
THE REASONER

VOLUME 13, NUMBER 1
JANUARY 2019

thereasoner.org
ISSN 1757-0522

Abduction and Modelling in Metaphysics, Duesseldorf, 6–7 December

The workshop *Abduction and Modelling in Metaphysics*—held at the Heinrich-Heine University Duesseldorf, Germany, on December 6–7, 2018 with support from the German Research Foundation (DFG) and organized by the research unit Inductive Metaphysics (FOR 2495)—had the goal to establish how empirical sources and abductive forms of inference play a role in metaphysical research. The workshop was the final event in a series of events with Timothy Williamson, which included also a public evening talk (December 4) on *Morally Loaded Cases in Philosophy* and two reading groups, which took place on December 4–5. The series of events was organized by Christian J. Feldbacher-Escamilla, Siegfried Jaag, Markus Schrenk and Gerhard Schurz (University of Duesseldorf).

The workshop hosted eight invited talks by distinguished speakers, who discussed the difference between abductive, deductive and purely *a priori* reasoning in metaphysics, skepticism regarding metaphysics as an independent discipline, the fruitfulness of abduction in metaphysics and in science, and further methodological issues of doing metaphysics, in particular, the status of modelling in metaphysics. One of the recurring topics during the workshop was the status of truth in metaphysics and in science, e.g., is it truth that our best theories can hope to achieve, or is it something less fundamental, like an agreement of peers within the research community?

Stephen Biggs (Iowa State University) gave the first talk of the workshop, entitled *Towards an Abduction-based Epistemology of Metaphysics*. He argued that abduction is the ultimate arbiter of metaphysical disputes, because abduction can deliver a wider range of metaphysical knowledge than conceiving, and an abduction-based approach implies a more plausible account of metaphysical dispute than a conceiving-based approach does.

Ilkka Niiniluoto (University of Helsinki) gave a talk on *Abductive Arguments for Ontological Realism*. He argued that ab-

ductive reasoning provides the strongest support for the thesis of ontological realism. The inference from agreeing perceptions to the reality and mind-independence of ordinary three-dimensional physical objects is abductive, because it proceeds from effects to causes by help of the principle of the common cause, and it is the best way to answer the idealists' arguments against the existence of mind-independent objects.

Gerhard Schurz (University of Duesseldorf) spoke about *Abduction as a Method of Inductive Metaphysics*. He made a distinction between selective abduction that chooses, given some empirical facts, among a set of hypotheses the one which allows for the best explanation in terms of accuracy and simplicity, and creative abduction that explains empirical facts by introducing new concepts and theories. These concepts describe theoretical entities whose existence is assumed in order to explain the empirical phenomena described in the premises of the inference. Schurz argued that creative abduction is applicable in metaphysics, in particular, for justifying certain principles of causality.

Timothy Williamson (University of Oxford) gave the talk on *Abduction in Logic and Mathematics*, where he addressed the possibility of an abductive methodology for identifying and justifying first principles in logic and mathematics. Williamson argued that classical logic does very well by abductive criteria (simplicity, strength, etc.) and is consistent with evidence. However, abduction cannot distinguish between logics with the same logical truth, but different consequence relations. To solve the problem, Williamson proposed to consider logics as closure operators on sets of typically non-logical assumptions, and abductively evaluate the resultant theories. He also considered the problems of vagueness, the possibility of restricting quantifiers to purely mathematical objects and argued for ways of using logic as a tool for model building in metaphysics.

Tim Maudlin (NYU) gave a talk on *Metaphysics Renaturalized*. Maudlin argued that traditional metaphysics—going back to Aristotle—has always been thoroughly naturalized, and made no distinction between the methods of science and the methods of philosophy. It was Kant who insisted that metaphysics had to be an a priori discipline, in his own sense of *a priori* as not in any way based on empirical data. According to Maudlin, it is time to get rid of the Kantian influence, and to renaturalize metaphysics.

Helen Beebe (University of Manchester) spoke about *Abductive Skepticism and Theory-Acceptance in Metaphysics*. She argued that the fact of widespread peer disagreement in metaphysics leads inevitably to skepticism about many substantive metaphysical theses. This skepticism cannot be resolved by abduction or by any other method, because we will always have to choose between equally reasonable and incompatible metaphysical positions.

Meghan Sullivan (University of Notre Dame) gave a talk on *Modal Logic and the Methodology of Metaphysics*. She distinguished between the intuition-driven approach in metaphysics, whose proponents argue for their theories in a natural language, and the logic-driven approach, which aims at presenting a formally systematized theory. Sullivan considered two prominent methodological arguments for systematization—the instrument argument and the ideological argument—and concluded that there is no reason to think that the best metaphysical theory should resemble a modal logic.

Igor Douven (CNRS, Paris) gave a talk on *Putting Prototypes in Place*, where he used an empirical approach to the

concepts of colors represented by the cells of an optimally partitioned similarity space. Douven defined optimal partitioning in terms of rational design criteria, according to which prototypical concepts should be such that they are both similar to the items they represent (representative) and dissimilar to each other (contrastive). Then he presented the data of his empirical study indicating that color prototypes strike the best balance between being representative and being contrastive.

The talks were recorded on video and will soon be available [here](#).

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