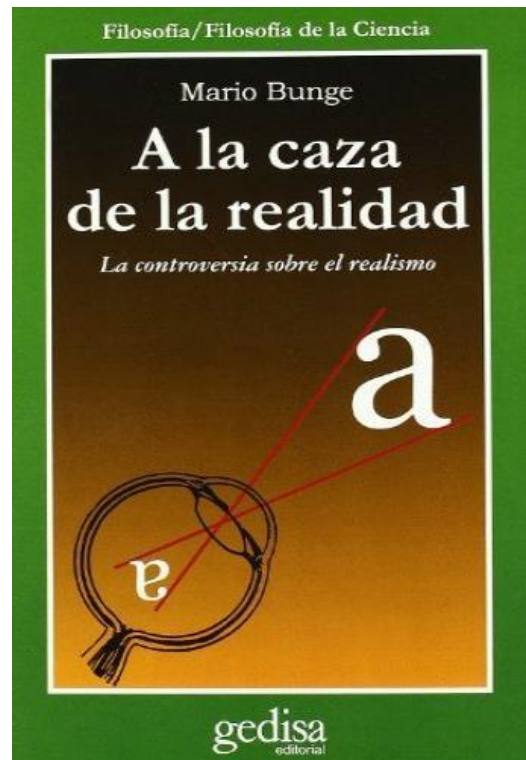
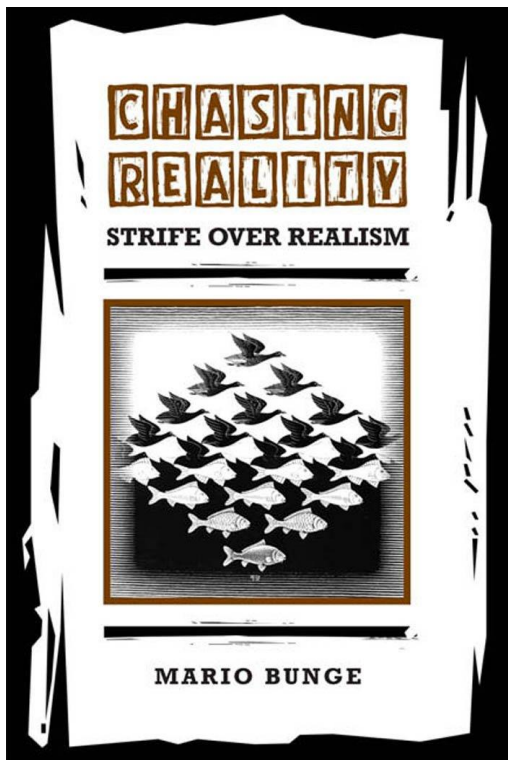


Chasing Reality: Strife over realism

Mario Bunge



BUNGE, Mario, *Chasing Reality: Strife over Realism*, Toronto: Toronto University Press, 2014 [2006], pp. xiv + 384 (Toronto Studies of Philosophy). ISBN 13: 978-14-4262-822-9 (paperback).

BUNGE, Mario, *A la caza de la realidad. La controversia sobre el realismo*, Barcelona: Gedisa editorial, 2007, pp. 456. ISBN 13: 978-84-9784-123-8 (rústica).

About the book (from the publisher)

Chasing Reality deals with the controversies over the reality of the external world. Distinguished philosopher Mario Bunge offers an extended defence of realism, a critique of various forms of contemporary anti-realism, and a sketch of his own version of realism, namely hylorealism. Bunge examines the main varieties of antirealism – Berkeley’s, Hume’s, and Kant’s; positivism, phenomenology, and constructivism– and argues that all of these in fact hinder scientific research.

Bunge’s realist contention is that genuine explanations in the sciences appeal to causal laws and mechanisms that are not directly observable, rather than simply to empirical generalisations. Genuine science, in his view, is objective even when it deals with subjective phenomena such as feelings of fear. This work defends a realist view of universals, kinds, possibilities, and dispositions, while rejecting contemporary accounts of these that are couched in terms of modal logic and ‘possible worlds’.

About the author

Mario Bunge was born in Buenos Aires (Argentina) in 1919. After training as a physicist –doctorate in mathematical physics, Universidad Nacional de La Plata (1952), where he learnt atomic physics and quantum mechanics from Guido Beck, an Austrian expatriate who had been an assistant of Heisenberg–, he was professor of theoretical physics (1956-1966) and philosophy, which he taught at the University of Buenos Aires from 1957 to 1963. He was the first South American philosopher of science to be trained in science.

Driven to emigrate by the political situation of his native country, particularly due to his socialist leanings, Mario Bunge initially settled in Europe, then in Montréal, where in 1966 he joined the philosophy department at McGill University, and never looked back. His career as a researcher rapidly assumed international scope and led him on to countless activities as an editor, speaker, guest professor, learned society member, and recipient of honorary distinctions, etc.

As Michael R. Matthews –University of New South Wales, Sydney, Australia– underline, the unifying thread of Mario Bunge’s scholarship is the constant and vigorous advancement of the Enlightenment Project, and criticism of cultural and academic movements that deny or devalue the core planks of the project: namely its naturalism, the search for truth, the universality of science, rationality, and respect for individuals. At a time when specialization is widely decried, and its deleterious effects on science, philosophy of science, educational research and science teaching are recognized – it is salutary to see the fruits of one person’s pursuit of the ‘Big’ scientific and philosophical picture.

Mario Bunge was the Frothingham Professor of Logic and Metaphysics at McGill University until his retirement in 2011 and is now Professor Emeritus in Philosophy.

He is author of over 80 books (including many translations into several languages) and some 500 articles mainly in English and Spanish, cofounder with logician Hugues Leblanc of the Society for Exact Philosophy, Mario Bunge set himself a task as an epistemologist, achieving a synthesis of rationalism and empiricism (*Scientific Research*, 1967, new version: *Philosophy of Science*, 1999), and also as a generalist philosopher and creator of a complete system, thanks to his monumental 8 volume *Treatise on Basic Philosophy* (1974-89), in which he defended conceptions on materialism and humanism. In his own cutting style, his *Dictionary of Philosophy* (1999) –the first edition of the *Philosophical Dictionary*–, accurately conveys this thought. Advocate of a precise philosophy “offering axiomatic and formalized expression of concepts and theories” he no less supported original positions on moral thought and politics. He is also the author of *Finding Philosophy in Social Science* (1996), *Social Science under Debate. A Philosophical Perspective* (1998), *The Sociology-Philosophy Connection* (1999), *Philosophy in Crisis: The Need for Reconstruction* (2001), *Scientific Realism: Selected Essays of Mario Bunge* (edited by Martin Mahner, 2001), *Matter and Mind. A Philosophical Inquiry* (2010), *Evaluating Philosophies* (2012), *Medical Philosophy* (2013) and *Memorias entre dos mundos* (2014).

Mario Bunge is a member of the American Association for the Advancement of Science (from 1984) and the Royal Society of Canada (from 1992). He was awarded the Premio Príncipe de Asturias of Spain in 1982 and the John Simon Guggenheim Fellowship in 1971.

Degrees

PhD in physico-mathematical sciences, Universidad Nacional de La Plata (1952)

Twenty honorary doctorates

Five honorary professorships

Teaching and research areas

Theoretical physics
Ontology
Epistemology
Philosophy of science
Philosophy of technology
Philosophy of mind
Value theory and ethics

Current research

Philosophy of the social sciences, philosophy of mind, and metaphysics

Bunge's Preface

Nowadays billions of us spend hours watching screens of various kinds. But of course we all know that the most interesting and important facts and ideas are behind the screens. This is why we look for objective fact behind appearance, for cause or chance below event, for mechanism behind behaviour, and for system and pattern underneath particulars. All these tasks require rigorous imagination –in particular, disciplined fiction rather than myth making. Although we immersed in reality, our knowledge of it is not immediate. (p. xi)

This book is part of a lifelong effort to update philosophy with the help of science, and to unmask unsound philosophy posing as science. What started me on this road, as I was finishing high school, were some of the best-selling popular science books in the 1930s – those of the famous astrophysicists Sir Arthur Eddington and Sir James Jeans. Eddington, the first to confirm Einstein's theory of gravitation, was a subjective idealist: He claimed that we only find out what is already in our minds. And Jeans was an objective idealist: He taught that the universe is a mathematical text written by God. I wished to refute them but was unable to for lack of requisite knowledge: this is why I decided to study physics. However, at the beginning of my research work in quantum physics, in the early 1940s, I swallowed the standard or Copenhagen interpretation, which is operationist, hence semi-subjectivist. My realist epiphany came only a decade later, during a break of a meeting of the Argentine Physical Society: I suddenly realized that, when describing a free electron, or calculating the energy levels of an atom, one uses exclusively variables describing properties of a thing that is not being observed by anyone – that is, a thing-in-itself. That experience suggested to me that much of what passes for the philosophical output of science is actually stale philosophy that plays only a decorative role in scientific research. (p. xiv)

En la actualidad, miles de millones de seres humanos pasamos largas horas mirando pantallas de diversos tipos. Pero, desde luego, todos sabemos que los hechos y las ideas más interesantes e importantes están detrás de las pantallas. Es este el motivo de que busquemos hechos objetivos detrás de las apariencias, causas o azar debajo de los eventos, mecanismos tras los comportamientos y sistemas y patrones detrás de los particulares. Todas estas tareas exigen una imaginación rigurosa; en particular, requieren de la ficción disciplinada antes que de la fabricación de mitos. Aunque estamos sumergidos en la realidad, nuestro conocimiento de ella no es inmediato.

Esta obra es parte del esfuerzo de toda una vida de actualizar la filosofía con el auxilio de la ciencia y de desenmascarar la falsa filosofía que se hace pasar por ciencia. Lo que me inició en este camino, cuando acababa la escuela secundaria, fue la lectura de algunos de los libros de divulgación de la ciencia más vendidos en la década de 1930, los de los famosos astrofísicos sir Arthur Eddington y sir James Jeans. Eddington, el primero en confirmar la teoría gravitatoria de Einstein, era un idealista subjetivo: sostenía que sólo descubrimos lo

que ya está en nuestras mentes. Jeans era un idealista objetivo: enseñaba que el universo es un texto matemático escrito por Dios. Yo deseaba refutar estas ideas, pero no podía hacerlo a causa de que carecía del necesario conocimiento: he ahí el motivo por el cual decidí estudiar física. Sin embargo, al comienzo de mi trabajo de investigación en física cuántica, a principios de la década de 1940, me tragué la interpretación estándar o de Copenhague, que es operacionista y, por ende, semisubjetivista. Mi epifanía realista llegó una década más tarde, durante un descanso en una de las reuniones de la Asociación Física Argentina: de pronto me di cuenta de que, cuando se describe un electrón libre o se calculan los niveles de energía de un átomo, solamente se utilizan variables que describen las propiedades de una cosa que no está siendo observada por nadie, vale decir una cosa en sí. Esta experiencia me sugirió la idea de que muchos de los pretendidos resultados filosóficos de la ciencia constituyen, en realidad, una filosofía ya rancia, que tiene un papel únicamente decorativo en la investigación científica. (Prefacio)

Editorial Reviews

“Bunge is a philosophical realist, or more accurately a scientific realist, and the book’s title, *Chasing Reality*, describes aptly his almost nine-decade quest for knowledge in physics and philosophy. [...]. (p. 22)

[...].

“The book is important because Bunge systematically chases not only physical reality, but personal, social and cultural realities. He lays out the epistemological and ontological framework for giving a systematic, coherent account of Reality, which of course includes human beings and societies. He also extends his chase by asking: whether there are objective values, moral facts, and moral truths (p. xiii). Thus at the outset he recognises the reality and importance of secondary qualities, or qualia, such as colour, taste, smell, but points out that these reside in nervous systems, not in the physical world around them. Qualia exist, but they do not exist independently of sentient beings. For this reason he says that physicalism, or vulgar materialism, cannot tackle qualia. It is likewise incapable of accounting for much more as well, such as the peculiarities of life (e.g. Evolution) and society (e.g. Culture). However physicalism is only the primitive version of materialism. The [scientific realist] alternative to physicalism is emergentist and systemist materialism, which has been around at least since Holbach’s time [1723-89]. (p.74) For Bunge “whatever is capable of changing in a lawful manner, from electron and gravitational field to person and society, is material” (p.26)

“Bunge outlines how ontologically, phenomena (experience, qualia) is a subset of reality; epistemologically, phenomena is the first port of call, but behind them are theories (of all kinds including mythological, religious, everyday and scientific), and behind theories and accessed via them is reality (p.8). To successfully take the final step, to successfully chase reality our theories need fictions especially mathematical ideas (limits, averages, square roots, etc.) and idealized models. The creation of such fictions involves mental effort, and their utility is ultimately demonstrated by experiment and more generally by successful intervention in real processes.

Chapter Two of the book deals with the Scientific Revolution and philosophers, principally Kant, who tried to learn from it but failed to grasp what methodologically was happening in the revolution. Chapter Three deals with Antirealism Today, and despatches Positivism, Phenomenology, Constructivism, and Nelson Goodman’s Worldmaking claims. The arguments and illustrations are familiar to readers of Bunge’s earlier books and articles (see essays in his *Scientific Realism*, 2001).

The final chapter of the book elaborates and defends his account of Ethical or Axiological Realism. He does this against ethical nihilists such as Nietzsche, emotivists such as Hume and Ayer, intuitionists such as Moore. For ethical realists, the fact/value dichotomy is a supernaturalist or irrationalist fallacy. He is careful to point out that value objectivism does not entail value absolutism (p.266). For Bunge, in brief, moral facts are social, not natural; they belong to the fabric of society, not to that of nature (p.270). Like other social facts, more facts can be perceived differently by different people; but also, if there are moral facts, then there can be moral truths, and as with other truths these are tied up with a competent moral theory. He lists and defends six conditions that any ethical theory needs to meet, and argues that his axiological realism encompasses them". (pp. 23-24)

International History, Philosophy and Science
Teaching Group *Newsletter*

"The explicit aim of *Chasing Reality* is to mount a defense of metaphysical and epistemological realism against its many postmodern critics. However, it is also a noteworthy instance of the work of increasingly rare breed of thinker who attempts to articulate the outlines of a complete philosophical system. Mario Bunge's work itself stands out because it not only incorporates current knowledge from the world of science (both natural and social/psychological), but is thoroughly informed by the methodology of science as it is actually practiced".

Daniel Forbes

"Mario Bunge proposes a comprehensive "philosophical realism" that amount to a complete philosophical system. On the way to development this system, he comments on a multitude of philosophical problems, a multitude of philosophical schools, and a multitude of philosophers. His comments on philosophers are very witty and pointed. In a sentence Bunge argues with a logical axe in hand, to cut down frivolous philosophy and frivolous philosophers –nothing spared for the sake of exacting truth, exacting science, and exacting exactedness. So, to the question –is this book worthreading?– the answer is a cloud and clear yes, if one wants to confront sharp and engaging challenges to one's own favorite philosophical position and favorite philosopher from whatever perspective one holds. However, to the question –does this book provides a philosophical realism that is for instance and advance over Aristotle?– I think not. Both Aristotle and Bunge attacked 'idealism'. Both proposed a very common sense sort of realism, though Bunge's philosophical arsenal contains the latest professional knowledge of logic, physics and mathematics, and philosophy and the social sciences. Bunge's argumentation utilizes poly-professionalism".

"Bold, forward thinking, and illuminating".

Sheldon Richmond

'*Chasing Reality* is clearly written and well-organized. It is broad in its sweep and deals with some of the most fundamental issues in metaphysics, epistemology, and the philosophy of science. Bunge is remarkably well informed about a wide range of scientific theories and puts that knowledge to good use in his choice and presentation of examples. Altogether, this book constitutes an original, eloquent, forthright, and remarkably wide-ranging defense of realism against its many and various antirealist opponents.'

E.J. Lowe, Department of Philosophy, University of Durham

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