Book review

Robert Kretsinger

History and Philosophy of Biology

Singapore: World Scientific Publishing, 2015
351 pp; Author Index; Subject Index

World Scientific Publishing is a relatively new company (established 1981), but it certainly rapidly conquers the market by producing interesting books and journals. With the headquarters in Singapore and offices in New Jersey, London, Geneva, Hong Kong, Taipei, Beijing, Shanghai, Tianjin and Chennai, it releases some 600 new titles per year. Especially attractive is the series of Nobel Lectures (the programme being active since 1991, but covering the lectures since the beginning, that is, 1901). Since 2006, a subsidiary of World Scientific Publishing has also been the London Imperial College Press (founded in 1995).

The recent book by Robert H. Kretsinger, Professor of biology at the University of Virginia School of Medicine in Charlottesville, an internationally recognised expert on the intracellular metabolism of the calcium, is a valuable attempt to create a student's repetitorium for the huge realm of history and philosophy of biology (biology being here understood as a science incorporating medicine and other fields of application). The book is divided into four sections and all together 46 chapters. Section A, „History and philosophy: overview", covers „Pre-Hellenic science," „Hellenic science," „China and early science," „Islamic science," „Christianity and science," „Inductive logic, 'works', and Francis Bacon," „Deductive logic, maths, and René Descartes," „The scientific revolution," „The Church and science," „Falsifiability: Karl Popper," „Paradigm: Thomas Kuhn," „Two cultures: C. P. Snow," and „Emergence." In Section B, „Physical sciences: overview", are presented „Engineering," „Mathematics," „Astronomy," „Mechanics," „Alchemy," „Phlogiston," „Periodic Table," „Electricity, magnetism, and optics," „Thermodynamics," and „Geology." The Section entitled „Biology: overview" lists „Medicine," „Anatomy," „Physiology," „Cell biology," „Embryology," „Microbiology," „Pharmacology," „Biochemistry,"

„Neurobiology," „Botany," „Genetics," „Paleontology," „Systematics," „Evolution," „Race," „Information," and „Origin of life," while the last Section, „Society and science: overview", discusses „Integrity," „Consent," „Faith, Intelligent Design," „Art," „Global warming," and „Free will."

Obviously, the range of covered topics is extremely broad and suggests an extraordinarily erudite author. The style is far from boring, varying from a „promenade" through facts and quotations, to discussing the most complex issues, like why Chinese or Islamic science had to stagnate at a certain point of the timeline. When Kretsinger writes on Maxwell's work or Euler's mathematics, he uses equations, and when he talks about Intelligent Design, it almost looks like he is adopting Rousseau's Deism. In most of the cases, Kretsinger certainly likes to deploy all kinds of logical divisions and branchings, revealing an astute scientific mind prone to systematisation.

The minor issues one might object, reflect the formal part and not the contents: high-quality paper burdens the book with needless weight (coloured images being also not so necessary), the usual basic data on the author and a list of references are not offered. Otherwise, one might say it is a flawless textbook: not an easy one, but very useful.

Amir Muzur