Abstracts

János Laki:
The Structure of Scientific Communities. Proofs and Persuasions

The aim of my paper is to show that the members of the Popper school are responsible for the creation of a standard but fundamentally false picture about Kuhn's ideas. The erroneous interpretation that Kuhn described scientific communities as closed religious sects based on indoctrination can be traced back to the critiques presented by Watkins and Lakatos. As a consequence of the dogmatism implied by such communities, scientific change can only be conceived as irrational conversion or (to use Lakatos' phrase) as a matter of "mob psychology".

Relying on a close reading of his texts, I wish to prove that contrary to this popular conception, Kuhn can by no means be labeled 'irrationalist' or 'relativist'. I argue that he describes science as a special social institution of Western culture. Scientists belonging to this institution share common, non-changing values that are independent of particular research traditions and thoroughly influence scientific decisions. This set of values exists continuously above paradigms and allow scientists to use persuasive arguments in the cases when logical proofs are not applicable. The persuasive power of such arguments stems form the comparison of the instrumental effectiveness of proposed theories in realizing the common values. My conclusion is that, according to Kuhn (despite the immediate incommensurability of theories), the arguments based on these common values are sufficient for establishing the rationality of scientific changes and providing science with a developmental character.

Vera Békés:
Kuhn's Affair with the Philosophical Climate

In this paper I try to compare the context of the early critics and reflections on Kuhn's famous *The Structure of Scientific Revolutions* from the sixties and seventies to the general appreciation of those fifty years later. In his book, Kuhn made some examples in context the nature and necessity of scientific revolutions and said: „These remarks should suffice to show what might, in another philosophical climate, have been taken for granted." The paper focuses on this changing climate of the philosophy of science from the time of the

dominancy of logical empiricism to the emergency of the history-sensitive scientific knowledge conception and the strong programme of sociological analysis of scientific knowledge.

However some fundamental theses of Kuhnian conception have remained unrecognised – especially his thesis on the culture-dependent factors in the natural sciences, even as in the case of social and human sciences. It is clear today that Kuhn realized a remarkable achievement in philosophy, as Rorty put it – he is one of the explorers of a substantial relation of human activity. Kuhn showed a new way of thinking, and this is which reshaped the self image and rhetoric of several different disciplines. Today we use his book as a kind of collection of aphorisms on scientific knowledge, and the thesaurus of his ideas is far from exhaustion.

Péter Hartl:
The role of the history of science in Kuhn's philosophy

In this paper I would like to investigate the changes of Kuhn's meta-theoretical position in terms of the relation between the history of science and the philosophy of science. I examine some epistemological problems concerning history of science. I will argue that although Kuhn had taken the principles of historical philosophy of science seriously, he failed to work it out in detail. Kuhn's main goal was always the same, namely presenting science as a rational enterprise. Afterwards due to debates he gave up his former opinion according to which we should solely or primarily rely on history of science in order to elaborate a theory about scientific progress. Instead of this we need to reinterpret our concepts about truth, reality and rationality. According to late Kuhn's theory which was outlined in the Rothschild-lecture, research on history of science is inferior to epistemology and metaphysics, as well as it plays a subsidiary role in terms of philosophical understanding of science.

László Székely:
The Structure of Scientific Revolutions and the Reception of the Copernican Theory – after Fifty Years

Whereas fifty years before Thomas Kuhn's famous work liberated philosophy of science from the dominancy of the neopositivist and Popperian traditions, and it brought new perspectives and inspired new researches in the history and philosophy of science, in our days the dogmatic insistence on the Kuhnian theses sets limit to an appropriate understanding of sciences in a similar way as the neopositivist and Popperian philosophy did it in the time when

Kuhn's book was published. The paper shows that there is a considerable set of relevant cases in which, in contrast to Kuhn's claim, scientific paradigm shifts did not involve a Gestalt–switch-like change of perception. Original historical texts witness that in the debates about the Copernican system and the phlogiston versus oxygen theory, as well as in the characteristic paradigm shifts of modern physics, the participants of discussions agreed concerning the assumed empirical basis of the theories and they opposed the views of the other party only regarding the interpretation. Historical sources also witness that the representatives of rival paradigms often understood and taught the other paradigm and incommensurability emerged between them only regarding their methodological preferences and their metaphysical and ontological commitments. We may become a real follower of Thomas Kuhn's philosophy of science only if we prefer historical scientific texts over his own works and we are ready to change his categories and theses when the picture which takes form on the basis of historical scientific texts cannot be interpreted in the framework of his philosophy of science without violation of the hermeneutical-methodological rules of studying historical sources. The genuine message of Kuhn's philosophy of science is about the philosophical relevance of the history of science; the claim that philosophy of science must be cultivated not on the basis of fictions but real historical sources. And this message is no less actual in our days than it was fifty years before.

Dániel Golden:
Kuhn and the paradigms of theory choice

In this paper I give an outline of the birth and decline of the theory choice problem within Kuhn's own research program and in the posterity. The problem originates from *The Structure of Scientific Revolutions* and revives again and again in various writings of Kuhn and his followers. I analyse the positions taken by different philosophers of science on Kuhn's proposal about the five criteria of theory choice. Finally, I come to some considerations made by Charles Sanders Peirce on scientific method, namely his invention of the logic of abduction. I find that practically all issues which Kuhn and his fellows were worrying about are present in the framework of that old theory.

Viktor Geng – Dániel Paksi:
Traps of Relativism

David Bloor claims in his paper *Epistemic Grace: Antirelativism as Theology in Disguise* that relativism or absolutism is an unavoidable choice, there is no third

way. Furthermore, to separate his own relativism from radical relativists who are idealists and deny scientific progress and truth, he necessarily connects his relativism with materialism. We believe, however, this dichotomy is burdened with difficult problems, e.g. the position of idealism or emergentism, and scientific progress is not compatible with incommensurability and Neo-Darwinism. Nevertheless, our main claim is that materialism itself is an absolutist view; therefore, its reconciliation with relativism undermines the goals of Bloor and relativism. We propose better relativist ontology.