

A One-Dimensional Choice-Function Approach to ‘Association with Focus’

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Workshop Choice Functions and Natural Language Semantics

European Summerschool in Logic, Language and Information (ESLLI XIII)

Helsinki August 2001

As is well known, focus particles like *only* are sensitive to the focus structure of their syntactic scope in that a difference in the placement of focus results in a difference in truth-conditions. Usually, this phenomenon is referred to as ‘association with focus’ (AwF). Since *only* (being a VP-adjunct) is not adjacent to the focus it is associated with, the challenge for the semanticist is to derive this truth-conditional effect in a compositional way.

Roughly speaking, there are two lines of research tackling this problem. The first (one-dimensional) one, starting with Chomsky (1976) and enriched with the notion of ‘structured propositions’ in von Stechow (1981), assumes covert movement of the focus (the foci) to the focus sensitive expression it is associated with. The second approach, going back to Rooth (1985), concludes from the fact that AwF behaves island-insensitively, cf. (1), that rather an in situ analysis of focus is called for. To this effect, Rooth stipulates a second dimension of interpretation that, in the background, computes alternatives to the denotation of the complement of *only*, to which *only* then gets access. However, as Kratzer (1991) points out, this approach, too, (lacking variable binding) is coerced to assume island-insensitive movement in VP-ellipsis contexts. Therefore, she proposes a representational variant of Rooth’s two-dimensional semantics that mimics variable binding in VP-ellipsis contexts (via identity of focus-indices) and thus allows for keeping an in situ analysis. However, as Krifka (1991) showed, two-dimensional alternative semantics in general (being ‘unselective’ in nature) cannot cope with ‘crossed association with focus,’ unless (undesirable) island-insensitive movement is allowed for, cf. (2).

To account for the observed island-insensitivity of AwF, I propose in this paper to take exactly the opposite route to Kratzer, i.e., I will show that it is possible and reasonable to combine a one-dimensional structured propositions approach to AwF with an in situ analysis of focus. What could such an analysis look like? As is well known, AwF shares the property of island-insensitivity with indefinites and *wh*-phrases. Further common features, such as all being related to the notion of ‘new’ information or indefinites and focus putting identical restrictions on word order in German, suggest that indefinites, *wh*-phrases, and focus together form a natural class of ‘indefinite’ or ‘weak’ phenomena. If this is correct, this should be

reflected by a common core in their analysis. Following Reinhart (1994), I assume a choice function approach to the analysis of indefinites and *wh*-phrases and propose to treat a focus-index as introducing a choice function that gets bound by a coindexed focus-sensitive expression (or rhetorical relation). Concretely, an F-marked constituent like *Bill*F1 is translated as $f1(X1)$, where $f1$ is a choice function variable and $X1$ is a variable being mapped to the contextually salient set of alternatives to *Bill* (including himself). On LF the coindex F1 only adjoins to VP. The resulting binary branching, then, is translated as a structured proposition consisting of a (minimal) choice-function f from which *Bill* (being the only value under f) is still recoverable and a certain property of choice-functions, cf. (3). The function f itself will be constructed (observing compositionality) as a definite description. (This is actually the most challenging part.) This interpretational process is easily extended to all conjoinable types. The semantics of focus-sensitive particles, then, is straightforwardly modified so as to apply to choice-functions instead of individuals.

While inheriting the high degree of informativeness of the one-dimensional approach (thus accounting for the Zimmermann example, see von Stechow 1991), this choice-function approach may be considered as a first step towards a natural explanation for the island-insensitivity of AwF in treating focus as ‘one of a family of island-insensitive operators’ (Rooth 1996:284). In each case, island-insensitivity is a direct consequence of treating the respective phenomenon in terms of (island-insensitive) binding instead of (island-sensitive) movement: a choice function variable is introduced in situ that gets bound by existential closure (in the case of indefinites), a Q-morpheme (*wh*-phrases), or a focus-sensitive operator (focus). Moreover, as in Kratzer’s analysis, VP-ellipsis contexts are quite unproblematic (identity of focus-indices), but, contrary to hers, cases of crossed AwF can be accounted for, too – in a way that avoids non-standard techniques for the interpretation of binary branching, as those proposed in Krifka (1991).

I. Data:

- (1) Dr. Jones only rejected [the proposal [that John_F submitted]]
- (2)a. John only_{F1} introduced Bill_{F1} to Mary.
b. He also_{F2} only_{F1} introduced Bill_{F1} to Sue_{F2}.
- (3)a. only [F1 [John introduced f1(X1) to Sue]]
b. only_F(_f, l_{f1}. John introduced f1(X1) to Sue₀),
where $f: \{ X1 \} \rightarrow De, f(X1) = \text{Bill}$.

II. References:

- Chomsky, Noam (1976). 'Conditions on Rules of Grammar'. *Linguistic Analysis* 2. 303-350.
- Kratzer, Angelika (1991). 'The Representation of Focus'. In: A. von Stechow and D. Wunderlich, eds. *Semantics. An International Handbook of Contemporary Research*. Berlin: de Gruyter. 825-834.
- Krifka, Manfred (1991). 'A Compositional Semantics for Multiple Focus Constructions'. In: *Proceedings of SALT I*. 127-158.
- Reinhart, Tanya (1994). *Wh-in-situ in the Framework of the Minimalist Program*. OTS Working Papers. Utrecht: Utrecht University.
- Rooth, Mats (1985). *Association with Focus*. Ph.D. thesis. University of Massachusetts, Amherst.
- Rooth, Mats (1996). 'Focus'. In: S. Lappin, ed. *The Handbook of Contemporary Semantic Theory*. Oxford: Blackwell. 271-297.
- Stechow, Arnim von (1981). 'Topic, Focus, and Local Relevance'. In: W. Klein and W. Levelt, eds. *Crossing the Boundaries in Linguistics*. Dordrecht: Reidel.
- Stechow, Arnim von (1991). 'Current Issues in the Theory of Focus'. In: A. von Stechow and D. Wunderlich, eds. *Semantics. An International Handbook of Contemporary Research*. Berlin: de Gruyter. 804-825.