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Mentioning atypical properties of objects is communicatively efficient

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Abstract: What governs how much information speakers include in referring expressions? Atypical properties of objects are more likely to be included in referring expressions than typical ones. E.g., speakers are more likely to call a blue banana a “blue banana” and a yellow banana a “banana”. A unified account of this phenomenon is lacking. When should a rational speaker mention an object’s color? Reference production is modeled within the Rational Speech Act framework. Utterances (“banana”, “blue”, and “blue banana”) are taken to have a graded semantics: rather than assuming all bananas are equally good instances of “banana”, we empirically elicited object-utterance typicality values for all possible utterances. Pragmatic speakers select utterances proportionally to the probability that a literal listener using a graded semantics will select the intended referent. We evaluate the proposed model on a dataset of freely produced referring expressions collected in an interactive reference game experiment via the web.