

## **UC Merced**

### **Proceedings of the Annual Meeting of the Cognitive Science Society**

#### **Title**

Modeling manipulative language use

#### **Permalink**

<https://escholarship.org/uc/item/2n23t8x8>

#### **Journal**

Proceedings of the Annual Meeting of the Cognitive Science Society, 42(0)

#### **Authors**

Silva, Vinicius Macuch

Cummins, Chris

Franke, Michael

#### **Publication Date**

2020

Peer reviewed

# **Modeling manipulative language use**

**Vinicius Macuch Silva**

Osnabrck University, Osnabrck, Germany

**Chris Cummins**

University of Edinburgh, Edinburgh, United Kingdom

**Michael Franke**

Osnabrck University, Osnabrck, Germany

## **Abstract**

We propose an extension to probabilistic pragmatic models to include a dimension that allows for the modeling of argumentative language use. Within our extended Rational Speech Act model, argumentative strength stands for a statistical measure of observational evidence which impacts a speaker's utterance choice. More concretely, our model recasts speaker utility in terms of a weight parameter which varies between being purely informative and purely argumentative. We fit the extended RSA model to empirical data from a novel production experiment. Our initial results suggest that there is room for argumentativity on top of informativity in formalizations of pragmatic language reasoning. Crucially, we see that the relationship between the two is not straightforward, as the model fails to capture instances of human behavior which are more manipulative than expected by the suggested informativity-argumentativity trade-off. All in all, our exploration provides us with interesting insights about this relationship.