

Causality and Explanation in the Sciences (CaEitS) 2011

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From Monday 19 till Wednesday 21 September 2011, the 'Centre for Logic and Philosophy of Science' brought philosophers and scientists together at Ghent University (Belgium) to discuss the relation between causality and explanation. This 'Causality and Explanation in the Sciences' conference (CaEitS) was already the sixth congress in the Causality in the Sciences conference series (<http://www.kent.ac.uk/secl/philosophy/jw/cits.htm>).

In the first plenary session, Nancy Cartwright made the case that the effectiveness of evidence-based policy tends to suffer from locality, both with respect to its support factors (as policies do not produce results on their own) and cause-description (abstraction is needed to "get a cause that travels"). Thus construed, she argued that evidence-based policy should "mix its methods": increasing its focus on concrete details in the target and its use of cross discipline heuristics. The first day came to a close with a plenary session by Henk de Regt entitled "How we understand through causal explanation". In this presentation, it was argued that by an analysis of the concept of understanding, one can gain insight into why causal explanations provide understanding, instead of merely stipulating this.

Tuesday opened with a plenary lecture by Michael Strevens ("Causality Unified"). In his presentation, Strevens drew on his recent work on explanation to argue that the evidence adduced by the causal pluralists can be accommodated easily by a unified theory of causality, on which on all causal claims concern the same fundamental causal relation. In the plenary session that afternoon, Daniel Little argued in his 'Explaining the world'-talk that social causal explanations depend upon the specification of mechanisms and processes that are at work in the social world. As there are no "laws of society" that might serve the ontological function of establishing "social necessity" for these mechanisms, Little opted to turn to features of structured human agency as the form of "necessity" that underlies causal links between antecedent conditions and the outcome in which we are interested, applying it to the example of "free-rider collective behaviour".

The final day opened with a plenary talk by Mauricio Suárez entitled "Causation, manipulability, and quantum mechanics". In his presentation, Suárez argued that, contrary to the perceived view, quantum mechanics does not constitute an exception to the applicability of the manipulability account of causal explanation, and that indeed the Causal Markov Condition is in principle applicable to the field of quantum mechanics.

Apart from the plenary sessions, around fifty contributed papers were presented. Though it is beyond the scope of this report to consider these presentations in detail, one clear division can be made, namely between those talks who focused on causality and explanation as such, and those who emphasized the application of general philosophical positions on concrete scientific disciplines. The former group consisted of contributions on mechanistic explanations (Jon Williamson, John Pemberton, Mark Couch, Patrick McGivern, Federica Russo, Phyllis Illari, Petri Ylikoski, Ben Barros, Cyril Hédoïn and Nicolas Brisset, Raoul Gervais), effect talk (Jan Willem Wieland, Alex Broadbent), causal inference (Jan Lemeire, Tim De Craecker, Frederik Van De Putte and Tjerk Gauderis, Holly Andersen, Jan Sprenger, Lorenzo Casini), interventionism (Alexandre Marcellesi, Silvia De Bianchi, Samuel Schindler), understanding (Alexandra Bradner, Wesley van Camp) and Kairetic and Structural

accounts of explanation (Merel Lefevere, Alex Koo, Theo Kuipers, F.A. Muller). The latter group consisted of contributions on biology (Jan Baedke, Laszlo Kosolovsky, Fridolin Gross, Michael Joffe, Leonardo Bich and Matteo Mossio), physics (Matt Farr and Alexander Reutlinger, Mark Shumelda, Michel Ghins, Andrew Wayne, Peter Bokulich), social sciences (Alessio Moneta and Tiziana Foresti, Jan Willem Lindemans, Alex Prescott-Couch, Francesca Pongiglione, Rogier De Langhe), medicine (Samantha Kleinberg, Brendan Clarke, Marshall Abrams) and mathematics (James Franklin, Victor Gijssbers, Pat Corvini, Mieke Boon).

Besides having experienced a canal boat trip through the inspiring old city centre of Ghent, the participants were treated to a number of funny clips presenting basic reasoning fallacies related to the conference topic (<http://www.youtube.com/user/CaEitS#p/u>).