

The puzzle of irrelevant assertions in alternative semantics

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In this paper, I present a puzzle for most standard analyses of focus-sensitive operators within formal semantics. Consider the following context:

- (1) **Context:** Sharon is at an event and on the phone with Bill. Bill’s good friend Edward is at the same event as Sharon. Sharon does not know Edward, but Bill thinks Sharon and Edward would hit it off. Sharon spots someone she thinks could be Edward.

Sharon: Could Edward be wearing a skinny tie?

Bill: #He only wears RED ties.

Bill’s response here is irrelevant to the question that Sharon asks. Intuitively, this fact is not surprising—only wearing RED ties precludes wearing green ties, or black ties, and so on, but does not have anything to do with wearing skinny ties. Standard theories, I argue, wrongly predict that Bill’s response would be judged relevant.

I take these standard theories to share three broad assumptions. The first is Roberts’ claim that an assertion is relevant iff it “introduces a partial answer to [the QUD]” (Roberts 2012). The second is an alternative-semantic account of focus, according to which, focus introduces a set of alternative propositions, generated by replacing the focussed constituent either with expressions of the same semantic type (Rooth 1992) or of no greater structural complexity (Fox and Katzir 2011). The final assumption, is that the denotations focus-sensitive operators like *only* only consider the contextually relevant subset of the alternative set generated by focus.

Under these assumptions, Bill’s assertion would be interpreted as follows. The operator *only* is taken to have wide scope, leaving the focus to generate alternatives to the proposition *Edward wears [red]_F ties*. The alternative set would be characterized as in (2), where the D_τ is either the domain of properties of individuals or roughly the domain of adjectives.

- (2) {Edward wears P ties | $P \in D_\tau$ }

In either case, the set in (2) is predicted to include the proposition that *Edward wears skinny ties*. *Only*, then, restricts this set of propositions to include only those that are relevant to the QUD (*Could Edward be wearing a skinny tie*). The resulting alternative set would certainly still include *Edward wears skinny ties*. Finally, since *only*(p) entails that all the non- p alternatives are false, Bill’s assertion would entail that Edward does not wear skinny ties, thus providing a partial answer to Sharon’s question. Therefore, Bill’s irrelevant assertion is predicted to be relevant.

I argue, though, that the source of this problem is not any of the theories in question, but rather from a shortcoming in the standard semantic theory that underpins all of them. Specifically, standard semantic theory classifies expressions based on a purely reference-based type system (Heim and Kratzer 1998), which places *red*, *blue*, and *skinny* in a single unarticulated class because they all refer to properties of individuals. This system, however cannot capture the intuitive fact that *red* and *blue* are antonyms of each other, while *skinny* is an antonym of neither because, as Katz (1972) argues, meaning-based relations and properties such as antonymy demand a sense-based semantic theory. According to such a theory, words and phrases have sense structures over and above their referential properties and these sense structures specify, among other meaning-based properties, the antonym-sets of those words and phrases. I show that an alternative semantics based on antonymy sets rather than reference type, naturally predicts the facts represented in (1).

References: Fox, Danny, and Roni Katzir. 2011. “On the Characterization of Alternatives.” *Natural Language Semantics* 19 (1). Springer: 87–107. ♦ Heim, Irene, and Angelika Kratzer. 1998. *Semantics in Generative Grammar*. Vol. 13. Blackwell Oxford. ♦ Katz, Jerrold J. 1972. *Semantic Theory*. New York: Harper & Row. ♦ Roberts, Craige. 2012. “Information Structure: Towards an Integrated Formal Theory of Pragmatics.” *Semantics and Pragmatics* 5: 6–1. ♦ Rooth, Mats. 1992. “A Theory of Focus Interpretation.” *Natural Language Semantics* 1 (1). Springer: 75–116.