Philosophy Of Science From Problem To Theory By Mario Bunge

Attempts to give the philosophical status as to the scientific claims of evolution and creationism
This volume provides the fundamentals needed to understand the various explanatory systems and methodologies used in the behavior sciences and to evaluate their findings, in particular the literature and findings on buyer behavior. In clear prose, the author discusses the key issues in modern philosophy, psychology, and sociology and their relevance for the student of marketing and buyer behavior. O’Shaughnessy exploits insights from many disciplines as to the many ways to derive understanding of behavioral phenomena, making it accessible not only to academics and students of marketing, but to professionals as well.

By combining excerpts from key historical writings with commentary by experts, Philosophy of Science: An Historical Anthology provides a comprehensive history of the philosophy of science from ancient to modern times. Provides a comprehensive history of the philosophy of science, from antiquity up to the 20th century. Includes extensive commentary by scholars putting the selected writings in historical context and pointing out their interconnections. Covers areas rarely seen in philosophy of science texts, including the philosophical dimensions of biology, chemistry, and geology. Designed to be accessible to both undergraduates and graduate students.

Philosophy of Science Volume 1, From Problem to Theory Routledge

About the Series Contemporary philosophy of science combines a general study from a philosophical perspective of the methods of science, with an inquiry, again from the philosophical point of view, into foundational issues that arise in the various special sciences. Methodological philosophy of science has deep connections with issues at the center of pure philosophy. It makes use of important results, for example, in traditional epistemology, metaphysics and the philosophy of language. It also connects in various ways with other disciplines such as the history and sociology of the sciences, with pure logic, and with such branches of mathematics as probability theory. These volumes are, for the most part, devoted to readings in the methodological aspects of the philosophy of science. One volume, however, takes up the philosophical issues in the foundations of a particularly important special science, that is the issues in the foundations of theories of contemporary physics. The methodological volumes cover a number of crucial general problem areas. The first volume takes up issues in the nature of scientific explanation, and the related issues of the nature of scientific law and of the casual relation among events. The second volume explores issues in the nature and structure of scientific theories. The third volume collects inquiries into the nature of scientific change, as one theory is replaced by another. Volume four is devoted to readings concerning the nature of probability and the nature and justification of inductive reasoning in science. The following volume continues the exploration of the issue of confirming and rejecting theories with a series of readings devoted to Bayesian methodologies in science and to the exploration of non-inductive strategies for rationalizing belief. Finally, volume six explores three major problem areas in the foundation of physics: the nature and rationale for physical theories of space and time; the interpretive problems arising out of the quantum theory; and some puzzles arising out of statistical mechanical theories of physics. The readings are selected and arranged to provide the user with systematic access to the most important contemporary themes in methodological philosophy of science and in philosophy of physics. The selections include many recent contributions to the field, as well as papers and extracts from books and journals otherwise not easily available.

As an academic discipline, the philosophy and history of science in Turkey was marked by two historical events: Hans Reichenbach's immigrating to Turkey and taking a post between 1933 and 1938 at Istanbul University prior to his tenure at UCLA, and Aydin Sayili's establishing a chair in the history of science in 1952 after having become the first student to receive a Ph.D. under George Sarton at Harvard University. Since then, both disciplines have flourished in Turkey. The present book, which contains seventeen newly commissioned articles, aims to give a rich overview of the current state of research by Turkish philosophers and historians of science. Topics covered address issues in methodology, causation, and reduction, and include philosophy of logic and physics, philosophy of psychology and language, and Ottoman science studies. The book also contains an unpublished interview with Maria Reichenbach, Hans Reichenbach's wife, which sheds new light on Reichenbach's academic and personal life in Istanbul and at UCLA.

An up-to-date, clear but rigorous introduction to the philosophy of science offering an indispensable grounding in the philosophical understanding of science and its problems. The book pays full heed to the neglected but vital conceptual issues such as the nature of scientific laws, while balancing and linking this with a full coverage of epistemological problems such as our knowledge of such laws.

Polish philosophy of science has been the beneficiary of three powerful creative streams of scientific and philosophical thought. First and fore most was the Lwow-Warsaw school of Polish analytical philosophy founded by Twardowski and continued in their several ways by Les niewski, Lukasiewicz, and Tarski, the great mathematical and logical philosophers, by Kotarbinski, probably the most distinguished teacher, public figure, and culturally influential philosopher of the inter-war and post-war period, and by Ajdukiewicz, the linguistic philosopher who was intellectually sympathetic with the anti-irrationalist (as he would say), logistic and meta-theoretical inquiries of the Vienna Circle. Second was independent and lively Polish Marxism, with its fine development of social research under Krzywicki, a social anthropologist and younger contemporary of Engels, and then after the war the economist Lange, the philosophers Schaff, Kolakowski, Baczkó, and many others. Finally there has been a wide range of philosophical, scientific and humanistic scholar ship which lends its various qualities to the understanding of both the logic of science and the historical situation of the sciences: we mention only that great and humane physicist Infeld, the phenomenologist with deep epistemological interest Ingarden, the historian of scientific ideas Zawirska, the historian of philosophy and aesthetics Tatarkiewicz, and the mathematical logicians such as Mostowski and Szaniawski.
It is fast becoming a cliche that scientific discovery is being rediscovered. For two philosophical generations (that of the Founders and that of the Followers of the logical positivist and logical empiricist movements), discovery had been consigned to the domain of the intractable, the ineffable, the inscrutable. The philosophy of science was focused on the so-called context of justification as its proper domain. More recently, as the exclusivity of the logical reconstruction program in philosophy of science came under question, and as the critique of justification developed within the framework of logical and epistemological analysis, the old question of scientific discovery, which had been put on the back burner, began to emerge once again. Emphasis on the relation of the history of science to the philosophy of science, and attention to the question of theory change and theory replacement, also served to legitimate a new concern with the origins of scientific change to be found within discovery and invention. How welcome then to see what a wide range of issues and what a broad representation of philosophers and historians of science have been brought together in the present two volumes of the Boston Studies in the Philosophy of Science! For what these volumes achieve, in effect, is the continuation of a tradition which had once been strong in the philosophy of science - namely, that tradition which addressed the question of scientific discovery as a central question in the understanding of science.

This volume presents a selection of papers from the Poincaré Project of the Center for the Philosophy of Science, University of Lisbon, bringing together an international group of scholars with new assessments of Henri Poincaré's philosophy of science - both its historical impact on the foundations of science and mathematics, and its relevance to contemporary philosophical inquiry. The work of Poincaré (1854-1912) extends over many fields within mathematics and mathematical physics. But his scientific work was inseparable from his groundbreaking philosophical reflections, and the scientific ferment in which he participated was inseparable from the philosophical controversies in which he played a prominent role. The subsequent history of the mathematical sciences was profoundly influenced by Poincaré's philosophical analyses of the relations between and among mathematics, logic, and physics, and, more generally, the relations between formal structures and the world of experience. The papers in this collection illuminate Poincaré's place within his own historical context as well as the implications of his work for ours.

Robert Figueroa and Sandra Harding bring together a collection of essays by philosophers exploring an extensive range of diversity issues for the philosophy of science and technology.

Part of the Handbook of the Philosophy of Science Series edited by: Dov M. Gabbay King's College, London, UK; Paul Thagard University of Waterloo, Canada; and John Woods University of British Columbia, Canada. Philosophy of Economics investigates the foundational concepts and methods of economics, the social science that analyzes the production, distribution and consumption of goods and services. This groundbreaking collection, the most thorough treatment of the philosophy of economics ever published, brings together philosophers, scientists and historians to map out the central topics in the field. The articles are divided into two groups. Chapters in the first group deal with various philosophical issues characteristic of economics in general, including realism and Lakatos, explanation and testing, modeling and mathematics, political ideology and feminist epistemology. Chapters in the second group discuss particular methods, theories and branches of economics, including forecasting and measurement, econometrics and experimentation, rational choice and agency issues, game theory and social choice, behavioral economics and public choice, geographical economics and evolutionary economics, and finally the economics of scientific knowledge. This volume serves as a detailed introduction for those new to the field as well as a rich source of new insights and potential research agendas for those already engaged with the philosophy of economics. Provides a bridge between philosophy and current scientific findings Encourages multi-disciplinary dialogue Covers theory and applications.

This collection of six symposia, with 24 prominent philosophers and scientists participating, concentrates on many of the most significant issues and controversies at the frontiers of philosophical and scientific enlightenment. The discussions clarify basic issues and problems and go on to suggest new avenues for their resolution. Each contribution is original; none has been published before. These fascinating give-and-take sessions among eminent thinkers simulate the reader to do his own thinking about fundamental problems in the logic and methodology of science. Among the problems discussed are the epistemological foundations of science, the logic of quantum theory, philosophy of space and time, and methodology of psychology. -- from dust jacket.

This volume is a serious attempt to open up the subject of European philosophy of science to real thought, and provide the structural basis for the interdisciplinary development of its specialist fields, but also to provoke reflection on the idea of 'European philosophy of science'. This efforts should foster a contemporaneous reflection on what might be meant by philosophy of science in Europe and European philosophy of science, and how in fact awareness of it could assist philosophers interpret and motivate their research through a stronger collective identity. The overarching aim is to set the background for a collaborative project organising, systematising, and ultimately forging an identity for a European philosophy of science by creating research structures and developing research networks across Europe to promote its development.

How does science work? Does it tell us what the world is "really" like? What makes it different from other ways of understanding the universe? In Theory and Reality, Peter Godfrey-Smith addresses these questions by taking the reader on a grand tour of one hundred years of debate about science. The result is a completely accessible introduction to the main themes of the philosophy of science. Intended for undergraduates and general readers with no prior background in philosophy, Theory and Reality covers logical positivism; the problems of induction and confirmation; Karl Popper's theory of science; Thomas Kuhn and "scientific revolutions"; the views of Imre Lakatos, Larry Laudan, and Paul Feyerabend; and challenges to the field from sociology of science, feminism, and science studies. The book then looks in more detail at some specific problems and theories, including scientific realism, the theory-ladenness of observation, scientific explanation, and Bayesianism. Finally, Godfrey-Smith defends a form of philosophical naturalism as the best way to solve the main problems in the field.

Throughout the text he points out connections between philosophical debates and wider discussions about science in recent decades, such as the infamous "science wars." Examples and asides engage the beginning student; a glossary of terms explains key concepts; and suggestions for further reading are included at the end of each chapter. However, this is a textbook that doesn't feel like a textbook because it captures the historical drama of changes in how science has been conceived over the last one hundred years. Like no other text in this field, Theory and Reality combines a survey of recent history of the philosophy of science with current key debates in language that any beginning student can follow.

"Cassirer employs his remarkable gift of lucidity to explain the major ideas and intellectual issues that emerged in the course of nineteenth century scientific and historical thinking. The translators have done an excellent job in reproducing his clarity in English. There is no better place for an intelligent reader to find out, with a minimum of technical language, what was really happening during the great intellectual movement between the age of Newton and our own."-- New York Times. -- Publisher description.

What sets the practice of rigorously tested, sound science apart from pseudoscience? In this volume, the contributors seek to answer this question, known to philosophers of science as "the demarcation problem." This issue has a long history in philosophy, stretching as far back as the early twentieth century and the work of Karl Popper. But by the late 1980s, scholars in the field began to treat the demarcation problem as impossible to solve and futile to ponder. However, the essays that Massimo Pigliucci and Maarten Boudry have assembled in this volume make a rousing case for the unequivocal importance of reflecting on the separation between pseudoscience and sound science. Moreover, the demarcation problem is not a purely theoretical dilemma of mere academic interest: it affects parents' decisions to
vaccinate children and governments’ willingness to adopt policies that prevent climate change. Pseudoscience often mimics science, using the superficial language and trappings of actual scientific research to seem more respectable. Even a well-informed public can be taken in by such questionable theories dressed up as science. Pseudoscientific beliefs compete with sound science on the health pages of newspapers for media coverage and in laboratories for research funding. Now more than ever the ability to separate genuine scientific findings from spurious ones is vital, and The Philosophy of Pseudoscience provides ground for philosophers, sociologists, historians, and laypeople to make decisions about what science is or isn’t.

Mature sciences have been long been characterized in terms of the “successfulness”, “reliability” or “trustworthiness” of their theoretical, experimental or technical accomplishments. Today many philosophers of science talk of “robustness”, often without specifying in a precise way the meaning of this term. This lack of clarity is the cause of frequent misunderstandings, since all these notions, and that of robustness in particular, are connected to fundamental issues, which concern nothing less than the very nature of science and its specificity with respect to other human practices, the nature of rationality and of scientific progress; and science’s claim to be a truth-conducive activity. This book offers for the first time a comprehensive analysis of the problem of robustness, and in general, that of the reliability of science, based on several detailed case studies and on philosophical essays inspired by the so-called practical turn in philosophy of science.

Containing 31 readings reflecting the dynamism of the field, this book provides readers with the most current and relevant readings available on issues in the philosophy of science. All of the readings have been selected based on their clarity and coverage of the prevailing debates in the philosophy of science—from logical positivism to antirealism. The book assumes no specialized training in formal logic or scientific methods and therefore can be appreciated by a wide range of readers.

"A book that shakes philosophy of science to its roots. Laudan both destroys and creates. With detailed, scathing criticisms, he attacks the 'pregnant confusions' in extant philosophies of science. The progress they espouse derives from strictly empirical criteria, he complains, and this clashes with historical evidence. Accordingly, Laudan constructs a remedy from historical examples that involves nothing less than the redefinition of scientific rationality and progress . . . Surprisingly, after this reshuffling, science still looks like a noble-and progressive-enterprise ... The glory of Laudan's system is that it preserves scientific rationality and progress in the presence of social influence. We can admit extra-scientific influences without lapsing into complete relativism. . . a must for both observers and practitioners of science."

--Physics Today "A critique and substantial revision of the historic theories of scientific rationality and progress (Popper, Kuhn, Lakatos, Feyerabend, etc.). Laudan focuses on contextual problem solving effectiveness (carefully defined) as a criterion for progress, and expands the notion of 'paradigm' to a 'research tradition,' thus providing a meta-empirical basis for the commensurability of competing theories. From this perspective, Laudan suggests revised programs for history and philosophy of science, the history of ideas, and the sociology of science. A superb work, closely argued, clearly written, and extensively annotated, this book will become a widely required text in intermediate courses."--Choice

This volume presents 25 essays on the philosophy of design. With contributions originating from philosophy and design research, and from product design to architecture, it gives a rich spectrum of state of the art research and brings together studies on philosophical topics in which design plays a key role and design research to which philosophy contributes. Coverage zooms in on specific and more well-known design disciplines but also includes less-studied disciplines, such as graphic design, interior architecture and exhibition design. In addition, contributors take up traditional philosophical issues, such as epistemology, politics, phenomenology and philosophy of science. Some essays cover philosophical issues that emerge in design, for instance what design can do in addressing societal problems, while other essays analyze mainstream philosophical issues in which design is part of the argument, as for instance abduction and aesthetics. Readers will discover new research with insightful analyses of design research, design thinking and the specificity of design. Overall, this comprehensive overview of an emerging topic in philosophy will be of great interest to researchers and students. This user-friendly text covers key issues in the philosophy of science in an accessible and philosophically serious way. It will prove valuable to students studying philosophy of science as well as science students. Prize-winning author Alex Rosenberg explores the philosophical problems that science raises by its very nature and method. He skillfully demonstrates that scientific explanation, laws, causation, theory, models, evidence, reductionism, probability, teleology, realism and instrumentalism actually pose the same questions that Plato, Aristotle, Descartes, Hume, Kant and their successors have grappled with for centuries.

The papers in this volume were presented at the colloquium "Reduktion in der Wissenschaft: Struktur, Beispiele, philosophische PrObleme", held in Bielefeld, West Germany, July 18-21, 1983. Altogether eighteen talks were delivered at the symposium, and all appear here with the exception of Professor Ehlers' address. In addition, we are pleased to be able to include three papers by invited participants (Kamiah, Ludwik, Scheibe) who were unable to attend the meeting. The meeting itself brought together a sizeable group of logicians, philosophers and working scientists to discuss and debate the theme of reduction, one that occupies a central place in contemporary philosophy of science. The participants and contributors succeeded in opening up new directions in reduction studies and presenting fresh case studies of reduction from many different areas of scientific practice. Their efforts will greatly enhance our understanding of reduction and, consequently, our grasp of the complex process of scientific change and the unity and growth of scientific knowledge.

...The understanding of scientific knowledge requires reflective thinking. The reflective thinking could restore the communication between subject and object, between social sciences and natural sciences. Only then, communication between facts and values can achieved. In other words, communication between reason and myth, science and art,
knowledge and wisdom, empirical research and the existential question for the meaning of life. The problem of scientific consciousness (liability) requires the transformation of the structures of the same knowledge. The sovereignty of uncontrolled scientism-positivism leads to brutalization and the reaction to it, leads to metaphysical obscurantism and madness. The researcher should be aware of the complex and reciprocal relationships between the scientific, technical, social and political worlds...

The problem of addiction is one of the major challenges and controversies confronting medicine and society. It also poses important and complex philosophical and scientific problems. What is addiction? Why does it occur? And how should we respond to it, as individuals and as a society? The Routledge Handbook of Philosophy and Science of Addiction is an outstanding reference source to the key topics, problems and debates in this exciting subject. It spans several disciplines and is the first collection of its kind. Organised into three clear parts, forty-five chapters by a team of international contributors examine key areas, including: the meaning of addiction to individuals conceptions of addiction varieties and taxonomies of addiction methods and models of addiction evolution and addiction history, sociology and anthropology population distribution and epidemiology developmental processes vulnerabilities and resilience psychological and neural mechanisms prevention, treatment and spontaneous recovery public health and the ethics of care social justice, law and policy. Essential reading for students and researchers in addiction research and in philosophy, particularly philosophy of mind and psychology and ethics, The Routledge Handbook of Philosophy and Science of Addiction will also be of great interest to those in related fields, such as medicine, mental health, social work, and social policy.

Philosophy Of Science Draws Upon Different Traditions In Western Philosophy, Starting From The Ancient Greek. However, There Is A Conspicuous Absence Of Non-Western Philosophical Traditions, Including The Indian, In Philosophy Of Science. This Book Argues That Indian Rational Traditions Such As Indian Logic, Drawn From Both Buddhist And Nyaya Philosophies, Are Not Only Relevant For Philosophy Of Science But Are Also Intrinsically Concerned With Scientific Methodology. It Also Suggests That The Indian Logical Traditions Can Be Understood As Requiring That Logic Itself Be Scientific. This Explains Their Engagement With Ideas Such As Valid Inference, Invariable Concomitance, The Use Of The Empirical In Logical Analysis, The Move From Observations To Statements About These Observations And So On. The Essential Relation Between Some Indian Philosophical Traditions And Science Is Further Illustrated By The Semiotic Character Of Indian Logic, Its Explanatory Structures Which Are Similar To Those Of Scientific Explanations, Indian Theories Of Knowledge And Truth, The Pragmatic Nature Of Truth And Its Relation To Action Which Is Essential To Nyaya And To Science, And Finally The Importance Of The Effability Thesis Which Is Central To Nyaya, Bhartṛhari And Modern Science. The Book Introduces The Reader To Important Themes In Indian Logic, Epistemology And Philosophy Of Language As Well As Philosophy Of Science. Relationships Between These Various Traditions Are Also Explored Thereby Suggesting How Indian Philosophy Can Engage With Contemporary Philosophy Of Science. This Introductory Book Will Be Valuable For Students, Professional Philosophers As Well As Those Interested In Indian Philosophy And Its Significance To Contemporary Thought.

This book features papers on the history and philosophy of science. It also includes related reviews of recent research literature on Rudolf Carnap, Eino Kaila, Ernst Mach, and Otto Neurath. The central idea behind this volume is that this distinctive field is both historical and philosophical at the same time. Good history and philosophy of science is not just history of science into which some philosophy of science may enter. On the other hand, it is neither philosophy of science into which some history of science may enter. The founding insight of this modern research discipline is that history and philosophy have a special affinity and one can effectively advance both simultaneously. The selection of contributions collected in this volume are good examples and best practices for these claims. In addition, it includes illuminating case studies. It will appeal to scholars in the history of and philosophy of science, especially history and philosophy of physics and biology, as well as economics, extended evolution, and the history of knowledge.

The question of the proper role of metaphysics in philosophy of science is both significant and contentious. The last few decades have seen considerable engagement with philosophical projects aptly described as "the metaphysics of science." inquiries into natural laws and properties, natural kinds, causal relations, and dispositions. At the same time, many metaphysicians have begun moving in the direction of more scientifically-informed ("scientistic" or "naturalistic") metaphysics. And yet many philosophers of science retain a deep suspicion about the significance of metaphysical investigations into science. This volume of new essays explores a broadly methodological question: what role should metaphysics play in our philosophizing about science? These new essays, written by leading philosophers of science, address this question both through ground-level investigations of particular issues in the metaphysics of science and by more general methodological inquiry. Originally published as Scientific Research, this pair of volumes constitutes a fundamental treatise on the strategy of science. Mario Bunge, one of the major figures of the century in the development of a scientific epistemology, describes and analyzes scientific philosophy, as well as discloses its philosophical presuppositions. This work may be used as a map to identify the various stages in the road to scientific knowledge. Philosophy of Science is divided into two volumes, each with two parts. Part 1 offers a preview of the scheme of science and the logical and semantical tool that will be used throughout the work. The account of scientific research begins with part 2, where Bunge discusses formulating the problem to be solved, hypothesis, scientific law, and theory. The second volume opens with part 3, which deals with the application of theories to explanation, prediction, and action. This section is graced by an outstanding discussion of the philosophy of technology. Part 4 begins with measurement and experiment. It then examines risks in jumping to conclusions from data to hypotheses as well as the converse procedure. Bunge begins this mammoth work with a section entitled “How to Use This Book.” He writes that it is intended for both independent reading and reference as well as for use in courses on scientific method and the philosophy of science. It suits a variety of purposes from introductory to advanced levels. Philosophy of Science is a versatile, informative, and useful text that will benefit professors, researchers, and students in a variety of disciplines, ranging from the behavioral and biological sciences to the physical sciences.

This book offers an integrated historical and philosophical examination of the origin of genetics. The author contends that an integrated HPS analysis helps us to have a better understanding of the history of genetics, and sheds light on some general issues in the philosophy of science. This book consists of three parts. It begins with historical problems, revisiting the significance of the work of Mendel, de Vries, and Weldon. Then it turns to integrated HPS problems, developing an exemplar-based analysis of the
development and the progress in early genetics. Finally, it discusses philosophical problems: conceptual change, evidence, and
theory choice. Part I lays out a new historiography, serving as a basis for the discussions in Part II and Part III. Part II introduces a
new integrated HPS method to analyse and interpret the historiography in Part I and to re-examine the philosophical issues in Part
III. Part III develops new philosophical accounts which will in turn make a better sense of the history of scientific practice more
generally. This book provides a practical defence of integrated HPS: the best way to defend integrated HPS is to do it.
This book contains a selection of original conference papers covering all major fields in the philosophy of science, that have been
organized into themes. The first section of this volume begins with the formal philosophy of science, moves on to idealization,
representation and explanation and then finishes with realism, anti-realism and special science laws. The second section covers
the philosophy of the physical sciences, looking at quantum mechanics, spontaneous symmetry breaking, the philosophy of space
and time, linking physics and metaphysics and the philosophy of chemistry. Further themed sections cover the philosophies of the
life sciences, the cognitive sciences and the social sciences. Readers will find that this volume provides an excellent overview of
the state of the art in the philosophy of science, as practiced in different European countries.

Though the publication of Kuhn's Structure of Scientific Revolutions seemed to herald the advent of a unified study of the history
and philosophy of science, it is a hard fact that history of science and philosophy of science have increasingly grown apart.
Recently, however, there has been a series of workshops on both sides of the Atlantic (called 'HPS') intended to bring historians
and philosophers of science together to discuss new integrative approaches. This is therefore an especially appropriate time
to explore the problems with and prospects for integrating history and philosophy of science. The original essays in this volume, all
from specialists in the history of science or philosophy of science, offer such an exploration from a wide variety of perspectives.
The volume combines general reflections on the current state of history and philosophy of science with studies of the relation
between the two disciplines in specific historical and scientific cases.

What is science? Is there a real difference between science and myth? Is science objective? Can science explain
everything? This Very Short Introduction provides a concise overview of the main themes of contemporary philosophy of
science. Beginning with a short history of science to set the scene, Samir Okasha goes on to investigate the nature of
scientific reasoning, scientific explanation, revolutions in science, and theories such as realism and anti-realism. He also
looks at philosophical issues in particular sciences, including the problem of classification in biology, and the nature of
space and time in physics. The final chapter touches on the conflicts between science and religion, and explores whether
science is ultimately a good thing. ABOUT THE SERIES: The Very Short Introductions series from Oxford University
Press contains hundreds of titles in almost every subject area. These pocket-sized books are the perfect way to get
ahead in a new subject quickly. Our expert authors combine facts, analysis, perspective, new ideas, and enthusiasm to
make interesting and challenging topics highly readable.

?The motivation for this volume is simple. For a variety of reasons, clinical psychologists have long shown considerable
interest in the philosophy of science. When logical positivism gained currency in the 1930s, psychologists were among
the most avid readers of what these philosophers had to say about science. Part of the critique of Skinner's radical
behaviorism and thus behavior therapy was that it relied on, and thus was logically dependent on, the truth of logical
positivism—a claim decisively refuted both historically and logically by L.D. Smith (1986) in his important Behaviorism and
Logical Positivism: A Reassessment of the Alliance.

One of the most comprehensive and yet accessible texts on the market, PHILOSOPHY OF SCIENCE COMPLETE: A
TEXT ON TRADITIONAL PROBLEMS AND SCHOOLS OF THOUGHT, Second Edition is updated to include current
developments in this complex field of study. This volume consists of two parts: Book I deals with traditional problems in
the philosophy of science: logic, explanation, and epistemology. Book II presents various schools and systems of thought
from the philosophy of science. Prominently featured are: rationalism, empiricism, logical positivism and constructivism.
The text offers both breadth and depth, but is written in clear and straightforward language, making it appropriate for
philosophy of science courses at both the undergraduate and graduate levels. Important Notice: Media content
referenced within the product description or the product text may not be available in the ebook version.

This book investigates Hermann Weyl's work on the problem of space from the early 1920s onwards. It presents new
material and opens the philosophical problem of space anew, crossing the disciplines of mathematics, history of science
and philosophy. With a Kantian starting point Weyl asks: among all the infinitely many conceivable metrical spaces, which one applies to the physical world? In agreement with general relativity, Weyl acknowledges that the metric can quantitatively vary with the physical situation. Despite this freedom, Weyl "deduces", with group-theoretical technicalities, that there is only one "kind" of legitimate metric. This construction was then decisive for the development of gauge theories. Nevertheless, the question of the foundations of the metric of physical theories is only a piece of a wider epistemological problem. Contributing authors mark out the double trajectory that goes through Weyl's texts, from natural science to philosophy and conversely, always through the mediation of mathematics. Readers may trace the philosophical tradition to which Weyl refers and by which he is inspired (Kant, Husserl, Fichte, Leibniz, Becker etc.), and explore the mathematical tradition (Riemann, Helmholtz, Lie, Klein) that permitted Weyl to elaborate and solve his mathematical problem of space. Furthermore, this volume analyzes the role of the interlocutors with whom Weyl discussed the nature of physical space (Einstein, Cartan, De Sitter, Schrödinger, Eddington). This volume features the work of top specialists and will appeal to postgraduates and scholars in philosophy, the history of science, mathematics, or physics.

Philosophy of science has always been an integral part of philosophy, and since the beginning of the 20th century it has
developed its own structure and its fair share of technical vocabulary and problems. Philosophy of Science A-Z gives you
concise, accurate and illuminating accounts of key positions, concepts, arguments and figures in the philosophy of
science. It helps you to understand the current debates, explains their historical development and connects them with
broader philosophical issues. It presupposes little prior knowledge of philosophy of science and is equally useful to
students coming to the subject for the first time and for more advanced scholars who need to look up particular terms or figures. You will find illuminating explanations, careful analysis, relevant examples, open problems and precise arguments. Philosophy of science is a flourishing discipline and Philosophy of Science A-Z is a practical and imaginative way into and through it.

Professor Peter Mittelstaedt is a physicist whose primary concern is the foundations of current physical theories. This concern has made him, through his prolonged, incisive and detailed examinations of the structures and overall characteristics of these theories, into a philosopher of physic- of contemporary physics, to be precise, of relativistic theories of space and time, and of the logic of quantum mechanics, in particular. The present book, which expounds his main ideas in these matters, has seen four editions (in German), each including newer results - as indeed does the present translation: see the author's 1975 preface to the English translation. Perhaps this is the place to repeat the author's chief problem and mention his own approach, even though they are expounded in his Introduction. How close is Mittelstaedt to Kant's understanding of science? We are at liberty to choose a framework for thought - a logic and a methodology - prior to experience (in the classic sense, to think a priori); yet we choose a framework so as to fit our empirical findings. How is this done? How may it be understood and justified? This is obviously the question of all philosophies that evolve from, and are in reaction to, Kant's system.

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