

Workshop on Bayesian Argumentation¹

Jointly funded by the Swedish Research Council and the Wenner Gren Foundations, this workshop took place on October 22-23 at the Department of Philosophy, University of Lund, Sweden. 15 participants came from Austria, Denmark, Germany, Sweden, Italy, The Netherlands, the United Kingdom, and the USA. They were joined by an equal number of visitors. Speakers came from philosophy (7), (social) psychology (4) and (computational) law (3); most pursued a modeling approach. Psychologists and lawyers contributed important empirical results as well as real-world examples; philosopher's mostly focused on the logical reconstruction and evaluation of arguments.

In order, *Matthias Grabmair* (Pittsburgh) presented the Carneades model, a computer based tool for argument reconstruction. *Tomoji Shogenji* (Rhode Island) forwarded a formal vindication of non-vicious circularity. *Erik Olsson* (Lund) related results on the threshold of assertion obtained in a computational simulation of multi agent exchange. *Claudio Mazolla* (Cagliari) argued against a logical dependence between Reichenbach's screening-off condition and deterministic causation. *Jonny Blamey* (London) explained the preface paradox by making the differential believability of conjunctions *vis à vis* their conjuncts a function of the respective stake size. *Mike Oaksford* (London) presented empirical evidence obtained in applying Bayes theorem to pro/con argument and the argument from ignorance. *Erich Witte* (Hamburg) reported on group interaction research, (reasoning) biases, and tensions between ideally-rational and evolutionary accounts (ultimate vs. satisficing perspective).

Ulrike Hahn (Cardiff) started the second day with empirical results demonstrating participants striking ability at accurately combining source and message characteristics. *Amid Pundik* (Cambridge) discussed a recent legal case which suggests that statistical reasoning is still alien to judges. Together with *Kevin Ashley*, *Matthias Grabmair* (Pittsburgh) gave an overview of legal uncertainties and how to respect these in a computer model. *Gregor Betz* (Karlsruhe) provided an account of degrees of justification based on dialectical structures. *Niki Pfeifer* (Salzburg) presented a probabilistic logical approach to argument strength and fallacies. *Robert van Rooij* (Amsterdam) contributed an application of game theory, particularly persuasion games, within a bounded rationality view. *Frank Zenker* (Lund) demonstrated challenges arising in the application of the Bayesian approach to deliberative contexts.

The workshop provided strong evidence for the claim that the Bayesian approach to natural language argument is likely to advance as an interdisciplinary project. It also revealed a need for a common language and the explicit formulation of discipline-specific assumptions. Next to technical details, recurring themes were the interpretation of "weights," logics for defeasible reasoning, and the formal specification of "coherence". Equally important was the descriptive vs. normative issue, as evidenced by a recent re-orientation in social psychology. What 25 or so years ago became known as "errors of (statistical) reasoning" could soon be

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vindicated within a “cognitive miser” view of human reasoning and argumentation. Generally, *vis à vis* its informal alternative, the Bayesian approach continues to recommend itself for its precise expressions. These naturally connect to developments in artificial intelligence and formal epistemology.

Proceedings are expected in 2011. Abstracts and presentations remain available at: <http://www.fil.lu.se/conferences/conference.asp?id=38&lang=se>

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