

*Conference Report: The Third  
International Conference of the  
German Society for Philosophy of  
Science (GWP.2019), 25-27 February,  
2019*



ROSE GRACE TRAPPES

During an unseasonably warm and sunny three days in February, the University of Cologne welcomed some 150 attendees for the third international conference of the German Society for the Philosophy of Science (GWP.2019). The conference covered a variety of philosophical themes, from epistemology and ethics to metaphysics and methodology, and encompassed studies from the whole gamut of natural and social sciences.

The GWP has become a well-established scientific society since its foundation in 2012, as witnessed by its ever growing numbers and profile. As well as six plenary lectures, this third conference of the GWP featured nearly 130 talks in six parallel sessions. In accordance with the mission statement of the GWP, young researchers were encouraged to present and the conference programme was extended to accommodate talks by PhD students. The gender balance was less satisfactory; despite a positive policy of favoring submissions by women, they counted for only 35 of 130 speakers, or 27%.

Together, the talks covered most of the key topics in contemporary philosophy of science; especially prominent were—in no particular order—modelling, explanation, understanding, interdisciplinarity, realism, values, reductionism, and of course discussions of theories, laws, concepts and evidence. While many talks were on biology and physics, the conference also covered a wide range of sciences including psychology, economics, biomedicine, mathematics, cognitive science, and climate science. The diversity of topics was reflected in the plenary lectures, which covered history, metaphysics, epistemology, policy making, and science communication.

The conference began with the first keynote speaker, Kärin Nickelsen (LMU Munich), addressing the often fraught relationship between history and philosophy of science. While it is clear to many that philosophers must be sensitive to the history of the sciences, it is less clear how they can do so without cherry-picking or making unjustified generalizations. Using historical research on the fragmented and convoluted

discovery of photosynthesis as an example, Nickelsen argued that the process of developing a historically-informed philosophy of science should be seen as one of abstraction: the back-and-forth motion between the concrete and the abstract, rather than unidirectional generalization.

The first day ended with a lecture from Kenneth Waters (University of Calgary), who expressed his delight at being invited to Germany to speak of metaphysics—an opportunity not to be missed! Informed by pragmatist concerns about standard analytic metaphysics as overly abstract and inattentive to the complexities of the real world, Waters outlined his project of scientific metaphysics. This is to be a metaphysics based on the successful activities of science and sensitive to real complexity. His thesis, supported here by an elaboration of the cross-cutting and hence non-reducible hierarchies treated in ecology, was that reality has no general structure. Or as a catchy take-home message: “It’s a mess out there!”

Erik Olssen (Lund University) kicked off the second day with his account of explicationist epistemology. Explications, such as the provision of the concept “Piscis” for the common language term “fish,” or the new definition of “planet,” must satisfy four requirements: they must be fruitful (facilitate generalizations), precise, simple, and fairly close to the common sense concept. Though different schools of thought place different weight on each of the four requirements, Olssen argued that the general framework of the four requirements provides a picture of knowledge that can overcome the paradox of analysis as well as Gettier problems, both major stumbling blocks for epistemology. In addition, Olssen argued that adopting an explicationist epistemology is conducive to epistemic pluralism, countenancing a variety of epistemic projects, explicata, and methodologies.

The fourth plenary lecture by Katherine Hawley (University of St. Andrews) shifted us to science communication. Hawley asked after the significance of the general practice of using the bare plural “scientists” to report research findings, as in “Scientists discover...” or “Scientists believe...” Sometimes this terminology is a matter of convention, human interest, or a way of acknowledging the proviso nature of scientific knowledge. However, Hawley suggested that such language is also often a way to borrow authority. It is this usage that is problematic: since the bare plural can be read as a generic (“all scientists”) as well as an existential (“some scientists”), Hawley argued, it lends illegitimate authority to a statement and can lead to contradictions. Hawley ended with the question of whether peer review can lend a legitimacy to the

bare plural “scientists,” in a kind of collectively authorized speech.

Continuing with the theme of science in its social role, Martin Carrier (Bielefeld University) opened the final day of the conference with a lecture on good science-based policy advice. Rejecting the notion that non-epistemic values corrupt scientific research, Carrier argued that good science—and hence good scientific policy advice—should be informed all along by non-epistemic values. Moreover, science must aim for plurality and thus incorporate a broad range of different social, political and economic preferences. But to facilitate the practicability and usefulness of such plural science, Carrier warned that policy advice must merge measures, integrate approaches, and prioritize measures that appear in many alternatives: a balance to strike between plurality and a clear policy direction.

The conference closed with a lecture by Michael Strevens (New York University) on the use of necessity in scientific explanation. Strevens argued that most kinds of necessity, including logical and mathematical necessity, can be subsumed under a broad sense of causal necessity, as facts about the causal webs essential to the causing of the outcome. An exception to explanation by way of causal necessity (in the broad sense) is the appeal to what Strevens labelled metaphysical necessity: necessity based on “lightweight metaphysical relations” such as aspecthood or parthood. Attention to this non-causal type of necessity, Strevens argued, is necessary to account for everyday instances of scientific explanation.

The GWP conference was organized locally by members of the Philosophical Seminar at the University of Cologne, including the chair Andres Hütteman, and members Ursula Heister, Michael Hicks, Elisabeth Muchka, Jan Köster, Liane Lofink, and Martin Voggenauer. The GWP committee had of course a significant role to play, including Gerhard Schurz, Uljana Feest, Alexander Gebharder, Thomas Reydon, and Christian Feldbacher-Escamilla. I’m sure I am joined by all attendees in thanking the organizers wholeheartedly. Appreciation is also deserved for the funders of the event, including Springer and De Gruyter for funding two of the plenary lectures, the DFG and the University of Cologne, as well as the German Society for Philosophy of Science and the Düsseldorf Center of Philosophy of Science. More information about the conference, including all the abstracts, can be found at <https://gwp2019.wissphil.de/>.

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