



Miscellaneous

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Conference Report: The Fourth International Conference of the German Society for Philosophy of Science (GWP.2022), 15–17 August, 2022

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The German Society for Philosophy of Science (*Gesellschaft für Wissenschaftsphilosophie*, GWP) held its fourth international conference (GWP.2022) between August 15 and August 17, 2022, at the Technische Universität Berlin. The GWP has been founded at the Leibniz-Universität Hannover in 2011 and has since organized three conferences: at the Leibniz-Universität Hannover in 2013, at the Heinrich Heine Universität Düsseldorf in 2016, and at the Universität zu Köln in 2019.

The conference had originally been scheduled to take place earlier, viz., March 21–23, 2022, but since the ongoing pandemic did not allow an in-person conference, the conference was postponed. It was the first big in-person philosophy conference to take place in Germany since the pandemic started. The conference covered a variety of philosophical topics including epistemology, metaphysics of science, ethics of science, and logic, as well as studies from the natural and social sciences.

The conference consisted of 111 presentations. There were 6 symposia of 3 presenters each as well as 93 contributed talks of which 5 were delivered via Zoom. These presentations were chosen out of 188 submissions of which 164 were for contributed talks and 8 for symposia. Compared to the 170 submissions for GWP.2019, the number of submissions increased by about 10%.

The acceptance rate of the GWP.2022 was 69.6% (GWP.2019:74%). Only 22% of the submissions were by women for whom the acceptance rate was 71.4% which was thus slightly greater than the overall acceptance rate. However, this still only amounts to 23% of all accepted presentations. Compared to the

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GWP.2019, this also means a decrease in the relative frequency of presentations by women.

The conference itself started with Hans Rott's (Universität Regensburg) keynote talk 'Relevance and Conditionals'. In his talk, Rott notices that conditionals are not merely used in deductions, but often also in providing explanations. He argues that in cases of explanation, the antecedent of a conditional needs to be relevant for the conditional's consequent, for example by providing evidential support. Rott goes on to show that this aspect has not been captured well by many logics, including suppositional logics, and he surveys some more recent logical and probabilistic attempts to address the problem of relevance in the logic of conditionals.

The first day ended with Mazviita Chirimuuta's (University of Edinburgh) de Gruyter lecture 'Formal Idealism/Haptic Realism'. Chirimuuta proposes to redirect the realism debate regarding unobservable posits of theories and models to the question whether such theories and models should be interpreted realistically. She argues that one upshot of such a redirection is that it is easier to include particular sciences which consider quite large and observable objects, such as biology. For example, computational neuroscience models the brain and the models can be interpreted in a realistic way, i.e., that the brain is actually performing computations which are represented in the model. On the other hand, there is an alternative interpretation which Chirimuuta calls 'formal idealism'. Formal idealism sees the brain as vastly more complicated than what the models capture; the aim of modelling is rather meant to simplify the processes to an acceptable degree. This means that the models don't aim at discovering pre-existing structures, but rather to approximating and structuring the brain. Chirimuuta argues that the contrast between formal realism and idealism is a preferable way of framing the realism debate, and illustrates this by utilising the sensory metaphor of touching.

Jutta Schickore (Indiana University, Bloomington) started the second day with her keynote talk 'Causation, Observation, and Experiment: Reflections on Practical Inquiry in the German Lands Around 1800'. Schickore argues that the work of German academic philosopher-educators and scientific practitioners around 1800 on the nature of causation are not merely forerunners of modern philosophy of science, but should prompt us to rethink the long-term history of methodological discussion in science and philosophy. One reason which supports this claim is that those researchers had practical goals and discussed causation as part of an empirical inquiry so that their understanding of 'cause' was pragmatic. Indeed, Schickore shows that they developed heuristics and evaluative criteria for finding and assessing hypothesis about cause-effect relations, and they discussed how experiments could help in this undertaking.

The second day ended with Anjan Chakravartty's (University of Miami) keynote talk 'The Role of Epistemic Stances in Interpreting Science: Naturalistic Challenges'. Chakravartty starts by suggesting that, even though many agree that science is privileged with respect to learning about the world, there is no agreement among scientists and philosophers regarding how to best interpret science. Chakravartty's aim is to make sense of this situation and respond to the naturalistic challenge of understanding how science licenses belief. He suggests that some disagreements stem from different 'epistemic stances', i.e., differences which concern how to interpret empirical evidence. Chakravartty notes that the notion of a stance is not free from challenges itself. In particular, he argues that there is a further challenge that such stances should be supported by scientific evidence which would also need the naturalization of scientific epistemology.

Branden Fitelson (Northeastern University) opened the third day with his keynote talk 'Bayesianism & Explanationism'. Fitelson notes that there are two opposing ways of thinking about the relationship between explanationism and Bayesianism in the recent literature, where explanationism is the position that a hypothesis which is the best explanation of some evidence should accrue epistemic credit. One way is to suggest that explanationist intuitions should be accommodated by *revising structural Bayesian requirements of rationality*. Another way is to suggest that Bayesians should accommodate explanationist intuitions by *supplementing substantive confirmation-theoretic postulates*. Based on the distinction between structural and substantive Bayesian rationality, Fitelson discusses these two ways, and argues that explanationism is a substantive Bayesian constraint, before he answers sceptical arguments that such substantive constraints cannot be incorporated into Bayesianism.

Brigitte Falkenburg (Technische Universität Dortmund) finished the conference with her Springer lecture 'Data, Theories and Probability in Physics'. Falkenburg provides an outline of the role of computer simulations in the experiments of particle and astroparticle physics after recapitulating the theory-data relation and the meaning of probability in physics. Falkenburg goes on to argue that computer simulation is not a third kind of scientific method compared to theory and experiment; rather, computer simulation corresponds to 'models as mediators' (Morgan and Morrison) or ideal-type explanations (Max Weber). In particular, Falkenburg supports her claim by detailed case studies which suggest that empirical underdetermination of theory can be reduced by machine learning without increasing the theory dependence of the data.

The GWP.2022 was organized locally by members of the philosophy department, including the chair Axel Gelfert and his team. Moreover, the GWP committee played its usual significant part, including Uljana Feest, Christian Feldbacher-Escamilla, Alexander Gebharter, Vera Hoffmann-Kolss, Thomas

Reydon, and Gerhard Schurz. I would like to thank all of them on behalf of all the attendees of the conference. Moreover, the generous funders of the event are also appreciated, viz., de Gruyter and Springer for sponsoring two plenary lectures, the TU Berlin, the GWP, and the Düsseldorf Center for Logic and Philosophy of Science. More information about the conference, including all the abstracts and the programme, can be found at <<http://gwp2022.wissphil.de>>.

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