

Duesseldorf Center for Logic and Philosophy of Science (DCLPS)

by [Alexander Christian](#), [Christian J. Feldbacher](#), and [Alexander Gebharter](#)

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Presentation and History

The [DCLPS](#) is located at the Chair of Theoretical Philosophy of the Heinrich Heine University (HHU) Duesseldorf, Germany. It is financed by the HHU and by research grants of the German Research Foundation (DFG). The DCLPS is directed by Gerhard Schurz (GS) who officially founded the center in 2011, though its informal activities started much earlier. The center cooperates and is in lively exchange with the local philosophy department and collaborative research center CRC 991, and with related research centers throughout the world (see [list of cooperations](#)). It is an important goal of the center to communicate relevant results of its research to the public by joining public discussions of philosophical topics.

Currently, the center consists of the members of the department of Theoretical Philosophy at the HHU (one full professor, five post-doctoral research fellows, five pre-doctoral research fellows, six student assistants), several members from other philosophical departments at the HHU (three professors, two postdocs) and external members from philosophy of science centers at other universities (see [members of the DCLPS](#)).

The center publishes a regularly appearing electronic newsletter that can be subscribed by e-mailing to dclps@phil.hhu.de.

Research Activities

The DCLPS investigates questions and problems in logic and philosophy of science in all their dimensions. Its focus lies on the application of formal methods to philosophy of science, epistemology, and cognitive science. Within philosophy of science and epistemology, it covers the following topics:

In the area of **causation** various research projects are ongoing at the DCLPS: Alexander Gebharter and GS work on the explanatory warrant, empirical content, and philosophical applications of the theory of causal Bayes nets (DFG research unit FOR 1063, subproject *Causality and explanation*). Nina Retzlaff investigates to which extent the theory can be applied to experimental setups in the quantum domain. The question of whether absences can be causally efficacious is explored by David Hommen (DFG research unit FOR 1063, subproject *Causality of absences*).

The DCLPS is well-known for its research on **meta-induction**, an approach that tries to justify inductive methods as the best alternatives for performing an epistemic strategy. GS, Paul Thorn, and Christian Feldbacher (DFG SPP 1516, subproject *The role of meta-induction in human reasoning*) are extending optimality results of learning and game theory on strategy selection to epistemic prediction settings and apply these results within the field of social spread of knowledge, wise-crowd

effects, and enhanced judgement aggregation. Besides the analytic results, computer simulations are used in order to study the short-term behavior of meta-inductive methods.

Regarding **values of science**, Christian Feldbacher and GS study the concept of value neutrality in science with a particular focus on objectivity in research and on the practical problems of risk assessment in modern research. A further hot topic in this area concerns bias in medical research. In this context, Alexander Christian is working on the epistemological and ethical foundations of responsible conduct of research and mechanisms to prevent and cope with scientific misconduct and questionable research practices.

Within philosophy of language, logic, and cognitive science the research projects of the DCLPS cover the following two topics:

Ioannis Votsis and Gerhard Schurz use **frame theory** for cashing out the concepts of reduction and unification in scientific theories (DFG CRC 991, subproject *A frame-theoretic investigation of unification and reduction in scientific theories*). David Hommen and Stephan Kornmesser investigate frame-based methods for representing theories, both from a logical and an ontological perspective (DFG CRC 991, subproject *Logic and ontology of the cognitive representation of theories*).

A specialization within frame theory is the center's focus on the **frame representation of prototype concepts** and **prototype reasoning**. Within this project, Annika Schuster, Corina Strößner and GS aim at a model of such frames, an investigation of their compositionality, as well as an empirical study of rules of default inheritance of prototypical properties to different kinds of subclasses (DFG CRC 991, subproject *Frame representation of prototype concepts and prototype-based reasoning*).

Members of the DCLPS are also involved in research on many other philosophical topics such as abduction, confirmation, explanation, generalized evolution theory, mechanisms, probabilistic reasoning, scientific realism, relevant deduction, unification, and verisimilitude.

Recent publications of DCLPS members can be found [here](#).

Events

The DCLPS organized the 5th Conference of the European Philosophy of Science Association ([EPSA15](#)) in September 2015. In March 2016 it will host the 2nd Conference of the German Society for Philosophy of Science ([GWP.2016](#)). The center also regularly invites fellows. Recent fellows were Clark Glymour, Christopher Hitchcock, and Theo Kuipers. The DCLPS organizes workshops on topics within logic and philosophy of science. The latest workshops focused on causation, ceteris paribus laws, coherence, conditional logic, explanation, unification, and values in science. An overview of the DCLPS's workshops can be found [here](#); this webpage includes video documentations of all important workshops. In addition, the DCLPS hosts a weekly research colloquium and lecture series.

Studying at the DCLPS

The DCLPS makes major contributions to the curriculum in the field of theoretical philosophy in the philosophy study program at the HHU and provides an excellent education and optimal preparation for a doctoral project. Numerous courses are given in the areas of philosophy of science, epistemology, and logic, including topics such as causation, induction, philosophy of probability, science and pseudoscience, scientific explanation, social epistemology, and values in science. The

DCLPS offers the possibility to participate in two online lectures held by GS: [Introduction to Logic](#) and [Introduction to Philosophy of Science](#).

PhD students are welcome and can enroll either as a doctoral student directly associated with a senior member of the DCLPS or in one of the graduate programs of the HHU. Candidates are invited to contact potential supervisors. For more information contact dclps@phil.hhu.de.

Visiting Schemes

Scientists in every career-stage are encouraged to visit the center and do research on any topic related to the center's research foci. For externally funded visitors, the DCLPS provides a working place and the infrastructure required for their research.

The DCLPS invites applications for the [DCLPS fellowship](#). We expect visitors to give a talk in our research seminar and engage into the center's activities. The amount of funding is negotiable. The DCLPS also participates in the EPSA Fellowships for junior philosophers working in Central and Eastern Europe.

We also support project applications to institutions, such as the [DFG](#) and the German Academic Exchange Service ([DAAD](#)).