Focused NPIs in statements and questions Sunwoo Jeong & Floris Roelofsen

Negative polarity items (NPIs) owe their name to the fact that, on a first approximation, they can be used in negative sentences but not in positive ones. Besides in negative statements, however, NPIs can also be license in *questions*. For instance, *ever* is felicitous in the polar question in (1) and the wh-question in (2).

(1) Have you ever seen Robin at the gym? (2) Who has ever seen Robin at the gym?

Most theories of NPIs concentrate on their behavior in statements. The present paper contributes to a relatively small body of work which aims to achieve a uniform characterisation of the behavior of NPIs across both statements and questions. In particular, it addresses puzzles concerning the interaction between NPIs and focus in both sentence types.

Focused NPIs in statements: domain widening effects An influential idea in the literature, originating in the work of Kadmon and Landman (1993), is that NPIs like *ever* and *any* are so-called 'domain wideners'. That is, they are existential quantifiers which quantify over a domain (of individuals in the case of *any*; of times in the case of *ever*) which is wider than the domain that is contextually most salient and would normally serve as the domain of quantification, i.e., in the absence of domain widening.

Kadmon and Landman (1993, §2.3) hold that NPIs like *any* involve domain widening no matter whether they are focused or not. However, Krifka (1995) and van Rooij (2003), among others, assume that domain widening effects are only obligatory in the presence of focus. In support of the latter approach, we consider the minimal pair in (3)-(4), which brings out the subtle difference between focused and unfocused NPIs particularly clearly. Statements with unfocused *any* such as B's statement in (3) allow the hearer to ask follow-up questions that relax the relevant domain, whereas statements with focused *any* such as B's statement in (4) do not.

(4)

- (3) A: I need a blue whiteboard marker.B: Sorry, we don't have any markers left.A: Green or red ones perhaps?
- A: I need a blue whiteboard marker.B: Sorry, we don't have ANY markers left.A: #Green or red ones perhaps?

These observations give rise to the following question:

(5) **Question 1**: Why does focus on NPIs in statements give rise to domain widening effects?

Focused NPIs in questions: negative bias Many authors have observed that focused NPIs in questions typically convey a negative bias (Borkin, 1971; Heim, 1984; Krifka, 1995; Abels, 2003; van Rooij, 2003; Guerzoni, 2004; Asher and Reese, 2005, among others). To illustrate this, consider the following minimal pair.

(6) Does Bill know anything about cars? (7) Does Bill know ANYTHING about cars?

The question in (7), where the NPI is focused, conveys a belief on the part of the speaker that Bill doesn't know a lot about cars, if he knows anything at all. On the other hand, the question in (6), where the NPI is not focused, doesn't convey such a belief. This yields the following question:

(8) **Question 2**: Why does focus on NPIs in questions convey a negative bias?

Proposal in a nutshell Following Lee and Horn (1994), Lahiri (1998), Crnič (2014, 2019), and Roelofsen (2018), among others, we assume that NPIs generally involve an operator whose semantics is similar to that of the particle *even*. We will denote this operator as EVEN. Note that a sentence like *Even Mary left.*, with the overt particle *even*, has both a *scalar* component—'Mary was relatively unlikely to leave'—and an *additive* component—'someone other than Mary left as well' (Karttunen and Peters, 1979; Wilkinson, 1996, among others). Interestingly, only the scalar component of *even* has played a significant role in *even*-based theories of NPIs. The additive component only plays a minor role in Lahiri (1998) and no role at all in Crnič (2014, 2019) and Roelofsen (2018). We propose that the **additive component** also has a crucial role to play. We suggest that it is strictly focus-sensitive, i.e., it is only activated in the presence of focus. When activated, it is responsible both for domain widening effects in statements and for conveying a negative bias in questions.

To develop this idea, the usual formulation of the additive component of *even* must be generalized. After all, it is normally assumed that '*even* S' presupposes that some contextually salient focus alternative of S is *true*, but this does not make sense when S and its focus alternatives are questions, which cannot be true or false. However, a natural generalization of this requirement, which applies no matter whether S is a statement or a question, can be formulated in inquisitive semantics (Ciardelli et al., 2018). In this framework, the semantic value of a sentence is not identified with the conditions under which the sentence is *true* in a given situation, but rather with the conditions under which it is *supported* by a given information state. Both statements and questions can be supported by an information state. For instance, the statement *Sue left* is supported by a state s if s contains enough information to guarantee that Sue left. Similarly, the question *Where did Sue go?* is supported by s if s contains enough information to determine where Sue went. Returning to the additive component of *even*, the idea is that '*even S*' requires that some salient focus alternative of S be supported by the speaker's information state. This, we will argue, is a key step toward a uniform theory of focused NPIs in statements and questions.

Let us now give a sketch of our answers to Questions 1 and 2 above. As for **Question 1**, we propose that 'domain-widening effects' are in fact better thought of as 'anti-domain-restriction effects'. Semantically, the domain of *any* is the set of all entities, just like the domain of *some* and *every*. This domain can in principle be contextually restricted. For instance, in B's statement in (3), *any markers* can be contextual domain restriction is blocked. Why? Because of the additive component of the EVEN operator that the NPI contributes, which is activated by focus. Namely, the additive component of EVEN requires that its prejacent has a contextually salient focus alternative which is supported by the speaker's information state. This alternative, in order to count as a proper alternative, must of course be different from the prejacent of EVEN itself. Now, this is possible if the domain of *any* is kept wide. In that case, a suitable contextually salient focus alternative of 'we don't have ANY markers left' is 'we don't have blue whiteboard markers left'. However, if *any markers* is contextually interpreted as 'any blue whiteboard markers is no distinct focus alternative which is contextually interpreted as 'any blue whiteboard markers' through domain restriction, then there is no distinct focus alternative which is contextually salient, which means that the additive requirement of EVEN cannot be satisfied. This is how an anti-domain-restriction effect arises.

Let us now turn to **Question 2**. Why does a question like (7) convey a belief on the part of the speaker that Bill doesn't know a lot about cars? Again, because of the additive component of the EVEN operator contributed by *anything*. This requires that its prejacent has a contextually salient focus alternative which is supported by the speaker's information state. Assuming that the prejacent of EVEN is the entire question 'Does Bill know anything about cars?' (we will show later that other scopal possibilities for EVEN are ruled out), the relevant focus alternatives are other questions, such as 'Does Bill know a lot about cars?'. Indeed, (7) cannot be felicitously uttered out of the blue, but requires that such a focus alternative is already contextually salient. Further, it is requires that the contextually salient focus alternative is already supported by the speaker's information state. Now, there are two possibilities. Either the speaker believes that Bill knows a lot about cars, or she believes that Bill does not know a lot about cars. However, if the speaker already believed that Bill knows a lot about cars, there would be no point in asking (7), for the answer would already be known. So, if the speaker behaves in a rational way, it must be the case that she believes that Bill does *not* know a lot about cars. This, in a nutshell, is how focus on NPIs in questions can convey a negative bias.

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