

Special seminar of the

RESEARCH CENTER FOR THEORY AND HISTORY OF SCIENCE

with

Michał Kokowski

Institute for the History of Science
of the Polish Academy of Sciences

19th November 2012
Sedláčkova 19, 306 14 Pilsen
Room RJ-209

Full schedule

- 11:00** ELIŠKA LUHANOVÁ:
Humanity: Gradual Progress or Continuing Decline?
The origin of the two ideas in archaic Greece
- 11:45** MIROSLAV HANKE:
Truth-preservation and validity paradoxes
in Martin Le Maistre's *Tractatus consequentiarum*
- 12:30** Lunch break
- 15:00** **Special Guest**
MICHAŁ KOKOWSKI:
The three cultures of Sarton – Snow,
Thomas S. Kuhn and the Copernican (r)evolution

Výzkumné centrum pro teorii a dějiny vědy – CZ.1.07/2.3.00/20.0138



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OP Vzdělávání
pro konkurenceschopnost

INVESTICE DO ROZVOJE VZDĚLÁVÁNÍ

THE THREE CULTURES OF SARTON – SNOW, THOMAS S. KUHN AND THE COPERNICAN (R)EVOLUTION

Michał Kokowski

L. & A. Birkenmajer Institute for the History of Science, Polish Academy of Sciences

E-mail: michal.kokowski@gmail.com

Website: <http://www.cyfronet.pl/~n1kokows/home.html>

In the discussion about sciences studies around the world, the works of Charles Percy Snow (1905–1980) on the topic of the two cultures (on the one hand, mathematics, exact sciences and natural sciences, and, on the other hand, the humanities) and of the third culture (as a combination of the two cultures) are mentioned quite often. It is very strange that in this context the new humanism proclaimed by George Sarton (1884–1956) is not even briefly mentioned, though it was not only well described and widespread before Snow's idea, but it is also more profound than Snow's. Therefore — in order to honour both Sarton's and Snow's achievements — I introduced the terms of the two cultures of Sarton – Snow and the third culture of Sarton – Snow (Kokowski 2001a, 2001b).

The omission is bizarre since a moderate version of Sarton's new humanism was — in the late forties and fifties of 20th century — the real basis of the Programme of General Education in Science Curriculum at Harvard University directed by James Bryant Conant (1893–1978), and influenced the views of Thomas Samuel Kuhn (1922–1996), a member of Conant's team, about the so-called Copernican revolution (Kokowski 2001a, 2001b).

In turn, the understanding of this revolution by T.S. Kuhn is the basis of his famous views on the mechanism of development of exact sciences that — which is common knowledge — caused a turbulent development of science studies in the so-called Western culture during the last fifty years, which resulted in the birth of the left-wing Kuhnians (Richard Rorty's term).

It is obvious that T.S. Kuhn's legendary books *The Copernican Revolution. Planetary Astronomy in the Development of Western Thought* (1st ed. 1957) and *The Structure of Scientific Revolutions* (1st ed. 1962) are both interesting and important. However, interpreting the so-called Copernican revolution, T.S. Kuhn made many important omissions, ambiguities or mistakes which influenced the development of science studies to some extent in... the wrong direction (I mean deconstructionism, relativism, sociologism, etc.).

This conclusion results from the author's analyzes of (1) the origin, content and reception of Copernicus' views, (2) Kuhn's interpretations of the so-called Copernican revolution, and (3) the current problem situation of science studies, made in the light of author's interdisciplinary approach developed in the last twenty years. The approach includes, among others, the method of the integrated hermeneutics of research, the method of the complementary explanations, the hypothetico-deductive method of *Korespondenzdenken* with, among others, the idea of scientific (r)evolution.

In the lecture I will explain the title issue by sketching the approach and results described in detail in earlier monographs and papers (or abstracts of papers) cited in references.

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HUMANITY: GRADUAL PROGRESS OR CONTINUING DECLINE? THE ORIGIN OF THE TWO IDEAS IN ARCHAIC GREECE

Eliška Luhanová
Research Center for Theory and History of Science
E-mail: luhanova@gmail.com

The present paper focuses on the question of human prehistory and on the role the ideal of golden age played in Greek archaic thinking. Taking into account Hesiod, the oldest source of this famous myth, but also another sources (such as Homer and Aeschylus) I will try to show that descriptions of golden-age life, free of all toil and suffering, have found their counterpart in the stories expressing the role of „cultural gods“ (such as Prometheus) which emphasise different aspects of human prehistory: absence of technai and knowledge and as a result rather bestial lifestyle lacking essential signs of humanity. After all, the anthropological question of human prehistory is inseparable from its cosmological context and so the actual human life, as imperfect as it is, nevertheless represents an integral part of the supreme Zeus' world-order. Thus the archaic view on the history of human race can be by no means reduced to a simple regression-scheme. The conception of a continuing decline of human character is counterbalanced by the idea of gradual cultural progress, in a way that the two views are not simply juxtaposed, but essentially ambiguous, forming together the appropriate view on human history and nature.

TRUTH-PRESERVATION AND VALIDITY PARADOXES IN MARTIN LE MAISTRE'S *TRACTATUS CONSEQUENTIARUM*

Miroslav Hanke
Research Center for Theory and History of Science
E-mail: ebedu@centrum.cz

The concept of truth plays manifold roles in different theoretical contexts in scholastic theological, philosophical and scientific discussions. From the semantic point of view, the concept of truth is analysed as a distinctive property of declarative sentences which are bearers of logical relations and thereby fundamental linguistic constituents of academic and scientific discourse. The lecture will focus on the concepts of truth, truth-making and truth-preservation and their role in defining deductive validity as discussed by the late-medieval nominalist scholar Martin LeMaistre (1432-1481) in his *Tractatus consequentiarum*. Furthermore, expanding on Stephen Read's research concerning Bradwardine's solution to semantic paradoxes, the lecture will make an effort to analyse Curry's paradox in terms of the so-called "Bradwardine's principle", i.e., in terms of the theory that sentential meaning is closed under entailment.