

# Revue de métaphysique et de morale

## Call for papers: special issue "Metaphysics of Science"

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Metaphysics of science consists in studying scientific theories, their models and their interpretations, in order to discover the structure of reality in the light of contemporary science. It may seem surprising and even paradoxical to interpret the sciences from a metaphysical perspective. At the beginning of the twentieth century, philosophy of science defined itself in opposition to metaphysics. According to the doctrine of logical empiricism, scientific knowledge rests on the solid foundations of observation and logic, while metaphysical statements are meaningless. In the 1950s, Carnap proposed a first partial rehabilitation, that of ontology, understood as a discipline concerned with the conventional form of scientific theories. In the second half of the twentieth century, the distinctions that justified the strict separation of empirical content and conventional form of scientific propositions were called into question, in particular 1. the distinction between analytical and synthetic statements and 2. the distinction between observational and theoretical vocabulary.

All this paved the way for metaphysics of science, according to which it is possible to understand the structure of reality by analysing general concepts used in all sciences, such as cause, law, individual object, process, mechanism and reduction. Metaphysics of science is now a flourishing field of research. The starting point for this "return to metaphysics" within the analytic tradition in philosophy of science was Quine's doctrine that scientific theories carry ontological commitment. However, this doctrine has been called into question for several reasons.

1. The criterion of ontological commitment cannot be used as it stands when there are several formal versions of the same theory.
2. It can be argued that ontological commitment is not limited to objects but includes properties and states of affairs that make scientific statements true.
3. Many authors believe that metaphysics of science is not limited to ontology, i.e. research into what exists. Complementary questions concern the relations between the things that exist, in particular the relations of causality, constitution and grounding.
4. Another aspect of the debate that goes beyond the framework introduced by Quine concerns the articulation of the metaphysics implicit in scientific theories with "descriptive metaphysics", i.e. the metaphysics implicit in common sense.

The present call for papers invites contributions of two kinds, bearing on the one hand, on metaphysical concepts at work in the empirical sciences, such as the concepts of mechanism, emergence, law of nature, causality, constitution and grounding. On the other hand, it addresses questions about the legitimacy of metaphysics of science, its scope, objectives and methods, and its relationship with the sciences.

The coordinator of this project, Max Kistler, invites anyone interested to send a two-page abstract exclusively to the following address: [rmm@sofrphilolo.fr](mailto:rmm@sofrphilolo.fr), by 1 November 2023. Abstracts must be written in English or French. Authors will then be invited to submit a first version of their manuscript (approximately 7,000 words) to the same address for assessment by the coordinator (single-blind) and by an external expert (double-blind).