

A Hierarchy of Intervention

In this talk, I present a pattern of intervention effects between different operators that suggests two groups of alternative evaluating phenomena that each share specific properties. The first group contains focus-evaluating elements like "only" and quantifiers that associate with focus, the second contains things like EXH, contrastive topic and the question operator.

I will argue that the elements of the first group are hierarchically ordered with regard to which element takes precedence to avoid intervention effects. Elements from the first group cause intervention effects and stand in a certain hierarchy to each other. An example for this would be "only" and "every". In reading (1-b.), "every" associates with focus on "Mary". This is disrupted if "only" is inbetween "every" and the source of alternatives, as in (2).

- (1) Everyone thinks that Peter calls Mary_F.
 - a. For all x: x thinks that Peter calls Mary.
 - b. For all x: if x thinks that Peter calls someone, x thinks that Peter calls Mary.
- (2) Everyone thinks that only Peter calls Mary_F.
 - a. For all x: x thinks that only Peter calls Mary.
 - b. *For all x: if x thinks that only Peter calls someone, x thinks that only Peter calls Mary.

The other way round, however, is different. What happens instead is that "only" supresses the ability of "every" to associate with a source of alternatives.

- (3) Peter only thinks that everyone calls Mary_F.
 - a. Only Mary is such that Peter thinks that for all x: x calls her.
 - b. *Only Mary is such that Peter thinks that for all x: if x calls someone, x calls her.

I argue that this hierarchy has four classes that are defined by the source of alternatives and the kind of evaluation: Sources of alternatives can be overt (i.e. focused) or covert (i.e. not overtly focused, e.g. indefinites (Kratzer and Shimoyama 2002, Sachs 2019)) and two kinds of evaluating operators: obligatory (e.g. "only") and optional (e.g. "every"). In general, obligatory evaluation of alternatives takes precedence over optional evaluation and evaluating overt sources of alternatives takes precedence over evaluating covert sources. For configurations, where these two priorities are in conflict, I propose a set of rules that predicts which element takes precedence. Consider (4), where the scope site of an indefinite (which have been argued to take scope through alternative evaluation e.g. Shimoyama 2001, Sachs 2019), where obligatory/covert evaluation happens, cannot be interpreted as being in the association path of "every", which uses optional/overt evaluation:

- (4) Jeder hat eine Studentin Maria_F vorgestellt.
everyone has a student Mary introduced
"Everyone introduced a student to Mary_F."
 - a. $\exists y[\text{student}(y) \ \& \ \forall x[x \text{ introduced } y \text{ to someone} \rightarrow x \text{ introduced } y \text{ to Mary}]]$

- b. $*\forall x[\exists y[\text{student}(y) \ \& \ x \text{ introduced } y \text{ to someone}] \rightarrow \exists y[\text{student}(y) \ \& \ x \text{ introduced } y \text{ to Mary}]]$

”every” cannot associate with focus across the scope site of an indefinite. But the indefinite can also not be assumed to move across ”every”, as another property of elements from the first group is that they create barriers for covert movement:

- (5) Noone gave Mary_F every book.
 - a. Noone who gave every book to someone gave every book to Mary.
 - b. $*\text{For all books } x$: Noone who gave x to someone gave x to Mary.

The conflict in (4) is instead resolved by interpreting the covert source as overt, allowing ”every” to evaluate both sources, which creates the impression of a wide scope reading of the indefinite. If this is done, ”every” associates with alternatives and, as in (5), becomes a barrier for covert movement:

- (6) Everyone recommended a book to noone.
 - a. $\exists y[\forall x[\neg\exists z[x \text{ recommended } y \text{ to } z]]]$
 - b. $*\neg\exists z[\exists y[\forall x[x \text{ recommended } y \text{ to } z]]]$

The set of rules I propose are in (7). Rule b.) comes with the caveat that covert sources can be interpreted as overt, but not vice versa: You can assume that there was focus that you missed, but you cannot ignore focus that you heard. These rules are prioritized, meaning that c.) can be violated to save a.) or b.), but b.) cannot be violated to save c.).

- (7)
 - a. An alternative evaluating operator does not have another alternative evaluating operator between itself and the nearest source of alternatives in its scope.
 - b. An alternative evaluating operator that cannot associate with a certain type of source does not have a source of that type in its scope without an evaluating operator inbetween.
 - c. An operator that optionally evaluates alternatives does so if and only if there is a source of alternatives in its scope and there is no evaluating operator inbetween.

In the first group, association paths may not overlap, i.e. evaluating alternatives causes intervention effects in the sense of Beck (2006). The second group behaves quite differently: Sources of alternatives can be evaluated selectively (e.g. in questions, which allows for Baker ambiguities (Baker 1970)) and evaluated alternatives can be passed on (e.g. EXH (Bade and Sachs 2019 and the examples discussed therein)). Another difference is that elements from the second group can move across evaluation by the first group (e.g. covert wh-movement across ”only” within islands (Kotek 2014)).

This pattern is a challenge to existing accounts for intervention effects, as it introduces an entirely new dimension of the phenomenon into the conversation. In this talk, I will show that the rules above allow us to account for most of the pattern with a Beck (2006)-style approach. I will also admit that some of the pattern remains unexplained.