

Research Group 1: History and Philosophy of Science

Heads:

Philippe Abgrall and Gabriella Crocco

Staff: 22 members, among whom 13 are full members.

Presentation

The research group History and Philosophy of Science aims to develop the epistemological tradition of the Center for Comparative Epistemology that was established in 1974 by Gilles Gaston Granger.

Research that is carried out by this group focuses on two objectives: on the one hand, proposing a historico-philosophical analysis of the scientific disciplines under consideration (logic, mathematics, physics, biology, psychology) and, on the other hand, on the basis of such an analysis, studying traditional aspects of philosophy and related issues (theory of knowledge, metaphysics, the political and social role of science). In close collaboration with the practitioners of the scientific disciplines at stake, the Research Group 1 intends to reinforce and develop further cross-disciplinary investigations in comparative epistemology, which is expected to be deeply rooted in the local context and to echo national and worldwide philosophical debates.

Research Topics

- 1) Philosophy, Epistemology, and Philosophy of Science
- 2) History and Philosophy of Mathematics
- 3) History and Philosophy of Physics
- 4) Logic and the Foundations of Mathematics and Computer Science
- 5) History and Philosophy of Biology and Psychology
- 6) Science Didactics and Cross-disciplinarity

Research Programs

Biomorphism

InterEpisteme

Gödel

Collaboration with the ANR Vuillemin

GDR History of Mathematics

Education

Teaching in Epistemology in the Master's degree in Philosophy

Bachelor's degree "Science and Humanities"

Events

For the full list of our initiatives (workshops, seminars, etc.) see [the calendar](#).

Topic 1: Philosophy, Epistemology, and History of ScienceDirect

We study the relationships between philosophy and history of science as a prerequisite for the establishment of a comparative and critical epistemology that is conceived as an antidote to prevailing dogmas (e.g. the myth of the almighty power of the quantitative or statistical approach) and as a propaedeutic to philosophical knowledge.

Topic 2: History and Philosophy of Mathematics

Since Plato's time, the evolution of mathematical objects and concepts within the various scientific traditions has brought abundant food for thought. Our research focuses on periods and topics in which mathematics particularly closely related to both philosophy and physics.

Topic 3: History and Philosophy of Physics

Our research on the elaboration and legacy of research traditions in physics focuses on two chief issues:

- a) The relationships between physics and the theory of perception.
- b) The relationships between mathematical description and phenomena in physical theories and the systems of world.

Topic 4: Logic and the Foundations of Mathematics and

Computer Science

Investigations relating to this topic have to with a threefold way of defining logic: first, logic as the discipline dealing with the all-encompassing concepts that underpin any form of knowledge; second, logic conceived as a branch of mathematics, as a discipline dealing with formal mathematical theories including those that relate to computer science; third, philosophical logic, which consists of research on non-classical logics that are applied to artificial intelligence.

Topic 5: History and Philosophy of Biology and Psychology

Our reflection on this topic deals, on the one hand, with the philosophy of living things, in relation to ecology and the theory of evolution and in close collaboration with the Research Group 2. It deals, on the other hand, with psychological thought, as it developed between the late 18th and early 20th centuries, the aim being to explore it per se and in its past and current relation to epistemology, logic, and language sciences.

Topic 6: Science Didactics and Cross-Disciplinarity

In current education, the teaching of scientific disciplines faces difficulties that result in a drop of vocations. The place of science in culture tends therefore to boil down to be that that is justified by its technological successfulness. Our reflection on cross-disciplinarity aims to develop novel educational prospects in which the image of science may free itself from the adulation/demonization dialectics and recover its cultural status that prevailed at the time of its fundamental advances.