# Use-conditional licensing of strong NPIs

Strong negative polarity items such as *lift a finger*, are observed to be restricted in their occurrence to anti-additive context, i.e., they are licensed in the immediate scope of clausal negation and negative indefinites, but not in the scope of simply downward-entailing expressions such as *few*, see (1).

(1) a. Alex didn't lift a finger to help. Noone lifted a finger to help.
b. *Few students lifted a finger to help.

In other NPI-licensing contexts, such as *if*-clauses, the restrictor of *every* and polar questions, strong NPIs are only licensed under certain pragmatic conditions (Borkin, 1971; Linebarger, 1980; Heim, 1984; van Rooy, 2003). Generally, in these cases, there is some expectation or other inference involved in which the NPI would be in the scope of a negation, see (2).

(2) Every restaurant that charges so much as a dime for iceberg lettuce, ought to be closed down.
Inference: 'A restaurant should not charge so much as a dime for iceberg lettuce'.

The common observation is that strong NPIs occur in a proper subset of the contexts that allow for weak NPIs (*ever*, *anything*). This generalization is built into all current theories of NPI licensing. Sedivy (1990) shows that this cannot be maintained empirically. She discusses two contexts in which strong NPIs can be used felicitously, but weak NPIs like *ever* or *any* are excluded. Both contexts lack an overt negation: clauses with contrastively used auxiliaries, see (3), and the scope of modals when there is an irrealis inference, see (4).

(3) a. I DO give a damn. b. *Bert DID ever kiss Marilyn Monroe. (Sedivy, 1990, 98)

(4) a. John should have lifted a finger to help Mary clean up.
b. *John should have eaten any healthful tofu. (Sedivy, 1990, 99)

I will add a previously undiscussed variant of this puzzling behavior. Strong NPIs can only occur in polar questions if they are negatively biased. However, it is irrelevant whether the question shows subject-auxiliary inversion or not, see (5). Weak NPIs, in contrast, are fine in biased and neutral polar questions, but they require an interrogative clause type, as shown in (6), see Progovac (1992, 277)

(5) A: You haven't helped us at all.
a. B: And, has ALEX lifted a finger to help?
b. B: And ALEX has lifted a finger to help?

(6) a. Has Alex ever been to France? b. *Alex has ever been to France?

These data show that there is no subset-superset relation between the licensing contexts of strong NPIs and weak NPIs, but an overlap in the core licensing contexts in (1-a). Even though NPIs have been an active area of research in the last decades, Sedivy's observations have still not received an explanation.

**Accounts of NPIs** Sedivy (1990) shows that the NPI analyses of the 1980s cannot capture her data. First, entailment-based approaches à la Ladusaw (1980, 1983) take the truth-conditional meaning of an untterance as their starting point. With there not being a downward-entailing operator in (3) and (4), the unacceptability of weak NPIs is correctly predicted, though not the acceptability of strong NPIs. Second, the Binding Theoretical approach in Progovac (1988, 1992) relies on the LF of the sentence containing the NPI. Consequently, there is no negation in the relevant logical form and the non-licensing of weak NPIs is correctly predicted – though the occurrence of strong NPIs is unexpected. Finally, Linebarger (1980, 1987) assumes that an NPI is licensed in the immediate scope of negation at the LF of a sentence. This requirement can be fulfilled at the LF of the sentence containing the NPI or of a *negative implicatum* (NI). Sedivy (1990) observes that the sentences in (3-a) and (4-a) may be considered as having such an NI. However, there is no clear way to distinguish between strong NPIs and weak NPIs and the status of the NI is left unclear in Linebarger's approach.
Kadmon & Landman (1993) and Krifka (1994) made pragmatic approaches to NPIs prominent. According to Krifka, NPIs refer to small entities and trigger larger, scalar alternatives. In addition, NPIs need to occur in emphatic utterances in the sense that what is being asserted is stronger than – i.e. entails – what could have been asserted by any of the alternatives. As argued in Eckardt & Csipak (2013), such theories cannot easily capture the more restricted distribution of strong NPIs. Eckardt & Csipak (2013) propose that strong NPIs come with an additional anti-veridicality condition. Again, this predicts a more restricted distribution of strong NPIs, not a more flexible one. Furthermore, the anti-veridicality condition is violated in examples like (3-a).

**Use-conditional semantics** Potts (2005) proposes that some types of secondary meaning are computed compositionally alongside with the truth-conditional content of an utterance. Gutzmann (2013) refers to these types of secondary meaning as *use-conditional semantics*. The compositionally computed use-conditional semantics of an utterance expresses conventionalized felicity conditions for its use. Gutzmann shows that there are expressions that make only truth-conditional contributions, only use-conditional contributions (for ex. *damn* and some appositives), or both (such as slurs).
I will use the notation in (7), where the truth-conditional and the use-conditional meaning dimensions are separated by "||". I will call a representation that contains both the truth-conditional and the use-conditional semantics a *tc-uc representation*.

(7) Alex, Kim's husband, is German. **german**(**alex**) || **husband-of**(**alex**, **kim**)

Let us look at the non-negative contexts in which strong NPIs can occur, i.e. (2)–(4). For each of them, it can be argued that they come with a use-conditional meaning that contains a negation. Example (3-a) might be the most interesting of them, as it triggers a veridicality inference. What Sedivy (1990) calls "contrastive uses of auxiliaries" can be considered *verum focus* (Höhle, 2019; Gutzmann et al., 2020). I will follow Gutzmann et al. (2020), who assume an operator **VERUM**, which makes a use-conditional semantic contribution, i.e., it specifies conditions under which the sentence can be uttered felicitously. Gutzmann et al. (2020, 39) say that **VERUM**($\phi$) is felicitous iff the speaker wants to prevent that the question under discussion is downdated with $\neg\phi$. Gutzmann et al. argue that this accounts for the fact that $\neg\phi$ must be a salient answer for the question under discussion in discourse.
My rendering of their analysis is given in (8). Note that the truth-conditional meaning of the sentence occurs in the scope of a negation on the use-conditional dimension. I propose a similar representation for modals with an irrealis inference, see (9).

(8) tc-uc of (3-a): **give-damn**(**speaker**) || **Prevent-Downdate**(**speaker**, ¬**give-damn**(**speaker**))

(9) tc-us of (4-a): **SHOULD**(**PAST**(**lift-finger**(**john**))) || ¬**PAST**(**lift-finger**(**john**))

**Analysis** Given the use-conditional meanings as sketched above, the challenging data can be analyzed under the following assumptions: strong NPIs need to be in the (immediate) scope of a negation (or: an anti-additive operator) in the tc-uc representation of the utterance containing it. Weak NPIs can be licensed by a wider class of operators – downward entailing/ scale reversing/ non-veridical/ ... depending on one's theory. However, the licensing must happen in the truth-conditional dimension at some point in the computation.
In the "classical" examples in (1), there is no licensing operator at the use-conditional dimension and we find the more restricted distribution of strong NPIs. In (8) and (9), the NPI is in the scope of negation in the sketched tc-uc representations, but only in its use-conditional dimension. This is ok for strong NPIs, but not for weak NPIs.
This can be extended to the question data. A negatively biased question ?$\phi$ comes with a use-conditional semantics that the speaker assumes $\neg\phi$. This use-conditional semantics is conventionally attached to biases questions with or without subject-auxiliary inversion. The strong NPI in (5) is licensed in the use-conditional dimension. Weak NPIs can be licensed by a question operator. However, the interrogative operator is only contributed on the truth-conditional dimension in (6-a), but not in an intonation question – see Gutzmann (2013) for considerations on the use-conditional impact of intonation. As the weak NPI cannot rely on use-conditional licensing, it is excluded in (6-a).

**Conclusion** I discussed and extended Sedivy's (1990) data on occurrences of strong NPIs in contexts which do not allow for weak NPIs and that do not contain any of the ordinary NPI-licensing operators overtly. I sketched how the data can be accounted for if strong NPIs, though not weak NPIs, can be licensed in the use-conditional dimension. The proposal captures the classical observation that the licensing of strong NPIs involves pragmatic aspects, but that it is nonetheless strongly constrained by the linguistic form – whereas pragmatic aspects are less prominent in the licensing of weak NPIs.
In the present analysis, strong NPI are not use-conditional items (like *damn* or appositives), but items whose licensing conditions have access to both the truth- and the use-conditional semantics of an utterance. This provides additional support for the relevance of use-conditional semantics for the modelling of the linguistic competence of speakers.

**Selected references** Gutzmann, D. 2013. Expressives and beyond. In D. Gutzmann & H.-M. Gärtner (eds): *Beyond expressives*, 1–58. Brill. ◇ Gutzman, D. et al. 2020. Verum focus is verum, not focus. *Glossa* 5(1).51. 1–48. ◇ Sedivy. J. 1990. Against a unified account of negative polarity licensing. *Cahiers Linguistique d'Ottawa* 19. 95–105.