Focus licensing on binding chains

Overview The paper argues for a strengthening of the licensing condition on (contrastive) focus, in that both the focus antecedent (FA) and the focus constituent (FC) must be alternatives to each other, rather than just FA being an alternative to FC (as proposed by Rooth (1992) a.o. for certain cases of parallel focus). We further argue that bound pronouns do not bear focus, rather it is the binding chain – that is the antecedent and the bound pronoun – that bears focus.

The data Sauerland (2000) observes that bound pronouns in sloppy readings can optionally get contrastive focus (1a)-(1b). The antecedent of the pronoun must be focused (1c).

(1) a. Every boy likes his mother, and every MAN likes HIS mother.
b. Every boy likes his mother, and every MAN likes his mother.
c. *Every boy likes his mother, and every man likes HIS mother.

To this we add the following new observation: (2) disallows the strict reading with focus on the pronoun (2b). Only the sloppy reading is allowed (2a).

(2) John likes his mother. BILL likes HIS mother, too.
a. 'John likes John's mother. Bill likes Bill's mother.'
b. *'John likes John's mother. Bill likes John's mother.'

(1) and (2) suggest that the focus licensing condition in (3) (Rooth (1992), Schwarzschild (1999)) must be strengthened. We assume (4) and (5) are the LFs for (1a) and the impossible (2b), respectively. Binding makes coreference impossible in (5a) (Reinhart (1983), Heim (1998)). For strict readings we follow Fox (2000), Büring (2005) in that parallelism is satisfied, if the bound pronoun in FA and the free one in FC have the same referential value. Also, it is assumed that FAs are focus marked as well.

(3) A may be focussed, if there is a constituent B dominating A and an antecedent B' for B, and $[\![B']\!] \in [\![B]\!]^f$ and $[\![B']\!] \neq [\![B]\!]$ (where $[\![\ ]\!]^f$ is the focus value as in Rooth (1992)).

(4) a. every boy^F λ_2[t_2 likes his$_2^F$ mother]
b. every man^F λ_3[t_3 likes his$_3^F$ mother]

(5) a. John^F λ_1[t_1 likes his$_1^F$ mother]
b. Bill^F λ_1[t_1 likes his$_2^F$ mother]

The puzzle (3) makes wrong predictions for (4) and (5) for all possible comparisons: Direct comparison of the object DPs will license focus on both (4) and (5). In particular, assuming Sauerland's amendment to (3), focus on (4) is licensed, if there is an assignment g that lets the DPs contrast. But this incorrectly predicts contrastive focus for (5), if there is an assignment g such that $[\![\text{his}_1 \text{ mother}]\!]^g \in [\![\text{his}_2^F \text{ mother}]\!]^f$ and $[\![\text{his}_1 \text{ mother}]\!]^g \neq [\![\text{his}_2^F \text{ mother}]\!]^g$. If the binders are taken into account – that is if the VPs are compared – focus will incorrectly be not licensed for (4), because the VPs are alphabetic variants and do not contrast. For (5) focus should be licensed, again incorrectly, because $[\![\lambda_1[t_1 \text{ likes his}_1 \text{ mother}]]\!]^g \in [\![\lambda_1[t_1 \text{ likes his}_2^F \text{ mother}]]\!]^f$ and $[\![\lambda_1[t_1 \text{ likes his}_1 \text{ mother}]]\!]^g \neq [\![\lambda_1[t_1 \text{ likes his}_2^F \text{ mother}]]\!]^g$. If the antecedents of the pronouns are taken into account, focus is licensed in (4), because $[\![(4a)]\!]^g \in [\![(4b)]\!]^f$ and $[\![(4a)]\!]^g \neq [\![(4b)]\!]^g$. But focus is also licensed in (5), because $[\![(5a)]\!]^g \in [\![(5b)]\!]^f$ and $[\![(5a)]\!]^g \neq [\![(5b)]\!]^g$.

Definite descriptions We explore a different option than assuming that the bound/ free pronouns in (1) and (2) are definite descriptions (Sauerland (2000), Elbourne (2005)), as it is not clear to us, how to deal with VP-ellipsis under the sloppy reading in (6), other than making the definite descriptions optional. The VP in (7a) cannot serve as antecedent for ellipsis in (7b).

(6) [illegible]

(7) a. every boy λ_1[[the$_1$ boy] likes [[his$_1$ boy] mother]]
b. every professor λ_2[[the$_2$ professor] likes [[his$_2$ professor] mother]]

Proposal Our proposal has two ingredients: First, we strengthen focus licensing as in (8), so that the alternativenss requirement holds bidirectionally.

(8) A may be focussed, if there is a constituent B dominating A and an antecedent B' for B, and $[\![B']\!]^g \in [\![B]\!]^f$, and $[\![B]\!]^g \in [\![B']\!]^f$, and $[\![B']\!]^g \neq [\![B]\!]^g$.

Second, we argue that focus on a bound pronoun is a PF-reflex of semantic binding (similar to φ-features on bound prononuns (Heim 2008), (von Stechow 2003)). I.e. the focus is really on the binding chain and therefore the antecedent of the bound pronoun must be taken into account, when the focus value of the pronoun is computed. This immediately explains, why (1c) is bad. The pronoun cannot introduce alternatives without the antecedent. Thus if the focussed pronoun in FC or the pronoun in FA is bound, it is the constituent containing the bound pronoun and its antecedent and the parallel constituent of FC/FA that are checked for (8). This follows from the assumption that focus is on the complete binding chain. I.e. for (5a) we get a focus value as in (9a), as the antecedent and the pronoun do not introduce alternatives independently (assuming D_e = {John, Bill}). For (5b), on the other hand, the subject and the pronoun factor in their alternatives independently, because the pronoun is free. It is now clear, why the LFs in (5) do not license contrastive focus on the pronoun under the strict reading. Although, $[\![(5a)]\!]^g \in [\![(5b)]\!]^f$, $[\![(5b)]\!]^g \notin [\![(5a)]\!]^f$. The bidirectional requirement that each ordinary semantic value must be in the focus value of the other does not hold for (5).

(9) a. $[\![(5a)]\!]^f$ = {John likes John's mother, Bill likes Bill's mother}
b. $[\![(5b)]\!]^f$ = {John likes John's mother, John likes Bill's mother, Bill likes John's mother, Bill likes Bill's mother}
c. $[\![(5a)]\!]^g$ = {John likes John's mother}
d. $[\![(5b)]\!]^g$ = {Bill likes John's mother}

In the case of (4), however the bi-directional requirement holds, as each ordinary semantic value is in the focus value of the other, i.e. $[\![(4a)]\!]^g \in [\![(4b)]\!]^f$ and $[\![(4b)]\!]^g \in [\![(4a)]\!]^f$ (assuming D_{et} = {boy, man}). As contrastiveness holds between (10c) and (10d) focus is licensed. Note that there is no requirement for there to be accent on the bound pronoun, as long as it is on the chain as a whole. This predicts the optionality between (1a) and (1b).

(10) a. $[\![(4a)]\!]^f$ = {Every boy$_x$ x likes x's mother, every man$_x$ x likes x's mother}
b. $[\![(4b)]\!]^f$ = {Every boy$_x$ x likes x's mother, every man$_x$ x likes x's mother}
c. $[\![(4a)]\!]^g$ = {Every boy$_x$ x likes x's mother}
d. $[\![(4b)]\!]^g$ = {Every man$_x$ x likes x's mother}

The sloppy reading of (2) with focus is predicted, because it involves binding in FA and FC, similar to (1a). For this to work it is crucial to assume that FA in (1a) and (1b) contains focus marking. Further data that the antecedent in a chain is crucial for focus licensing are also explained. We will extend this idea to chains created by movement.

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