

Graz Advanced School of Science
PHYSICS COLLOQUIUM OF THE UNIVERSITY OF GRAZ AND
THE GRAZ UNIVERSITY OF TECHNOLOGY

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**Exhaustivity of Answers to Questions.
Computational Models of Interpretation in Linguistics**

Abstract:

Consider the simple dialogue in (1). Experimental data show that around 70% of the times A will understand B as suggesting that John danced and nobody other than John did. This is called an exhaustivity inference. This may be taken as surprising because B did not use the stronger utterance in (2) and ample evidence exists to the extent that the meaning of (1B) does not entail that nobody other than John danced. For example (3) should be entirely acceptable otherwise (which it is not)!

(1) A: Who danced?

B: JOHN danced.

(2) B': Only JOHN danced.

(3) C: ??? You told me to call you if JOHN danced, but actually John, Michael and Mary danced, so I didn't.

In this talk I discuss a series of recent experiments that show some problems that arise when upscaling and applying the Rational Speech Act Model of Frank and Goodman (2012) to such data. For example, while RSA (or any Bayesian model) predicts that the number of relevant alternatives to John (i.e. the number of people who could have danced) will negatively impact the strength of the exhaustivity inference, i.e. the more people could have danced the less likely it is that only John danced, experiments show that the inference is unaffected by this at all. Eventually, I explore some solutions to the problems discussed.

As the aim of this talk is in part to explore possible methodological interfaces between my own research and research in the field of "Models and Simulations", the talk will also introduce basic methods of formal semantics that allow us, for example, to compute that B's utterance is actually an answer to A's question (including formal languages used, the representation of accents, meanings of questions etc.). Moreover, the talk also includes a few independent examples of how formal representation of meaning is used in formal semantics and pragmatics and could potentially yield interfaces to natural science.

References:

Frank, M. C., & Goodman, N. D. (2012). Predicting pragmatic reasoning in language games. *Science*, 336(6084), 998–998

Date: Tuesday, 15.5.2018, 17:00;
16:30 meet the speaker tea, Library of Experimental Physics – 1st floor, room 122

Location: Lecture Hall 05.01, Universitätsplatz 5, University of Graz

Host: Prof. Dr. Reinhard Alkofer – Institute of Physics – Theoretical Physics