

## Strong Negative Polarity Items in Pragmatic Accounts of Licensing

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Pragmatic theories to license negative polarity items (NPIs) have gained popularity in recent years, eclipsing in an elaborate theory of the pragmatics – syntax interface by Chierchia (2004, 2006). Yet, the analyses available so far make wrong predictions for the more limited contexts of use of so-called strong NPIs like *lift a finger* (Zwarts, 1998). Heim (1984), often quoted as an early forerunner of pragmatic NPI licensing, proposes that licensing by hidden *even* can explain that strong NPIs are limited to those restrictors of universal quantifiers where the universal is law-like. Krifka (1995) suggests that weak NPIs are licensed on basis of scalar implicatures whereas strong NPIs are licensed by **emphatic.assert**, an operator which in the meantime has been classed as a variant of hidden *even*. Hidden *even* is analysed as a scalar particle of the following kind:

1. Assume that  $S$  is a sentence with an NPI. Assume that it is a lexical property of NPIs to evoke certain more restricted alternatives that could replace the NPI.  
some commonly offered examples:  
 $\text{Alt}(\text{any } N) = \{ \text{some } N, \text{some } N', \text{some } N'', \dots | N', N'' \subset N \}$   
 $\text{Alt}(\text{lift a finger}) = \{ \text{, lift a finger', do } P', \text{do } P'', | P', P'' \subset \text{, lift a finger' } \}$   
 $\text{Alt}(\text{budge an inch}) = \{ \text{, budge an inch', move } 2'', \text{move } 3'', \text{move } 4'', \dots \}$
2. Let  $\text{Alt}(S)$  be the set of propositions that arises if the NPI denotation is replaced in the semantic composition by an alternative. Lexical requirement of NPIs: An NPI is felicitous in  $S$  only if  
 $\text{prob}(\|S\|) < \text{prob}(p')$  for all other alternatives  $p'$  in  $\text{Alt}(S)$

In the first part of my talk, I will carefully review contexts like the scope of *few*, *rarely*, universal quantifiers, licensing by *only* and other weak licensors and demonstrate that hidden *even* licenses NPIs in these contexts. Hidden *even* requires to replace the NPI denotation by a more restricted property. In downward-entailing contexts, this replacement yields a logically weaker alternative proposition. In a standard argumentation, logical strength translates into probabilities: Logically stronger propositions hold true in less situations / worlds than their logically weaker entailments. Truth in less situations translates into lower likelihood. Resting on this argument, it is easy to show that hidden *even* will license NPIs in all downward-entailing contexts. It can potentially serve as a licenser in more contexts, but the licensing contexts of weak NPIs are automatically covered. If time allows, I will show that the criticisms extend to Chierchia (2006). The preceding Chierchia (2004) predicts that licensing in weak contexts should not be possible at all, which is likewise empirically inadequate.

This raises the question how the more limited contexts of use of strong NPIs in assertions can be explained in a pragmatic theory. My analysis will proceed in the following steps. First, I assume that strong and weak NPIs behave alike in raising alternatives and being matched against hidden *even*. Next, I will review the implicatures raised by NPIs in weak licensing contexts. I will argue that the use of an NPI, plus the background alternatives that it makes salient, together create a *minimality implicature* which states that some instances of the literal content of the sentence became true without anything beyond happening or being the case. For instance, *few visitors owned any car* implicates that *some visitors owned a car-of-the-unspectacular-type*. *Few families own (even) a red cent* implicates that *some families own a red cent* and nothing beyond. *Only John lifted a finger to help Judy* implicates

that *John lifted a finger to help Judy and nothing more*. etc. Visibly, this minimality implicature sounds more reasonable in some cases than in others. Minimality implicatures typically arise in weak licensing contexts, and the existence of these implicatures will be carefully demonstrated on basis of other scalar (non-NPI) examples. In theoretical terms, it can be analysed as an interaction of *Relevance* and *Quality*. The final step of the analysis turns these implicatures into an explanation of the weak-strong contrast. If we consider the literal content of NPIs, it turns out that weak NPIs usually have a denotation which is semantically “harmless”. The denotation of *any* is the same as *some*, *ever* has the same denotation as *sometime*, *anybody* is literally synonymous to *somebody* etc. The ensuing minimality implicatures are propositions that can reasonably be true in the actual world. The denotations of strong NPIs are systematically different. They refer to states of affairs which can only occur as part of larger, more substantial events or states. E.g. *lifting a finger* is typically understood as part of a larger activity. *Owning a red cent* is understood as part of ownership of more substantial sums of money. However, the analysis also can cover maximizers like *da bringen mich keine 10 Pferde rein* or most-general properties of the *any N whatsoever* type. Let me go through the first example. *10 Pferde bringen x nach/zu y* is analysed as denoting, literally, a disposition of *x* to need the forces of 10 horses to be carried to *y*. A sentence like *\*In diese Kneipe brachten mich selten 10 Pferde rein*. raises the implicature that *there were occasions where 10 horses dragged me into the pub* and no lesser force would suffice. This conveys the strange fact that I sometimes was dragged into pubs by ten horses.

Generally, I predict that an NPI is *strong* exactly if its literal meaning gives rise to absurd minimality implicatures in weak licensing contexts. In a certain sense, this analysis elucidates the *antiveridicality* restrictions that were posited by Giannakidou (1998). The proposed analysis of the behaviour of strong NPIs captures polarity sensitivity as a uniform pragmatic process where the acceptability of each single case depends on (a) the logical properties of the host context, (b) the implicatures raised by the sentence, and (c) the literal meaning of the sensitive expression. The analysis has the further advantage that it can easily deal with occasional uses of strong NPIs in weak licensing contexts, as reported in corpus studies of polarity sensitivity. Speakers who find a sentence like *Tom rarely lifted a finger to help me* acceptable might attribute *lift a finger* a denotation like *did something little* or *helped in minor ways* rather than the literal property of lifting a finger. Consequently, such speakers will not find it odd to implicate that Tom sometimes “lifted a finger”. What they mean (or as hearers: understand) is that Tom occasionally helped in minor ways—a completely plausible state of affairs.

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