

## BOOK REVIEWS AND NOTICES

**Adam Grobler, *Metodologia nauk*, Wydawnictwo Aureus, Wydawnictwo Znak, Kraków 2006, 4 Appendices by J. Cachro, 343 pp.**

Adam Grobler's *Methodology of the Sciences* (published in Polish) adopts the kind of attitude to philosophical questions concerning science that is familiar from the works of Marian Przełęcki, Ryszard Wójcicki and Adam Nowaczyk. More generally, the book conforms to the legacy of the Vienna Circle (p. 144) incorporating topics discussed in the recent philosophy of science. Also, *Methodology of the Sciences* takes into account some of the fashionable issues raised in erotetic logic, epistemology (esp. Bayesianism and theory of truth), and philosophy of mind. (An extensive exposition of methodology of science is to be found in Stanisław Kamiński's *Science and Method* (in Polish), 1992 4<sup>th</sup> edition, Lublin: TN KUL, where a theory and different types of methods are comprehensively presented. In contrast to Grobler's book Kamiński's monograph covers history of science and of philosophy of science.)

The book consists of four parts. Part I, „Induction and Explanation,” (5 chapters, 123 pp.) endorses a version of abductive reasoning to the best explanation as *the* theory of inductive reasoning in science which succeeds in overcoming the difficulties of its main contenders, i.e. inductionism and falsificationism. Grobler offers a contrastive conception of explanation which modifies the idea of explanation elaborated by T. Kuipers and A. Wiśniewski. Roughly, the main rationale for the explanatory power of scientific hypotheses is that they come up with answers to questions of the following form: „Why in a given setting did an event *b* occur (unexpectedly) rather than one of the (usual) events  $b_1, \dots, b_k$ ?” The process of generating the correct answer can then be described as a series of questions which aim at picking out the true hypothesis for a given set or – should that fail – an extensive revision of the presuppositions of the contrastive question. Next, two criteria for comparing alternative explanations are formulated: one of comparative explanatory power, the other – of the progressive revision of received scientific knowledge. Roughly, the set of questions answered by the less explanatory hypothesis is a proper subset of answers delivered by its alternative. And a revision is progressive if it covers all the explanations offered so far and solves at least one more scientific question. The criteria offered are compatible with I. Lakatos's principle of theoretical pluralism as they may well select several hypotheses having the same explanatory power.

Part II, „The Structure of Science,” (12 chapters, 70 pp.) covers topics such as: the notion of scientific theory, the problem of reduction of theoretical terms and

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various types of definitions in science, the notion of scientific law, idealisation in science and the *ceteris paribus* condition, different types of models employed in science, the non-statement view of theories, reduction and the unity of science. The author claims that contrastive explanation sets a framework which allows it to alleviate or even to resolve many of the traditional problems raised in the philosophy of science. It is granted that scientific knowledge progresses as theories solve more varied kinds of problems. However, if a recurrent failure in resolving a theoretical question persists a revision of some of the presuppositions underlying the question at hand is considered. And this may lead in turn to a radical reconstruction of the domain studied, as exemplified by the elimination of absolute space and time by four-dimensional space-time. Thus, the stepwise transition from the old domain to the new one can be traced back and explicitly described, which in turn undermines the claim of their radical discontinuity and absolute incommensurability.

In Part III, „Different Types of Sciences and Their Methodological Characteristics,” (4 chapters, 48 pp.) a number of standard distinctions of different types of scientific disciplines is critically examined. P. Kitcher’s idea that mathematics is a science of mental representations of possible manipulations of objects by an ideal subject is generalised to cover also logic and to question the sharp divide between formal and empirical sciences. Next, it is suggested that the opposition between a naturalistic and an interpretive approach to the social sciences will become less stringent if both approaches are reconceptualised by means of K. Popper’s idea of the third world. Nonetheless, the author acknowledges that there is a tension between the interpretive method conceived of by Popper and the exceptionless and naturalistic postulates entailed by his falsificationism. Finally, the distinction between nomotetic vs. idiographic sciences is criticised. Of course, there are examples where the distinction is not observed in even supposedly paradigmatic idiographic sciences like history. But the principled reason for Grobler to reject the distinction is that it presupposes that the explanatory role is primarily attributed to scientific laws. A contrastive conception of explanation, however, takes laws and theoretical generalisations to be merely instrumental in achieving the main objective of science, namely explanation.

The central topic of Part IV, „The Cognitive Status of Science,” (4 chapters, 60 pp.) is the debate between scientific realism and anti-realism. Grobler defends the pluralism of truth within the internal realist standpoint. The progress of science in one domain affects related domains. It does not follow, however, that there is anything like an end-point of scientific research and the Ultimate Truth yet to be discovered. Rather, the author argues, the conceptual frameworks established with the advancement of science have merit relative to specific cognitive needs of human beings. Metaphorically speaking, the theoretical advancement of science resembles working out the details of various interrelated kinds of maps of the same region, e.g. physical, political, or administrative. Each of these maps can be improved, even though there is no unique and ultimate ideal map.

*Methodology of the Sciences* is the third volume published in the series *Philosophical Companions*. The readership is not explicitly identified by the author, but on the back flap of the dust cover the publisher announces that the companion, as „an academic survey,” is „written in an accessible style with didactic elements.” In the Introduction the author acknowledges that the editors – seeking perhaps the completeness of the survey – endorsed some topics going beyond the initial plan of the book. Indeed, in its final form the book covers a broad range of topics within philosophy and methodology of science, some of which, however, seem not to contribute, essentially, to the author’s project. Moreover, in terms of the coherence of the book, the four appendices may well have been saved for a different occasion. The book does not include an English summary or contents page, and the detailed content page is not divided into lines and has no page references. The publisher’s description of the book could give the false impression that its main target is an elementary exposition of philosophy of science in Poland and elsewhere, or that *Methodology of the Sciences* presents definitions of the central notions, illustrates them with examples and helps to test a student’s comprehension. Grobler purposefully brings out only the standpoints and ideas relevant to his own approach to induction and explanation in science. Moreover, to appreciate the accessible style in some parts of the book the reader has to be an advanced – and perhaps also a dedicated – student of philosophy of science. *Methodology of the Sciences* is an advanced textbook for graduate philosophy students and scholars. Familiarity with 20<sup>th</sup> century philosophy of science is a prerequisite for an informed study of the book, and acquaintance with erotetic logic would certainly be an advantage.

ANDRZEJ BRONK & PAWEŁ KAWALEC  
Catholic University of Lublin

**Friedrich August von Hayek *The Constitution of Liberty*, Warsaw, PWN 2006, 528 pp.**

We had to wait 46 years to have a Polish translation of „The Constitution of Liberty” by Friedrich August von Hayek, who is one of the most famous representatives of the Austrian neoclassical school. This work – in which the author tries to establish a systematic political philosophy based on individual freedom – was first published in 1960 and is believed to be one of the most important works on political and legal theory. Its author, an Austrian economist and political philosopher is one of the biggest enemies of socialism and central planning. In 1974, for his achievements in the field of economy, he was awarded with the Nobel Prize.

This book focuses mainly on the concept of freedom under the rule of law. It is based on a theory, according to which, if we respect laws taking the form of abstract

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