On the strength of being positive

Jacopo Romoli (based on joint work with Paul Marty, Yasutada Sudo, and Richard Breheny)

FREE CHOICE (FC) is a well-known puzzling inference arising from the interaction between existential modals and disjunction. Specifically, the puzzle is to explain why a sentence like (1a) gives rise to the conjunctive inference in (1b). NEGATIVE FREE CHOICE (NFC) is the corresponding inference in (2b) associated with sentences containing negated universal modals embedding conjunction as in (2a).

- (1) a. It is permitted that Mia buys apples or pears. $\Diamond (A \lor B)$ b. \rightsquigarrow It is permitted that she buys apples and that she buys pears $\Diamond A \land \Diamond B$
- (2) a. It is not required that Mia buys apples and pears. $\neg \Box (A \land B)$ b. \rightsquigarrow It is not required that she buys apples and not required that she buys pears $\neg \Box A \land \neg \Box B$

A prominent approach derives FC as a Scalar Implicature (SI) (Fox 2007, Klinedinst 2006, Romoli & Santorio 2017, Bar-Lev & Fox 2017, a.o.). An important challenge for this approach comes from experimental results showing that FC behaves differently from regular SIs in terms of robustness, processing speed and acquisition (Bott & Chemla 2014, Tieu et al. 2016, Meyer & Feiman 2020, a.o.). In response to this, it has been suggested in the literature that these discrepancies could result from differences in the nature of the alternatives at work (Barner et al. 2013, Tieu et al 2016, Chemla & Bott 2014; Fox & Bar-Lev 2020).

The implicature approach derives NFC through the same steps as FC, on the basis of the same type of alternatives. Thus, NFC offers an interesting testing case for the idea above about alternatives. I will report experimental work providing evidence that NFC is much weaker than FC and patterns with regular SIs. As I will discuss, these findings pose a challenge for the hypothesis about alternatives above and the implicature approach to free choice more generally. I will then show that the same contrast between positive and negative extends to the related distributive inferences and ignorance inferences. I will discuss two directions towards addressing this challenge: [1] maintain a *uniform* implicature approach to all of these inferences while adding further assumptions – e.g., negation introduces more alternatives (Bar-Lev and Fox 2020, Schulz 2019) or negation indirectly affects the relevance of alternatives – or [2] move to a *hybrid* approach deriving the positive versions of these inferences as an entailment while adopting an implicature account for their negative counterparts.