

## Refiguring Life Metaphors Of Twentieth Century Biology Wellek Library Lectures In Critical Theory

An exploration of the meaning of "modernist" music.

This book explains the role of simple biological model systems in the growth of molecular biology. Essentially the whole history of molecular biology is presented here, tracing the work in bacteriophages in *E. coli*, the role of other prokaryotic systems, and also the protozoan and algal models - *Paramecium* and *Chlamydomonas*, primarily - and the move into eukaryotes with the fungal systems - *Neurospora*, *Aspergillus* and yeast. Each model was selected for its appropriateness for asking a given class of questions, and each spawned its own community of investigators. Some individuals made the transition to a new model over time, and remnant communities of investigators continue to pursue questions in all these models, as the cutting edge of molecular biological research flowed onward from model to model, and onward into higher organisms and, ultimately, mouse and man.

*A Simpler Life* approaches the developing field of synthetic biology by focusing on the experimental and institutional lives of practitioners in two labs at Princeton University. It highlights the distance between hyped technoscience and the more plodding and entrenched aspects of academic research. Talia Dan-Cohen follows practitioners as they wrestle with experiments, attempt to publish research findings, and navigate the ins and outs of academic careers. Dan-Cohen foregrounds the practices and rationalities of these pursuits that give both researchers' lives and synthetic life their distinctive contemporary forms. Rather than draw attention to avowed methodology, *A Simpler Life* investigates some of the more subtle and tectonic practices that bring knowledge, doubt, and technological intervention into new configurations. In so doing, the book sheds light on the more general conditions of contemporary academic technoscience.

"In this fourth volume in our Convening Science series with the Marine Biological Laboratory, contributors, including historians, biologists, and philosophers, explore the development of bioengineering. The essays show how engineering is both a means to a functional end and a method of learning about the world. The book is organized around three themes--controlling and reproducing, knowing and making, and envisioning--to chart the increasing sophistication of our engineering of biological systems and to change our sense of the scales at which engineering occurs, to include not just genetics but also ecosystem-level intervention. The volume will attempt to make the case for "the centrality of engineering for understanding and imagining modern life.""

Following centuries of debate about "nature and nurture" the discovery of DNA established the idea that nature (genes) determines who we are, relegating nurture (environment) to icing on the cake. Since the 1950s, the new science of epigenetics has demonstrated how cellular environments and certain experiences and behaviors influence gene expression at the molecular level, with significant implications for health and wellbeing. To the amazement of scientists, mapping the human genome indirectly supported these insights. Anthropologists Margaret Lock and Gisli Palsson outline vituperative arguments from Classical times about the relationship between nature and nurture, furthered today by epigenetic findings and the demonstration of a "reactive genome." The nature/nurture debate, they show, can never be put to rest, because these concepts are in constant flux in response to the new insights science continually offers.

Refiguring Life Metaphors of Twentieth-century Biology Columbia University Press

A short and accessible introduction to philosophy of science for students and researchers across the life sciences.

The studies concentrate on different aspects of the medical, scientific and technical varieties of early English used in a wide range of medieval manuscripts.

Scientists turn to metaphors to formulate and explain scientific concepts, but an ill-considered metaphor can lead to social misunderstandings and counterproductive policies, Brendon Larson observes in this stimulating book. He explores how metaphors can entangle scientific facts with social values and warns that, particularly in the environmental realm, incautious metaphors can reinforce prevailing values that are inconsistent with desirable sustainability outcomes. *Metaphors for Environmental Sustainability* draws on four case studies--two from nineteenth-century evolutionary science, and two from contemporary biodiversity science--to reveal how metaphors may shape the possibility of sustainability. Arguing that scientists must assume greater responsibility for their metaphors, and that the rest of us must become more critically aware of them, the author urges more critical reflection on the social dimensions and implications of metaphors while offering practical suggestions for choosing among alternative scientific metaphors.

DIVA study of the mutually constitutive relations between Western biomedicine and Anglo- American literature in the 20th and early 21st centuries, tracing the interwoven processes by which both fields have transformed the course of human life.

This collection of papers presents some recent trends in metaphor studies that propose new directions of research on the embodied cognition perspective. The overall volume, in particular, shows how the embodied cognition still remains a relevant approach in a multidisciplinary research on the communicative side of metaphors, by focusing on both comprehension processes in science as well as learning processes in education.

Comprehensive yet accessible, this key Handbook provides an up-to-date overview of the fast growing and increasingly important area of 'public communication of science and technology', from both research and practical perspectives. As well as introducing the main issues, arenas and professional perspectives involved, it presents the findings of earlier research and the conclusions previously drawn. Unlike most existing books on this topic, this unique volume couples an overview of the practical problems faced by practitioners with a thorough review of relevant literature and research. The practical Handbook format ensures it is a student-friendly resource, but its breadth of scope and impressive contributors means that it is also ideal for practitioners and professionals working in the field. Combining the contributions of different disciplines (media and journalism studies, sociology and history of science), the perspectives of different geographical and cultural contexts, and by selecting key contributions from appropriate and well-respected authors, this original text provides an interdisciplinary as well as a global approach to public communication of science and technology.

This book brings together for the first time philosophers of biology to write about some of the most central concepts and issues in their field from the perspective of biology education. The chapters of the book cover a variety of topics ranging from traditional ones, such as biological explanation, biology and religion or biology and ethics, to contemporary ones, such as genomics, systems biology or evolutionary developmental biology. Each of the 30 chapters covers the respective philosophical literature in detail and makes specific suggestions for biology education. The aim of this book is to inform biology educators, undergraduate and graduate students in biology and related fields,

students in teacher training programs, and curriculum developers about the current state of discussion on the major topics in the philosophy of biology and its implications for teaching biology. In addition, the book can be valuable to philosophers of biology as an introductory text in undergraduate and graduate courses.

In this informed and discerning study, Crowther-Heyck explores Simon's contributions to science and their influences on modern life and thought. For historians of science, social science, technology, and twentieth-century American intellectual and cultural history, this account of Herbert Simon's life and work provides a rich and valuable perspective. Rarely does the world see as versatile a figure as Herbert Simon. He was a Nobel laureate in economics; an accomplished political scientist; winner of a lifetime achievement award from the American Psychological Association; and founder of the department of computer science at Carnegie Mellon University. In all his work in all these fields, he pursued a single goal - to create a science that could map the bounds of human reason and so enlarge its role in human affairs. Hunter Crowther-Heyck uses the career of this unique individual to examine the evolution of the social sciences after World War II, particularly Simon's creation of a new field, systems science, which joined together two distinct, powerful approaches to human behavior, the sciences of choice and control. Simon sought to develop methods by which human behavior: specifically human problem-solving, could be modeled and simulated. Regarding mind and machine as synonymous, Simon applied his models of human behavior to many other areas, from public administration and business management to artificial intelligence and the design of complex social and technical systems. In this informed and discerning study, Crowther-Heyck explores Simon's contributions to science and their influences on modern life and thought.

After World War II, the US Atomic Energy Commission (AEC) began mass-producing radioisotopes, sending out nearly 64,000 shipments of radioactive materials to scientists and physicians by 1955. Even as the atomic bomb became the focus of Cold War anxiety, radioisotopes represented the government's efforts to harness the power of the atom for peace—advancing medicine, domestic energy, and foreign relations. In *Life Atomic*, Angela N. H. Creager tells the story of how these radioisotopes, which were simultaneously scientific tools and political icons, transformed biomedicine and ecology. Government-produced radioisotopes provided physicians with new tools for diagnosis and therapy, specifically cancer therapy, and enabled biologists to trace molecular transformations. Yet the government's attempt to present radioisotopes as marvelous dividends of the atomic age was undercut in the 1950s by the fallout debates, as scientists and citizens recognized the hazards of low-level radiation. Creager reveals that growing consciousness of the danger of radioactivity did not reduce the demand for radioisotopes at hospitals and laboratories, but it did change their popular representation from a therapeutic agent to an environmental poison. She then demonstrates how, by the late twentieth century, public fear of radioactivity overshadowed any appreciation of the positive consequences of the AEC's provision of radioisotopes for research and medicine.

This book explores the socio-political implications of human heredity from the second half of the nineteenth century to the present postgenomic moment. It addresses three main phases in the politicization of heredity: the peak of radical eugenics (1900-1945), characterized by an aggressive ethos of supporting the transformation of human society via biological knowledge; the repositioning, after 1945, of biological thinking into a liberal-democratic, human rights framework; and the present postgenomic crisis in which the genome can no longer be understood as insulated from environmental signals. In *Political Biology*, Maurizio Meloni argues that thanks to the ascendancy of epigenetics we may be witnessing a return to soft heredity - the idea that these signals can cause changes in biology that are themselves transferable to succeeding generations. This book will be of great interest to scholars across science and technology studies, the philosophy and history of science, and political and social theory.

The Human Genome Diversity Project (HGDP) was launched in 1991 by a group of population geneticists whose aim was to map genetic diversity in hundreds of human populations by tracing the similarities and differences between them. It quickly became controversial and was accused of racism and 'bad science' because of the special interest paid to sampling cell material from isolated and indigenous populations. The author spent a year carrying out participant observation in two of the laboratories involved and provides fascinating insights into daily routines and technologies used in those laboratories and also into issues of normativity, standardization and naturalisation. Drawing on debates and theoretical perspectives from across the social sciences, M'charek explores the relationship between the tools used to produce knowledge and the knowledge thus produced in a way that illuminates the HGDP but also contributes to our broader understanding of the contemporary life sciences and their social implications.

This book moves beyond the traditional constructivist and social-constructivist view of learning and development in science. It draws upon cultural-historical theory in order to theorise early childhood science education in relation to our currently globalised education contexts. The book argues that concept development in science for young children can be better theorised by using Vygotsky's concept of Imagination and creativity, Vygotsky's theory of play, and his work on higher mental functions, particularly the concept of inter and intrapsychological functioning. Key concepts are extracted from the theoretical section of the book and used as categories for analysis in presenting evidence and new ideas in the second section of the book. In this second part of the book, the authors examine how science knowledge has been constructed within particular countries around the globe, where empirical research in early childhood science education has occurred. The third part of the book examines the nature of the encounter between the teacher and the child during science learning and teaching. In the final part of the book the authors look closely at the range of models and approaches to the teaching of early childhood science that have been made available to early childhood teachers to guide their planning and teaching. They conclude the book with a theoretical discussion of the cultural-historical foundation for early childhood science education, followed by a model of teaching scientific concepts to young children in play-based settings, including homes and community contexts.

What significance does the physical, material body still have in a world of virtual reality and genetic cloning? How do technology and postmodern rhetoric influence our understanding of the body? And how can our discussion of the body affect the way we handle crises in public policy--the politics of race and ethnicity; issues of "family values" that revolve around sexual and gender identities; the choices revolving around reproduction and genome projects, and the spread of disease? Leading scholars in rhetoric and communication, as well as literary and cultural studies, address some of the most important topics currently being discussed in the human sciences. The essays collected here suggest the wide range of public arenas in which rhetoric is operative--from abortion clinics and the World Wide Web to the media's depiction of illiteracy and the Donner Party. These studies demonstrate how the discourse of AIDS prevention or Demi Moore's "beautiful pregnancy" call to mind the physical nature of being human and the ways in which language and other symbols reflect and create the physical world.

What do biologists want? What kind of explanation do biologists aim? How will we know when we have "made sense" of life? Explanations in the biological sciences are provisional and partial, judged by criteria as heterogeneous as their subject matter. This text accounts for this diversity.

Why the rise of redundant precision in architecture and the accompanying fear of error are key to understanding the discipline's needs, anxieties and desires. When architects draw even brick walls to six decimal places with software designed to cut lenses, it is clear that the logic that once organized relations between precision and material error in construction has unraveled. Precision, already a promiscuous term, seems now to have been uncoupled from its contract with truthfulness. Meanwhile error, and the always-political space of its dissent, has reconfigured itself. In *The Architecture of Error* Francesca Hughes argues that behind the architect's acute fetishization of redundant precision lies a special fear of physical error. What if we were to consider the pivotal cultural and technological transformations of modernism to have been driven not so much by the causes its narratives declare, she asks, as by an unspoken horror of loss of control over error, material life, and everything that matter stands for? Hughes traces the rising intolerance of material vagaries—from the removal of ornament to digitalized fabrication—that produced the blind rejection of organic materials, the proliferation of material testing, and the rhetorical obstacles that blighted cybernetics. Why is it, she asks, that the more we cornered physical error, the more we feared it? Hughes's analysis of redundant precision exposes an architecture of fear whose politics must be called into question. Proposing error as a new category for architectural thought, Hughes draws on other disciplines and practices that have interrogated precision and failure, citing the work of scientists Nancy Cartwright and Evelyn Fox Keller and visual artists Gordon Matta-Clark, Barbara Hepworth, Rachel Whiteread, and others. These non-architect practitioners, she argues, show that error need not be excluded and precision can be made accountable.

Since antiquity, philosophers and engineers have tried to take life's measure by reproducing it. Aiming to reenact Creation, at least in part, these experimenters have hoped to understand the links between body and spirit, matter and mind, mechanism and consciousness. *Genesis Redux* examines moments from this centuries-long experimental tradition: efforts to simulate life in machinery, to synthesize life out of material parts, and to understand living beings by comparison with inanimate mechanisms. Jessica Riskin collects seventeen essays from distinguished scholars in several fields. These studies offer an unexpected and far-reaching result: attempts to create artificial life have rarely been driven by an impulse to reduce life and mind to machinery. On the contrary, designers of synthetic creatures have generally assumed a role for something nonmechanical. The history of artificial life is thus also a history of theories of soul and intellect. Taking a historical approach to a modern quandary, *Genesis Redux* is essential reading for historians and philosophers of science and technology, scientists and engineers working in artificial life and intelligence, and anyone engaged in evaluating these world-changing projects.

The communication of scientific principles is becoming increasingly important in a world that relies on technology. Exploring the use of scientific language in the news and examining how important scientific ideas are reported and communicated, this title in the Intertext series takes a look at the use and misuse of scientific language and how it shapes our lives. *The Language of Science*: explores the goals of, and problems with, scientific language and terminology demonstrates the power and misuse of scientific discourse in the media examines the special qualities of scientific communication explores how science and popular culture interact is illustrated with a wide range of examples from the MMR vaccine to AIDS and the biological weapons debate, and includes a glossary as well as ideas for further reading. This practical book is ideal for post-16 to undergraduate students in English Language, Linguistics, Journalism, Communications Studies or Science Communication.

*Gender History Across Epistemologies* offers broad range of innovative approaches to gender history. The essays reveal how historians of gender are crossing boundaries - disciplinary, methodological, and national - to explore new opportunities for viewing gender as a category of historical analysis. Essays present epistemological and theoretical debates central in gender history over the past two decades Contributions within this volume to the work on gender history are approached from a wide range of disciplinary locations and approaches The volume demonstrates that recent approaches to gender history suggest surprising crossovers and even the discovery of common grounds

Transhumanists would have humanity's creation of posthumanity be our governing aim. Susan B. Levin challenges their overarching commitments regarding the mind, brain, ethics, liberal democracy, knowledge, and reality. Her critique unmasks their notion of humanity's self-transcendence via science and technology as pure, albeit seductive, fantasy.

Genetics is currently at the forefront of scientific research and discussed almost daily in the media. The possibilities for good and bad applications of this research are enormous and cannot be properly advanced without a Christian response. This cutting-edge book presents the legal, scientific, medical, and theological perspectives of genetic engineering based on a Christian worldview.

*The Death of Life* dissects biology's claim to be the Cinderella science that rose above its station. Early attempts to study life through observation, experiment and theory are exposed as the skeleton of ideas for controlling life, ideas which were only fleshed out by the biotech and genomic industries. Physicists- and chemists-turned biologists in alliance with biology's own eugenicists are shown to have abandoned the study of life and suppressed poststructuralist approaches ranging from neoLamarckism to biogeological/Gaia theory.

*Charles Dickens in Cyberspace* opens a window on a startling set of literary and scientific links between contemporary American culture and the nineteenth-century heritage it often repudiates. Surveying a wide range of novelists, scientists, filmmakers, and theorists from the past two centuries, Jay Clayton traces the concealed circuits that connect the

telegraph with the Internet, Charles Babbage's Difference Engine with the digital computer, Frankenstein's monster with cyborgs and clones, and Dickens' life and fiction with all manner of contemporary popular culture--from comic books and advertising to recent novels and films. In the process, Clayton argues for two important principles: that postmodernism has a hidden or repressed connection with the nineteenth-century and that revealing those connections can aid in the development of a historical cultural studies. In *Charles Dickens in Cyberspace* nineteenth-century figures--Jane Austen, Charles Darwin, Charles Dickens, Thomas Hardy, Henry James, Ada Lovelace, Joseph Paxton, Mary Shelley, and Mary Somerville--meet a lively group of counterparts from today: Andrea Barrett, Greg Bear, Peter Carey, Hélène Cixous, Alfonso Cuarón, William Gibson, Donna Haraway, David Lean, Richard Powers, Salman Rushdie, Ridley Scott, Susan Sontag, Neal Stephenson, Bruce Sterling, and Tom Stoppard. The juxtaposition of such a diverse cast of characters leads to a new way of understanding the "undisciplined culture" the two eras share, an understanding that can suggest ways to heal the gap that has long separated literature from science. Combining storytelling and scholarship, this engaging study demonstrates in its own practice the value of a self-reflective stance toward cultural history. Its personal voice, narrative strategies, multiple points of view, recursive loops, and irony emphasize the improvisational nature of the methods it employs. Yet its argument is serious and urgent: that the afterlife of the nineteenth century continues to shape the present in diverse and sometimes conflicting ways.

Since the late 1980s, the neglect of experiment by philosophers and historians of science has been replaced by a keen interest in the subject. In this volume, a number of prominent philosophers of experiment directly address basic theoretical questions, develop existing philosophical accounts, and offer novel perspectives on the subject, rather than rely exclusively on historical cases of experimental practice. Each essay examines one or more of six interconnected themes that run throughout the collection: the philosophical implications of actively and intentionally interfering with the material world while conducting experiments; issues of interpretation regarding causality; the link between science and technology; the role of theory in experimentation involving material and causal intervention; the impact of modeling and computer simulation on experimentation; and the philosophical implications of the design, operation, and use of scientific instruments.

The relation between procreation and authorship, between reproduction and publication, has a long history - indeed, that relationship may well be the very foundation of history itself. The essays in this volume bring into focus a remarkably important and complex phase of this long history. In this volume, some of the most renowned scholars in the field persuasively demonstrate that during the early modern period, the awkward, incomplete transition from manuscript to print brought on by the invention of the printing press temporarily exposed and disturbed the epistemic foundations of English culture. As a result of this cultural upheaval, the discursive field of parenting was profoundly transformed. Through an examination of the literature of the period, this volume illuminates how many important conceptual systems related to gender, sexuality, human reproduction, legitimacy, maternity, kinship, paternity, dynasty, inheritance, and patriarchal authority came to be grounded in a range of anxieties and concerns directly linked to an emergent publishing industry and book trade. In exploring a wide spectrum of historical and cultural artifacts produced during the convergence of human and mechanical reproduction, of parenting and printing, these essays necessarily bring together two of the most vital critical paradigms available to scholars today: gender studies and the history of the book. Not only does this rare interdisciplinary coupling generate fresh and exciting insights into the literary and cultural production of the early modern period but it also greatly enriches the two critical paradigms themselves.

Does science aim at providing an account of the world that is literally true or objectively true? Understanding the difference requires paying close attention to metaphor and its role in science. In *The Third Lens*, Andrew S. Reynolds argues that metaphors, like microscopes and other instruments, are a vital tool in the construction of scientific knowledge and explanations of how the world works. More than just rhetorical devices for conveying difficult ideas, metaphors provide the conceptual means with which scientists interpret and intervene in the world. Reynolds here investigates the role of metaphors in the creation of scientific concepts, theories, and explanations, using cell theory as his primary case study. He explores the history of key metaphors that have informed the field and the experimental, philosophical, and social circumstances under which they have emerged, risen in popularity, and in some cases faded from view. How we think of cells—as chambers, organisms, or even machines—makes a difference to scientific practice.

Consequently, an accurate picture of how scientific knowledge is made requires us to understand how the metaphors scientists use—and the social values that often surreptitiously accompany them—influence our understanding of the world, and, ultimately, of ourselves. The influence of metaphor isn't limited to how we think about cells or proteins: in some cases they can even lead to real material change in the very nature of the thing in question, as scientists use technology to alter the reality to fit the metaphor. Drawing out the implications of science's reliance upon metaphor, *The Third Lens* will be of interest to anyone working in the areas of history and philosophy of science, science studies, cell and molecular biology, science education and communication, and metaphor in general.

*Doing Science + Culture* is a groundbreaking book on the cultural study of science, technology and medicine. Outstanding contributors including life and physical scientists, anthropologists, sociologists, literature/communication scholars and historians of science who focus on the analysis of science and scientific discourses within culture: what it means to "do" science.

of UB's medical school, that UB developed its School of Arts and Sciences, and thus, assumed its place among the other institutions of higher education. Had Fillmore lived throughout UB's first seventy years, he would probably have been elated by the success of his university, and he should have been satisfied and pleased that UB remained intrinsically bonded to its community while at the same time engrafting the values and standards important to higher education's mission in the region. UB and its medical school

have undergone many challenging transitions since 1846. Included among them were: (1) the completion of an academic campus in the far northeast corner of the City of Buffalo while leaving its medical, dental and law schools firmly situated in the core of downtown Buffalo; (2) the eventual relocation, after the second world war, of the law school to the newer campus in Amherst, and the medical and dental school to the original academic campus; and (3) the merger with the State University of New York System in 1962. Despite these significant transitions, any one of which could have changed the intrinsic integrity of UB and disrupted the bonding between community and university, that did not happen. To this day, the ties between community and academe persist. Fillmore and White should celebrate their success and important contribution to Buffalo and Western New York.

An accessible but rigorous introduction to genes for non-experts, explaining what genes are and what they can and cannot do.

The book addresses some fundamental and profound questions such as: Are GM foods safe to eat? What do consumers think about GM foods and, alternatively, organic produce? What are the real risks of genetic pollution? And is it appropriate to delete a supposed gene for sadness? 'Recoding Nature' challenges the assumptions of those preparing the world for a 'recoded' DNA future. Recoding Nature is at the cutting edge of critical reflection about the 'biotechnology revolution', the redesign of nature through genetically modified plants, animals and even designer humans. to eat? What do consumers think about GM foods and, alternatively, organic produce? What are the real risks of genetic pollution? Is it appropriate to delete a supposed gene for sadness? Where did the idea of the DNA code come from, and how is it shaping thought for a genetics future? Why has commercial release of GM canola been approved when all canola-growing States have declared moratoriums? there genes for crime, or is this just an illusion? What about the prospects of corporate bioprospecting among Indigenous peoples? And why have large grass-roots movements in Asia surfaced to contest the notion that GM foods will feed the hungry? In fourteen essays by Australian and New Zealand writers critiquing the new biology, and with a stimulating foreword by Mae-Wan Ho - the UK scientist leading a global attack on genetic engineering as 'bad science' - Recoding Nature challenges the assumptions of those preparing the world for a 'recoded' DNA future.

Drawing on social science perspectives, Contested Categories presents a series of empirical studies that engage with the often shifting and day-to-day realities of life sciences categories. In doing so, it shows how such categories remain contested and dynamic, and that the boundaries they create are subject to negotiation as well as re-configuration and re-stabilization processes. Organized around the themes of biological substances and objects, personhood and the genomic body and the creation and dispersion of knowledge, each of the volume's chapters reveals the elusive nature of fixity with regard to life science categories. With contributions from an international team of scholars, this book will be essential reading for anyone interested in the social, legal, policy and ethical implications of science and technology and the life sciences.

This Biographical Dictionary provides detailed accounts of the lives, works, influence and reception of thinkers from all the major philosophical schools and traditions of the twentieth-century. This unique volume covers the lives and careers of thinkers from all areas of philosophy - from analytic philosophy to Zen and from formal logic to aesthetics. All the major figures of philosophy, such as Nietzsche, Wittgenstein and Russell are examined and analysed. The scope of the work is not merely restricted to the major figures in western philosophy but also covers in depth a significant number of thinkers from the near and far east and from the non-European Hispanic-language communities. The Biographical Dictionary also includes a number of general entries dealing with important schools of philosophy, such as the Vienna Circle, or currents of thought, such as vitalism. These allow the reader to set the individual biographies in the context of the philosophical history of the period. With entries written by over 100 leading philosophy scholars, the Biographical Dictionary is the most comprehensive survey of twentieth-century thinkers to date. Structure The book is structured alphabetically by philosopher. Each entry is identically structured for ease of access and covers: \* nationality \* dates and places of birth and death \* philosophical style or school \* areas of interest \* higher education \* significant influences \* main appointments \* main publications \* secondary literature \* account of intellectual development and main ideas \* critical reception and impact At the end of the book a glossary gives accounts of the schools, movements and traditions to which these philosophers belonged, and thorough indexes enable the reader to access the information in several ways: \* by nationality \* by major areas of contribution to philosophy e.g. aesthetics \* by major influences on the thinker concerned e.g. Plato, Kant, Wittgenstein

Refiguring Life begins with the history of genetics and embryology, showing how discipline-based metaphors have directed scientists' search for evidence. Keller continues with an exploration of the border traffic between biology and physics, focusing on the question of life and the law of increasing entropy. In a final section she traces the impact of new metaphors, born of the computer revolution, on the course of biological research. Keller shows how these metaphors began as objects of contestation between competing visions of the life sciences, how they came to be recast and appropriated by already established research agendas, and how in the process they ultimately came to subvert those same agendas. Refiguring Life explains how the metaphors and machinery of research are not merely the products of scientific discovery but actually work together to map out the territory along which new metaphors and machines can be constructed. Through their dynamic interaction, Keller points out, they define the realm of the possible in science. Drawing on a remarkable spectrum of theoretical work ranging from Schroedinger to French psychoanalyst Jacques Lacan, Refiguring Life fuses issues already prominent in the humanities and social sciences with those in the physical and natural sciences, transgressing disciplinary boundaries to offer a broad view of the natural sciences as a whole. Moving gracefully from genetics to embryology, from physics to biology, from cyberscience to molecular biology, Evelyn Fox Keller demonstrates that scientific inquiry cannot pretend to stand apart from the issues and concerns of the larger society in which it exists.

The Visible Human Project is a critical investigation of the spectacular, three-dimensional recordings of real human bodies - dissected, photographed and converted into visual data files - made by the US National Library of Medicine in Baltimore. Catherine Waldby uses new ideas from cultural studies, science studies and social studies of the computer to situate the Visible Human Project in its historical and cultural context, and to consider the meanings such an object has within a computerised culture. In this fascinating and important book, Catherine Waldby explores how advances in medical technologies have changed the way we view and study the human body, and places the VHP within the history of technologies such as the X-ray and CT-scan, which allow us to view the human interior. Bringing together medical conceptions of the human body with theories of visual culture from Foucault to Donna Haraway, Waldby links the VHP to a range of other biomedical projects, such as the Human Genome Project and cloning, which approach living bodies as data sources. She argues that the VHP is an example of the increasingly blurred distinction between 'living' and 'dead' human bodies, as the bodies it uses are

digitally preserved as a resource for living bodies, and considers how computer-based biotechnologies affect both medical and non-medical meanings of the body's life and death, its location and its limits. While earlier research considered Simone de Beauvoir in the perspectives of Existentialism or Feminism, this work is the first to emphasize her reflective and descriptive approach and the full range of issues she addresses. There are valuable chapters and sections that are historical and/or comparative, but most of the contents of this work critically examine Beauvoir's views on old age (whereon she is the first phenomenologist to work), biology, gender, ethics, ethnicity (where she is among the first), and politics (again among the first). Besides their systematic as well as historical significance, these chapters show her philosophy as on a par with those of Merleau-Ponty and Jean-Paul Sartre in quality, richness and distinctiveness of problematics, and the penetration of her insight into collective as well as individual human life within the socio-historical world.

Metaphors are essential to scientists themselves and strongly influence science communication. Through careful analyses of metaphors actually used in science texts, recordings, and videos, this book explores the essential functions of conceptual metaphor in the conduct of science, teaching of science, and how scientific ideas are promoted and popularized. With an accessible introduction to theory and method this book prepares scientists, science teachers, and science writers to take advantage of recent shifts in metaphor theories and methods. Metaphor specialists will find theoretical issues explored in studies of bacteriology, cell reproduction, marine biology, physics, brain function and social psychology. We see the degree of conscious or intentional use of metaphor in shaping our conceptual systems and constraining inferences. Metaphor sources include social structure, embodied experience, abstract or mathematical formulations. The results are sometimes innovative hypotheses and robust conclusions; other times pedagogically useful, if inaccurate, stepping stones or, at worst, misleading fictions.

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