

PROBABILISTIC MODELING OF RATIONAL COMMUNICATION WITH CONDITIONALS

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Abstract:

While much research has focused on the semantic meaning of conditionals, considerably less attention has been paid to formal models of the pragmatic use and interpretation of these constructions.

We here take a probabilistic approach to pragmatic reasoning about conditionals which flexibly integrates gradient beliefs about richly structured world states. We model listeners' update of their prior beliefs about the causal structure of the world and the joint probabilities of the consequent and antecedent based on assumptions about the speaker's utterance production protocol.

We show that model predictions vindicate a number of inferences from conditionals attested in the literature, including epistemic inferences, Conditional Perfection and Biscuit readings, when natural contextual assumptions are supplied. We argue that this approach also helps explain three puzzles introduced by Douven (2012) about updating with conditional information: depending on the utterance context, the listener's belief in the antecedent may increase, decrease or remain unchanged after uptake of a conditional.

References

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