

Conference Report: SOPhiA 2016



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This year the Salzburg Conference for Young Analytic Philosophy (SOPhiA, Salzburger Concilium Omnibus Philosophis Analyticis) took place from September 7 to 9. As the title of the conference indicates, it is mainly organized by and aimed at graduate students in philosophy. Since 2010 the conference has been held annually in Salzburg and features contributions from many international participants. One of the distinctive features of SOPhiA is that it is open to contributions from every philosophical discipline—the only requirement being that the presented work is carried out in an analytic way. Analytic Philosophy is here broadly understood in the way expressed by Carnap in *The Logical Structure of the World* (1967): analytic philosophers “have taken the strict and responsible orientation of the scientific investigator as their guideline” and address specific problems.

The conference featured more than 100 contributed papers that (broadly speaking) covered topics from all philosophical subdisciplines. The main sections were Epistemology, Metaphysics and Ontology, Ethics (approx. 20 % each), Philosophy of Mind, Philosophy of Language, and Philosophy of Science (approx. 10 % each). The remaining sections covered topics from Logic and Philosophy of Mathematics, Political Philosophy, History of Philosophy, and Philosophy of Law. The papers were given by graduate students (approx. 30 % female) from 19 different countries. Some of these contributions were handed in as full papers of which a selection is published in this journal. The best paper award went to Maximilian Kiener (Oxford) for his paper on moral and non-moral testimony.

There were four plenary lectures given by invited speakers: Julien Murzi (Salzburg), Jeremy Butterfield (Cambridge), Dorothy Edgington (Birkbeck College), and Sylvia Wenmackers (KU Leuven). In the following the lectures shall be briefly summarized.

The conference started with a talk by Julien Murzi who challenged revisionary approaches to semantic paradox. Consider for example the Liar Paradox. In order to preserve consistency (or at least non-triviality) when dealing with the Liar Paradox, there are two options: (1.) either

give up on naïve semantic principles such as the equivalence of 'A' and 'A is true', or (2.) revise the rules of classical logic. Revisionary approaches choose option (2.), for instance, in the case of paracomplete approaches which allow for sentences having an intermediate value between truth and falsity. Murzi argued that all known revisionary approaches run into problems when dealing with semantic paradox. In particular, he argued against moderate revisionary approaches. These approaches attempt to restrict non-classical logic to the contexts of paradoxicality while trying to recapture classical logic for other contexts (such as mathematics). According to Murzi, these approaches rely on classifying contexts as paradox or unparadox. Murzi argued that this gives rise to a revenge phenomenon which is common to all revisionary approaches: (a) consistent non-classical theories fail to express a suitable notion of paradoxicality, and (b) inconsistent (but non-trivial) non-classical theories cannot express unparadoxicality. Thus, moderate revisionary approaches fail in their attempt to demarcate classical from non-classical contexts.

On the second day Jeremy Butterfield gave a talk on the implications of modern cosmology to scientific realism. In Butterfield's approach scientific realism is to be understood as the claim that we can know, and indeed do know, about the unobservable. Butterfield takes cosmology as a particularly promising case study for an evaluation of scientific realism because it challenges the usual philosophical distinction between two types of under-determination: (1.) under-determination by all data that one could in principle obtain and (2.) under-determination by all data obtainable in practice. In his presentation Butterfield focused on primordial cosmology which investigates very early states of the universe (less than 10^{-11} seconds after the Big Bang). In particular he pointed out the stupendous success of cosmology in recent decades. Nevertheless, he noted, it is unsurprising that probing the very early universe involves intractable cases of under-determination of theory by data. This is particularly the case with regard to the inflationary period of the universe. However, when scientific realism is understood in the modest sense that we can know something (rather than everything) about the unobservable, then it is not threatened by modern cosmology. According to Butterfield, cosmologists make claims about the history of the universe which are and will forever remain as well established as other scientific facts, for instance, from molecular biology.

The second day of the conference ended with a talk by Dorothy Edgington on conditionals, uncertainty and indeterminacy. She began her talk by pointing out many situations in which we are confronted with

the vagueness of language, for instance, when we are presented with a colour spectrum and asked to indicate where one colour ends and the next begins. Frege, Russell and the early Wittgenstein aimed at constructing an ideal language that works without such borderline cases. However, according to Edgington this was a futile attempt: we cannot eliminate vagueness from natural languages and it is not even desirable. But how can we account for vagueness in a theory of language? Edgington suggested an idealization which assigns a number between 1 and 0 for the degree to which a statement is clearly true or clearly false. Moreover, she suggested giving these values a degree-theoretic structure that is analogous to probability theory. This analogy is to be taken with caution: probabilistic indeterminacy is often dynamic (the indeterminacy collapses, for instance, when we toss a coin) whereas indeterminacy through vagueness is static. Edgington then argued that there is another case of static indeterminacy which is very similar: the indeterminacy of counterfactual probability. According to Edgington, this analogy can be used for a better understanding of uncertainty in conditionals. Uncertain conditional judgements can be assessed by conditional probability. In this framework their truth value is often indeterminate, just as in the case of vague statements.

The conference concluded with a plenary talk by Sylvia Wenmackers on infinitesimal probabilities. Standard probability theory (Kolmogorov's axioms) entails the axiom of continuity. As a consequence, probability values can be represented by real numbers which makes probability theory easily fit in with real analysis and measure theory. Wenmackers pointed out that the axiom of continuity is in conflict with the intuition that we should assign strictly positive probability to any possible outcome, no matter how improbable it is. This is problematic for example in the context of infinite lotteries (such as the lottery on \mathbb{N}) because the probability of any particular ticket winning has to be set to zero. The usual reaction to this conflict is dismissing the intuition and rounding tiny probabilities off to zero in order to preserve mathematical convenience. However, according to Wenmackers this is too high a price to pay. She argued that probability theory has to take remote contingencies into account and that without such infinitesimal probabilities do not add up. According to Wenmackers, these issues motivate adopting a non-Archimedean probability theory. Such a set of axioms gives up on the axiom of continuity and allows us to assign non-zero infinitesimal probabilities to remote contingencies. Wenmackers argued that this alternative approach to probabilities is unobjectionable from a

mathematical point of view but has attracted philosophers' criticism. In particular, Wenmackers took up conceptual objections by Williamson, Easwaran and Pruss and argued that they do not threaten her non-Archimedean approach.

The conference was complemented by two affiliated workshops that took place on September 7: "Dispositions in Action: Laws of Nature, Explanation and Modality" and "Equivalence and Reduction of Scientific Theories". Each workshop consisted of five talks by invited speakers. The workshops were kindly supported by the Gesellschaft für Wissenschaftsphilosophie (GWP).

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Further information about SOPhiA 2016 is available at the conference website <https://www.sbg.ac.at/sophia/SOPhiA/2016/languages/en/>.

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