Philosophy Of Science The Central Issues

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Philosophy of Chemistry - Paul Thagard 2012 Philosophy of Chemistry investigates the foundational concepts and methods of chemistry, the science of the nature of substances and their transformations. This groundbreaking collection, the most thorough treatment of the philosophy of chemistry ever published, brings together philosophers, scientists and historians to map out the central topics in the field. The 33 articles address the history of the philosophy of chemistry and the philosophical importance of some central figures in the history of chemistry; the nature of chemical substances; central chemical concepts and methods, including the

chemical bond, the periodic table and reaction mechanisms; and chemistry's relationship to other disciplines such as physics, molecular biology, pharmacy and chemical engineering. 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 chemistry. Provides a bridge between philosophy and current scientific findings Encourages multi-disciplinary dialogue Covers theory and applications

Philosophy of Science: The Key Thinkers - James Robert Brown 2012-02-16

All the great philosophers from Plato and Aristotle to the present day have been philosophers of science. However, this book concentrates on modern philosophy of science, starting in the nineteenth century and offering coverage of all the leading thinkers in the field including Whewell, Mill, Reichenbach, Carnap, Popper, Feyerabend, Putnam, van Fraassen, Bloor, Latour, Hacking, Cartwright and many more. Crucially the book demonstrates how the ideas and arguments of these key thinkers have contributed to our understanding of such central issues as experience and necessity, conventionalism, logical empiricism, induction and falsification, the sociology of science, and realism. Ideal for undergraduate students, the book lays the necessary foundations for a complete and thorough understanding of this fascinating subject.

Why Does the World Exist?: An Existential Detective Story - Jim Holt 2012-07-16

The Washington Post Notable Non-Fiction of 2013 “I can imagine few more enjoyable ways of thinking than to read this book.”—Sarah Bakewell, New York Times Book Review, front-page review Tackling the “darkest question in all of philosophy” with “raffish erudition” (Dwight Garner, New York Times), author Jim Holt explores the greatest metaphysical mystery of all: why is there something rather than nothing?

This runaway bestseller, which has captured the imagination of critics and the public alike, traces our latest efforts to grasp the origins of the universe. Holt adopts the role of cosmological detective, traveling the globe to interview a host of celebrated scientists, philosophers, and writers, “testing the contentions of one against the theories of the other” (Jeremy Bernstein, Wall Street Journal). As he interrogates his list of ontological culprits, the brilliant yet slyly humorous Holt contends that we might have been too narrow in limiting our suspects to God versus the Big Bang. This “deft and consuming” (David Ulin, Los Angeles Times) narrative humanizes the profound questions of meaning and existence it confronts.

Philosophy of Science - J. A. Cover 2012-09-26
Both an anthology and an introductory textbook, Philosophy of Science: The Central Issues offers instructors and students a comprehensive anthology of fifty-two primary texts by leading philosophers in the field and provides extensive editorial commentary that places the readings in a wide philosophical context.

Science, Policy, and the Value-Free Ideal - Heather Douglas 2009-07-15
The role of science in policymaking has gained unprecedented stature in the United States, raising questions about the place of science and scientific expertise in the democratic process. Some scientists have been given considerable epistemic authority in shaping policy on issues of great moral and cultural significance, and the politicizing of these issues has become highly contentious. Since World War II, most philosophers of science have purported the concept that science should be “value-free.” In Science, Policy and the Value-Free Ideal, Heather E. Douglas argues that such an ideal is neither adequate nor desirable for science. She contends that the moral responsibilities of scientists require the consideration of values even at the heart of science. She lobbies for a new ideal in which values serve an essential

function throughout scientific inquiry, but where the role values play is constrained at key points, thus protecting the integrity and objectivity of science. In this vein, Douglas outlines a system for the application of values to guide scientists through points of uncertainty fraught with moral valence. Following a philosophical analysis of the historical background of science advising and the value-free ideal, Douglas defines how values should-and should not-function in science. She discusses the distinctive direct and indirect roles for values in reasoning, and outlines seven senses of objectivity, showing how each can be employed to determine the reliability of scientific claims. Douglas then uses these philosophical insights to clarify the distinction between junk science and sound science to be used in policymaking. In conclusion, she calls for greater openness on the values utilized in policymaking, and more public participation in the policymaking process, by suggesting various models for effective use of both the public and experts in key risk assessments.

Representing and Intervening - Ian Hacking 1983-10-20

This 1983 book is a lively and clearly written introduction to the philosophy of natural science, organized around the central theme of scientific realism. It has two parts. 'Representing' deals with the different philosophical accounts of scientific objectivity and the reality of scientific entities. The views of Kuhn, Feyerabend, Lakatos, Putnam, van Fraassen, and others, are all considered. 'Intervening' presents the first sustained treatment of experimental science for many years and uses it to give a new direction to debates about realism. Hacking illustrates how experimentation often has a life independent of theory. He argues that although the philosophical problems of scientific realism can not be resolved when put in terms of theory alone, a sound philosophy of experiment provides compelling grounds for a realistic attitude. A great many scientific examples are

described in both parts of the book, which also includes lucid expositions of recent high energy physics and a remarkable chapter on the microscope in cell biology.

The Routledge Companion to Philosophy of Science - Martin Curd 2013-07-24

The Routledge Companion to Philosophy of Science is an indispensable reference source and guide to the major themes, debates, problems and topics in philosophy of science. It contains sixty-two specially commissioned entries by a leading team of international contributors. Organized into four parts it covers:historical and philosophical context debates concepts the individual sciences. The Routledge Companion to Philosophy of Science addresses all of the essential topics.

What is Philosophy of Science? - Dean Rickles 2020-04-20

Philosophy of science puts science itself under the microscope: What exactly is science? How do its explanations of the world differ from those of other subjects, including so-called "pseudo-sciences"? How should we understand and evaluate scientific methods? What, if anything, can science tell us about the nature of physical reality? Dean Rickles guides beginners through the central topics in philosophy of science. He looks at the origins and evolution of the field, the issues that arise when distinguishing between science and non-science, the concepts of logic and associated problems, scientific realism and anti-realism, and the nature of scientific models and representing. Rickles brings the subject to sparkling life with a user-friendly tone and rich, real-world examples. What is Philosophy of Science? is the must-have primer for students getting to grips with this broad-ranging and important topic.

The Logic in Philosophy of Science - Hans Halvorson 2019-07-11

Reconsiders the role of formal logic in the analytic approach to philosophy, using cutting-edge mathematical techniques to elucidate

twentieth-century debates.

Current Controversies in Philosophy of Science - Shamik Dasgupta 2020-10-27

Current Controversies in Philosophy of Science asks twelve philosophers to debate six questions that are driving contemporary work in this area of philosophy. The questions are: I. Are Boltzmann Brains Bad? II. Does Mathematical Explanation Require Mathematical Truth? III. Does Quantum Mechanics Suggest Spacetime is Nonfundamental? IV. Is Evolution Fundamental When It Comes to Defining Biological Ontology? V. Is Chance Ontologically Fundamental? VI. Are Sexes Natural Kinds? These debates explore the philosophical foundations of particular scientific disciplines, while also examining more general issues in the philosophy of science. The result is a book that's perfect for the advanced philosophy student, building up their knowledge of the foundations of the field and engaging with its cutting-edge questions. Preliminary descriptions of each chapter, annotated lists of further readings for each controversy, and study questions for each chapter help provide clearer and richer snapshots of active controversies for all readers.

Theory and Reality - Peter Godfrey-Smith 2021-07-16

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 more than a hundred years of debate about science. The result is a completely accessible introduction to the main themes of the philosophy of science. 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. 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 that any beginning scholar or critical

reader can follow. The second edition is thoroughly updated and expanded by the author with a new chapter on truth, simplicity, and models in science.

Philosophy of Science: Key Concepts - Steven French 2016-01-28

Science has made a huge impact on human society over hundred years, but how does it work? How do scientists do the things they do? How do they come up with the theories? How do they test them? How do they use these theories to explain phenomena? How do they draw conclusions from them about how the world might be? Now updated, this second edition of Philosophy of Science: Key Concepts looks at each of these questions and more. Taking in turn the fundamental theories, processes and views lying at the heart of the philosophy of science, this engaging introduction illuminates the scientific practice and provides a better appreciation of how science actually works. It features: - Chapters on discovery, evidence, verification and falsification, realism and objectivity - Accessible overviews of work of key thinkers such as Galileo, Einstein and Mullis - A new chapter on explanation - An extended range of easy-to-follow and contemporary examples to help explain more technical ideas - Study exercises, an annotated bibliography and suggestions of Where to Go Next Succinct and approachable, Philosophy of Science: Key Concepts outlines some of the most central and important scientific questions, problems and arguments without assuming prior knowledge of philosophy. This enjoyable introduction is the perfect starting point for anyone looking to understand how and why science has shaped and changed our view of the world.

Reality+: Virtual Worlds and the Problems of Philosophy - David J. Chalmers 2022-01-25

A leading philosopher takes a mind-bending journey through virtual worlds, illuminating the nature of reality and our place within it. Virtual reality is genuine reality; that’s the central

thesis of Reality+. In a highly original work of "technophilosophy," David J. Chalmers gives a compelling analysis of our technological future. He argues that virtual worlds are not second-class worlds, and that we can live a meaningful life in virtual reality. We may even be in a virtual world already. Along the way, Chalmers conducts a grand tour of big ideas in philosophy and science. He uses virtual reality technology to offer a new perspective on long-established philosophical questions. How do we know that there's an external world? Is there a god? What is the nature of reality? What's the relation between mind and body? How can we lead a good life? All of these questions are illuminated or transformed by Chalmers' mind-bending analysis. Studded with illustrations that bring philosophical issues to life, Reality+ is a major statement that will shape discussion of philosophy, science, and technology for years to come.

The Environment - William P. Kabasenche 2012-04-27

Original essays by leading scholars consider the environment from biological and ethical perspectives. Philosophical reflections on the environment began with early philosophers' invocation of a cosmology that mixed natural and supernatural phenomena. Today, the central philosophical problem posed by the environment involves not what it can teach us about ourselves and our place in the cosmic order but rather how we can understand its workings in order to make better decisions about our own conduct regarding it. The resulting inquiry spans different areas of contemporary philosophy, many of which are represented by the fifteen original essays in this volume. The contributors first consider conceptual problems generated by rapid advances in biology and ecology, examining such topics as ecological communities, adaptation, and scientific consensus. The contributors then turn to epistemic and axiological issues, first

considering philosophical aspects of environmental decision making and then assessing particular environmental policies (largely relating to climate change), including reparations, remediation, and nuclear power, from a normative perspective. Contributors Katie McShane, Robert Brandon, Rachel Bryant, Michael Trestman, Brian Steverson, Denis Walsh, Lorraine Code, Jay Odenbaugh, Joseph Cannon, Mariam Thalos, Chrisoula Andreou, Clare Palmer, Ben Hale, Kristin Shrader-Frechette, Andrew Light

Metaphysics and the Philosophy of Science - Matthew Slater 2017-02-01

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.

An Introduction to the Philosophy of Science - Kent W. Staley 2014-11-06

This book explores central philosophical concepts, issues, and debates in the philosophy of science, both historical and contemporary.

The Meaning of Science - Tim Lewens 2016-01-26

A philosopher of science examines the biggest

ethical and moral issues in science today, and explains why they matter for all of us -- scientist and layman alike Science has produced explanations for everything from the mechanisms of insect navigation to the formation of black holes and the workings of black markets. But how much can we trust science, and can we actually know the world through it? How does science work and how does it fail? And how can the work of scientists help -- or hurt -- everyday people? These are not questions that science can answer on its own. This is where philosophy of science comes in. Studying science without philosophy is, to quote Einstein, to be "like somebody who has seen thousands of trees but has never seen a forest." Cambridge philosopher Tim Lewens shows us the forest. He walks us through the theories of seminal philosophers of science Karl Popper and Thomas Kuhn and considers what science is, how far it can and should reach, and how we can determine the nature of its truths and myths. These philosophical issues have consequences that stretch far beyond the laboratory. For instance: What role should scientists have in policy discussions on environmental issues such as fracking? What are the biases at play in the search for a biological function of the female orgasm? If brain scans can be used to demonstrate that a decision was made several seconds before a person actually makes a conscious choice, what does that tell us about the possibility of free will? By examining science through this philosophical lens, Lewens reveals what physics can teach us about reality, what biology teaches us about human nature, and what cognitive science teaches us about human freedom. A masterful analysis of the biggest scientific and ethical issues of our age, The Meaning of Science forces us to confront the practical, personal, and political purposes of science -- and why it matters to all of us.

Philosophy of Social Science - Mark Risjord 2014-05-16

The Philosophy of Social Science: A Contemporary Introduction examines the perennial questions of philosophy by engaging with the empirical study of society. The book offers a comprehensive overview of debates in the field, with special attention to questions arising from new research programs in the social sciences. The text uses detailed examples of social scientific research to motivate and illustrate the philosophical discussion. Topics include the relationship of social policy to social science, interpretive research, action explanation, game theory, social scientific accounts of norms, joint intentionality, reductionism, causal modeling, case study research, and experimentation.

Empiricism and Philosophy of Physics - Lars-Göran Johansson 2021-01-13

This book presents a thoroughly empiricist account of physics. By providing an overview of the development of empiricism from Ockham to van Fraassen the book lays the foundation for its own version of empiricism. Empiricism for the author consists of three ideas: nominalism, i.e. dismissing second order quantification as unnecessary, epistemological naturalism, and viewing classification of things in natural kinds as a human habit not in need for any justification. The book offers views on the realism-antirealism debate as well as on the individuation of theories as a thoroughly neglected aspect of underdetermination. The book next discusses a broad range of topics, including the predicates body, spatial distance and time interval, the ontology of electromagnetism, propensities, the measurement problem and other philosophical issues in quantum theory. Discussions about the direction of time and about string theory make up the final part of the book.

Philosophy of Biology - Peter Godfrey-Smith 2016-09-06

An essential introduction to the philosophy of biology This is a concise, comprehensive, and

accessible introduction to the philosophy of biology written by a leading authority on the subject. Geared to philosophers, biologists, and students of both, the book provides sophisticated and innovative coverage of the central topics and many of the latest developments in the field. Emphasizing connections between biological theories and other areas of philosophy, and carefully explaining both philosophical and biological terms, Peter Godfrey-Smith discusses the relation between philosophy and science; examines the role of laws, mechanistic explanation, and idealized models in biological theories; describes evolution by natural selection; and assesses attempts to extend Darwin's mechanism to explain changes in ideas, culture, and other phenomena. Further topics include functions and teleology, individuality and organisms, species, the tree of life, and human nature. The book closes with detailed, cutting-edge treatments of the evolution of cooperation, of information in biology, and of the role of communication in living systems at all scales. Authoritative and up-to-date, this is an essential guide for anyone interested in the important philosophical issues raised by the biological sciences.

Philosophy of Medicine - Dov M. Gabbay 2011-08-23

This volume covers a wide range of conceptual, epistemological and methodological issues in the philosophy of science raised by reflection upon medical science and practice. Several chapters examine such general meta-scientific concepts as discovery, reduction, theories and models, causal inference and scientific realism as they apply to medicine or medical science in particular. Some discuss important concepts specific to medicine (diagnosis, health, disease, brain death). A topic such as evidence, for instance, is examined at a variety of levels, from social mechanisms for guiding evidence-based reasoning such as evidence-based medicine, consensus conferences, and clinical trials, to the

more abstract analysis of experimentation, inference and uncertainty. Some chapters reflect on particular domains of medicine, including psychiatry, public health, and nursing. The contributions span a broad range of detailed cases from the science and practice of medicine, as well as a broad range of intellectual approaches, from conceptual analysis to detailed examinations of particular scientific papers or historical episodes. Chapters view philosophy of medicine from quite different angles Considers substantive cases from both medical science and practice Chapters from a distinguished array of contributors

Philosophy of Economics - Dov M. Gabbay 2012-06-12

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

Understanding Philosophy of Science - James Ladyman 2012-08-06

Few can imagine a world without telephones or televisions; many depend on computers and the Internet as part of daily life. Without scientific theory, these developments would not have been possible. In this exceptionally clear and engaging introduction to philosophy of science, James Ladyman explores the philosophical questions that arise when we reflect on the nature of the scientific method and the knowledge it produces. He discusses whether fundamental philosophical questions about knowledge and reality might be answered by science, and considers in detail the debate between realists and antirealists about the extent of scientific knowledge. Along the way, central topics in philosophy of science, such as the demarcation of science from non-science, induction, confirmation and falsification, the relationship between theory and observation and relativism are all addressed. Important and complex current debates over underdetermination, inference to the best explaination and the implications of radical theory change are clarified and clearly explained for those new to the subject.

The Fate of Knowledge - Helen E. Longino 2018-06-05

Helen Longino seeks to break the current deadlock in the ongoing wars between philosophers of science and sociologists of science--academic battles founded on disagreement about the role of social forces in constructing scientific knowledge. While many

philosophers of science downplay social forces, claiming that scientific knowledge is best considered as a product of cognitive processes, sociologists tend to argue that numerous noncognitive factors influence what scientists learn, how they package it, and how readily it is accepted. Underlying this disagreement, however, is a common assumption that social forces are a source of bias and irrationality. Longino challenges this assumption, arguing that social interaction actually assists us in securing firm, rationally based knowledge. This important insight allows her to develop a durable and novel account of scientific knowledge that integrates the social and cognitive. Longino begins with a detailed discussion of a wide range of contemporary thinkers who write on scientific knowledge, clarifying the philosophical points at issue. She then critically analyzes the dichotomous understanding of the rational and the social that characterizes both sides of the science studies stalemate and the social account that she sees as necessary for an epistemology of science that includes the full spectrum of cognitive processes. Throughout, her account is responsive both to the normative uses of the term knowledge and to the social conditions in which scientific knowledge is produced. Building on ideas first advanced in her influential book Science as Social Knowledge, Longino brings her account into dialogue with current work in social epistemology and science studies and shows how her critical social approach can help solve a variety of stubborn problems. While the book focuses on epistemological concerns related to the sociality of inquiry, Longino also takes up its implications for scientific pluralism. The social approach, she concludes, best allows us to retain a meaningful concept of knowledge in the face of theoretical plurality and uncertainty.

General Philosophy of Science: Focal Issues - 2007-07-18

Scientists use concepts and principles that are partly specific for their subject matter, but they also share part of them with colleagues working in different fields. Compare the biological notion of a 'natural kind' with the general notion of 'confirmation' of a hypothesis by certain evidence. Or compare the physical principle of the 'conservation of energy' and the general principle of 'the unity of science'. Scientists agree that all such notions and principles aren't as crystal clear as one might wish. An important task of the philosophy of the special sciences, such as philosophy of physics, of biology and of economics, to mention only a few of the many flourishing examples, is the clarification of such subject specific concepts and principles. Similarly, an important task of 'general' philosophy of science is the clarification of concepts like 'confirmation' and principles like 'the unity of science'. It is evident that clarfication of concepts and principles only makes sense if one tries to do justice, as much as possible, to the actual use of these notions by scientists, without however following this use slavishly. That is, occasionally a philosopher may have good reasons for suggesting to scientists that they should deviate from a standard use. Frequently, this amounts to a plea for differentiation in order to stop debates at cross-purposes due to the conflation of different meanings. While the special volumes of the series of Handbooks of the Philosophy of Science address topics relative to a specific discipline, this general volume deals with focal issues of a general nature. After an editorial introduction about the dominant method of clarifying concepts and principles in philosophy of science, called explication, the first five chapters deal with the following subjects. Laws, theories, and research programs as units of empirical knowledge (Theo Kuipers), various past and contemporary perspectives on explanation (Stathis Psillos), the evaluation of theories in terms of their virtues (Ilkka Niiniluto), and the

role of experiments in the natural sciences, notably physics and biology (Allan Franklin), and their role in the social sciences, notably economics (Wenceslao Gonzalez). In the subsequent three chapters there is even more attention to various positions and methods that philosophers of science and scientists may favor: ontological, epistemological, and methodological positions (James Ladyman), reduction, integration, and the unity of science as aims in the sciences and the humanities (William Bechtel and Andrew Hamilton), and logical, historical and computational approaches to the philosophy of science (Atocha Aliseda and Donald Gillies). The volume concludes with the much debated question of demarcating science from nonscience (Martin Mahner) and the rich European-American history of the philosophy of science in the 20th century (Friedrich Stadler). Comprehensive coverage of the philosophy of science written by leading philosophers in this field Clear style of writing for an interdisciplinary audience No specific pre-knowledge required

Philosophy of Science and the Occult - Patrick Grim 1990-07-17

This book both introduces the philosophy of science through examination of the occult and examines the occult rigorously enough to raise central issues in the philosophy of science. Placed in the context of the occult, philosophy of science issues become immediately understandable and forcefully compelling. Divergent views on astrology, parapsychology, and quantum mechanics mysticism emphasize topics standard to the philosophy of science. Such issues as confirmation and selection for testing, causality and time, explanation and the nature of scientific laws, the status of theoretical entities, the problem of demarcation, theory and observation, and science and values are discussed. Significantly revised, this second edition presents an entirely new section of quantum mechanics and mysticism including

instructions from N. David Mermin for constructing a device which dramatically illustrates the genuinely puzzling phenomena of quantum mechanics. A more complete and current review of research on astrology has been included in this new edition, and the section on the problem of demarcation has been broadened. Patrick Grim is Associate Professor of Philosophy at the State University of New York at Stony Brook. He has coedited eleven volumes of The Philosopherâ□□s Annual and has published a number of articles on logic and contemporary metaphysics, philosophy of religion, and ethics.

The Philosophy of Science - Anouk Barberousse 2018-06-28

Philosophy of science studies the methods, theories, and concepts used by scientists. It mainly developed as a field in its own right during the twentieth century and is now a diversified and lively research area. This book surveys the current state of the discipline by focusing on central themes like confirmation of scientific hypotheses, scientific explanation, causality, the relationship between science and metaphysics, scientific change, the relationship between philosophy of science and science studies, the role of theories and models, unity of science. These themes define general philosophy of science. The book also presents sub-disciplines in the philosophy of science dealing with the main sciences: logic, mathematics, physics, biology, medicine, cognitive science, linguistics, social sciences, and economics. While it is common to address the specific philosophical problems raised by physics and biology in such a book, the place assigned to the philosophy of special sciences is much more unusual. Most authors collaborate on a regular basis in their research or teaching and share a common vision of philosophy of science and its place within philosophy and academia in general. The chapters have been written in close accordance with the three editors, thus

achieving strong unity of style and tone.

Philosophy of Science - Timothy McGrew 2009-05-04

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

Neuroscience and Philosophy - Felipe De Brigard 2022-02-01

Philosophers and neuroscientists address central issues in both fields, including morality, action, mental illness, consciousness, perception, and memory. Philosophers and neuroscientists grapple with the same profound questions involving consciousness, perception, behavior, and moral judgment, but only recently have the two disciplines begun to work together. This volume offers fourteen original chapters that address these issues, each written by a team that includes at least one philosopher and one neuroscientist who integrate disciplinary perspectives and reflect the latest research in both fields. Topics include morality, empathy, agency, the self, mental illness, neuroprediction, optogenetics, pain, vision, consciousness, memory, concepts, mind wandering, and the neural basis of psychological categories. The chapters first address basic issues about our social and moral lives: how we decide to act and ought to act toward each other, how we understand each other's mental states and selves, and how we deal with pressing social problems regarding crime and mental or brain

health. The following chapters consider basic issues about our mental lives: how we classify and recall what we experience, how we see and feel objects in the world, how we ponder plans and alternatives, and how our brains make us conscious and create specific mental states.

Philosophy of Science in the Twentieth Century - Donald Gillies 1993-04-08

This book traces the development during the 20th century of four central themes in the philosophy of science. The themes, chosen for their importance are expounded in a way which does not presuppose any previous knowledge of philosophy or science. The book thus constitutes an excellent introduction to the philosophy of science.

Recent Developments in the Philosophy of Science: EPSA13 Helsinki - Uskali Mäki 2015-09-09

This volume showcases the best of recent research in the philosophy of science. A compilation of papers presented at the EPSA 13, it explores a broad distribution of topics such as causation, truthlikeness, scientific representation, gender-specific medicine, laws of nature, science funding and the wisdom of crowds. Papers are organised into headings which form the structure of the book. Readers will find that it covers several major fields within the philosophy of science, from general philosophy of science to the more specific philosophy of physics, philosophy of chemistry, philosophy of the life sciences, philosophy of psychology, and philosophy of the social sciences and humanities, amongst others. This volume provides an excellent overview of the state of the art in the philosophy of science, as practiced in different European countries and beyond. It will appeal to researchers with an interest in the philosophical underpinnings of their own discipline, and to philosophers who wish to explore the latest work on the themes explored.

Scientific Pluralism Reconsidered - Stephanie

Ruphy 2017-03-17
Can we expect our scientific theories to make up a unified structure, or do they form a kind of “patchwork” whose pieces remain independent from each other? Does the proliferation of sometimes-incompatible representations of the same phenomenon compromise the ability of science to deliver reliable knowledge? Is there a single correct way to classify things that science should try to discover, or is taxonomic pluralism here to stay? These questions are at the heart of philosophical debate on the unity or plurality of science, one of the most central issues in philosophy of science today. This book offers a critical overview and a new structure of this debate. It focuses on the methodological, epistemic, and metaphysical commitments of various philosophical attitudes surrounding monism and pluralism, and offers novel perspectives and pluralist theses on scientific methods and objects, reductionism, plurality of representations, natural kinds, and scientific classifications.

Philosophy of Science for Biologists - Kostas Kampourakis 2020-09-24
A short and accessible introduction to philosophy of science for students and researchers across the life sciences.

Philosophy of Science - Samir Okasha 2016
"In this new edition Samir Ikasha reviews the main themes of contemporary philosophy of science. Beginning with a brief account of the history of modern science, he asks whether there is a discernible pattern to the way scientific ideas change over time. He examines scientific inference, scientific explanation, and the debate between realist and anti-realist views of science."--

An Introduction to the Philosophy of Science - Lisa Bortolotti 2008-12-03
This book is an excellent introduction to philosophy for students and provides researchers of scientific disciplines with an opportunity to reflect upon the value and impact

of their work. It is also a stimulating read for anybody who is interested in the philosophical issues raised by the status of scientific knowledge in contemporary society.

Continental Philosophy of Science - Gary Gutting 2008-04-15

Continental Philosophy of Science provides an expert guideto the major twentieth-century French and German philosophicalthinking on science. A comprehensive introduction by the editor provides a unifiedinterpretative survey of continental work on philosophy ofscience. Interpretative essays are complemented by key primary-sourceselections. Includes previously untranslated texts by Bergson, Bachelard,and Canguilhem and new translations of texts by Hegel andCassirer. Contributors include Terry Pinkard, Jean Gayon, RichardTieszen, Michael Friedman, Joseph Rouse, Mary Tiles,Hans-Jöerg Rheinberger, Linda Alcoff, Todd May, Axel Honneth,and Penelope Deutscher.

Central Issues of Philosophy - John Shand 2009-06-02

Comprising 20 free-standing chapters written by specialists in their respective fields, Central Issues of Philosophy provides novice readers with the ideal accessible introduction to all of philosophy's core issues. An accessible introduction to the central issues of philosophy Organized around key philosophical issues - ranging from truth, knowledge and reality to free will, ethics and the existence of God Provides beginning students with the information and skills to delve deeper into philosophical fields of study Each chapter is written by an experienced teacher

Philosophy of Science - Martin Curd 2013

A flexible and comprehensive introduction to the main currents in philosophy of science.

Philosophy of Science - Wang Wei 2020-12-30

The book is a translation of the second edition of a much-used and research-based Chinese textbook. As a succinct and issue-based introduction to the Western philosophy of

science, the book brings eight focal issues in the field to the fore and augments each topic by incorporating Chinese perspectives. Followed by an overview of the historical framework and logical underpinnings of the philosophy of science, the book thoroughly discusses eight issues in the discipline: (1) the criteria of cognitive meaning, (2) induction and confirmation, (3) scientific explanation, (4) theories of scientific growth, (5) the demarcation between science and pseudoscience, (6) scientific realism and empiricism; (7) the philosophy of scientific experimentation, (8) science and value. Not confined to Western mainstream discourse in this field, the book also introduces voices of Chinese philosophers of note and adopts a stance that productively combines logical empiricism and Kuhnianism, both of which tend to be covered in less detail by many English language textbooks. In the final chapter the author offers a prognosis regarding the future of the discipline based on recent trends. This book will be of value to students who study philosophy of science and hope to gain a better understanding of science and technology.

Scientific Knowledge - Janet A. Kourany 1998

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 anit-realism. The book assumes no specialized training in formal logic or scientific methods and therefore can be appreciated by a wide range of readers.