on TP will not require a matching negation in (6).

Our analysis extends to responses like (3B). We propose that in this case the polarity particle *no* contains a feature marking "reverse" polarity. In many languages, reverse polarity involves a different particle altogether, e.g. German *doch*, French *si* (see Bruce and Farkas 2007). However, in English, reverse polarity is realized by a combination of *no* and an intonational peak (similar to VERUM focus; Höhle 1992; Romero and Han 2004). The same agreement mechanism discussed above accounts for the data. High Σ will agree either with [NEG] or with a [REV] feature. As with [NEG], when [REV] appears in high Σ, there is a concord effect, and it also appears in low Neg. At PF, the lowest [REV] feature takes the shape of an intonational peak requiring a host, thus explaining the incompatibility of a reverse reading with ellipsis.

In sum, we develop a TP-ellipsis account of *yes* and *no*, and propose that there are agreement relations between *no*, the high Σ head and the low Σ head. (See (7) for two summarizing trees.) These assumptions allow us to account for an unusually broad range of the complicated distribution of polarity particles.

(1) A: Did Alfonso go to the store? (positive polar question)
B: Yes, he did./No, he didn't.
B′: Yes. (= he did.) / No. (= he didn't.)

(2) A: Did Alfonso not go to the store? (polar question with inner negation)
B: Yes. (= he didn't)
B′: No. (= he didn't)

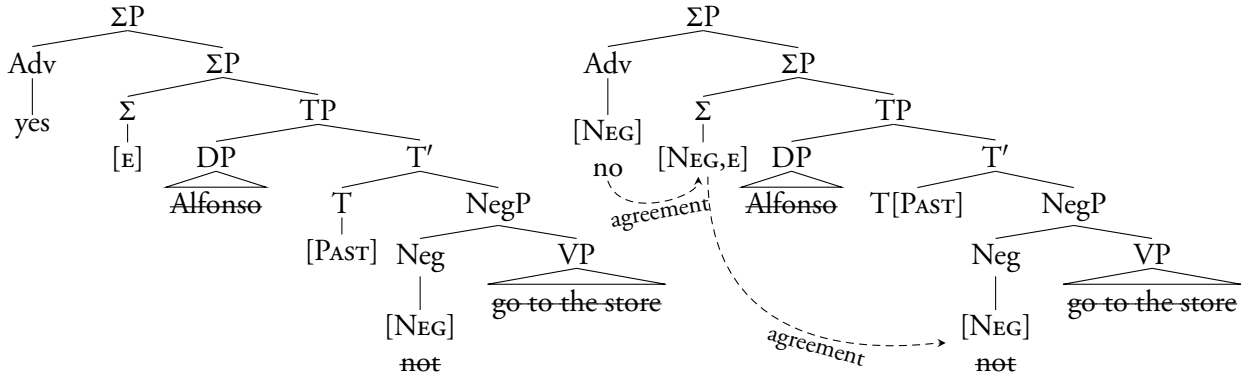
(3) A: Did Alfonso not go to the store? (polar question with inner negation)
B: No, he did.
B′: No, he didn't.

(4) A: Did Alfonso go to the store? (stripping responses to positive)
B: Maybe (so). (= maybe he did)
B′: Maybe not. (= maybe he didn't)

(5) A: Did Alfonso not go to the store? (stripping responses to inner negative)
B: Maybe (so). (= maybe he didn't)
B′: Maybe not. (= maybe he didn't)

(6) A: Didn't Alfonso go to the store? (preposed/outer negation)
B: Yes. (= he did)
B′: No. (= he didn't)

(7) **Structure of (2B)** **Structure of (2B′)**



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