Holt California Life Science Journal

The best-selling author of Why People Believe Weird Things offers a revealing study of the influence of evolutionary theory on the modern economy, as well as the evolutionary roots of human economic behavior, bringing together the latest research in neuroeconomics, psychology, biology, and other fields to analyze the economics of everyday life. Reprint. 40,000 first printing.

Building on the foundation set in Volume I—a landmark synthesis of research in the field—Volume II is a comprehensive, state-of-the-art new volume highlighting new and emerging research perspectives. The contributors, all experts in their research areas, represent the international and gender diversity in the science education research community. The volume is organized around six themes: theory and methods of science education research; science learning; culture, gender, and society and science learning; science teaching; curriculum and assessment in science; science teacher education. Each chapter presents an integrative review of the research on the topic it addresses—pulling together the existing research, working to understand the historical trends and patterns in that body of scholarship, describing how the issue is conceptualized within the literature, how methods and theories have shaped the outcomes of the research, and where the strengths, weaknesses, and gaps are in the literature. Providing guidance to science education faculty and graduate students and leading to new insights and directions for future research, the Handbook of Research on Science Education, Volume II is an essential resource for the entire science education community.

Proceedings of the NATO Advanced Study Institute, Trieste, Italy, July 10-August 1, 1980

In Fungible Life Aihwa Ong explores the dynamic world of cutting-edge bioscience research, offering critical insights into the complex ways Asian bioscientific worlds and cosmopolitan sciences are entangled in a tropical environment brimming with the threat of emergent diseases. At biomedical centers in Singapore and China scientists map genetic variants, disease risks, and biomarkers, mobilizing ethnicized "Asian" bodies and health data for genomic research. Their differentiation between Chinese, Indian, and Malay DNA makes fungible Singapore's ethnic-stratified databases that come to "represent" majority populations in Asia. By deploying genomic science as a public good, researchers reconfigure the relationships between objects, peoples, and spaces, thus rendering "Asia" itself as a shifting entity. In Ong's analysis, Asia emerges as a richly layered mode of entanglements, where the population's genetic pasts, anxieties and hopes, shared genetic weaknesses, and embattled genetic futures intersect. Furthermore, her illustration of the contrasting methods and goals of the Biopolis biomedical center in Singapore and BGI Genomics in China raises questions about the future direction of cosmopolitan science in Asia and beyond.

The Raven & Johnson's Biology author team is committed to continually improving the text, keeping the student and learning foremost. The integrated pedagogical features expand the students' learning process and enhance their learning experience. This latest edition of the text maintains the clear, accessible, and engaging writing style of past editions with the solid framework of pedagogy that highlights an emphasis on evolution and scientific inquiry that have made this a leading textbook for students majoring in biology. This emphasis on the organizing power of evolution is combined with an integration of the importance of cellular, molecular biology and genomics to offer our readers a text that is student friendly and current.

Bringing together international research on nature of science (NOS) representations in science textbooks, the unique analyses presented in this volume provides a global perspective on NOS from elementary to college level and discusses the practical implications in various regions

across the globe. Contributing authors highlight the similarities and differences in NOS representations and provide recommendations for future science textbooks. This comprehensive analysis is a definitive reference work for the field of science education.

The Living World is often considered a student favorite. George Johnson has written this introductory biology textbook from the ground up to be an engaging and accessible learning tool with an emphasis on "how things work and why things happen the way they do". The Living World focuses on concepts rather than terminology and technical information, and features a straight forward,clear writing style and a wide variety of media assets to enhance the content of the textbook. George believes that ‘relevancy is the window’ in which students can learn biology. This is shown through every chapter of this 10th edition, which is focused directly on the relevance of its content to today’s students. When the discussion of a topic is linked to a student’s own experience, it does not seem so unapproachable, and the utility of learning it is far easier to accept.

This volume explores the interactions between organisms and their environments and how this “entanglement” is a fundamental aspect of all life. It brings together the work and ideas of historians, philosophers, biologists, and social scientists, uniting a range of new perspectives, methods, and frameworks for examining and understanding the ways that organisms and environments interact. The volume is organized into three main sections: historical perspectives, contested models, and emerging frameworks. The first section explores the origins of the modern idea of organism-environment interaction in the mid-nineteenth century and its development by later psychologists and anthropologists. In the second section, a variety of controversial models—from mathematical representations of evolution to model organisms in medical research—are discussed and reframed in light of recent questions about the interplay between organisms and environment. The third section investigates several new ideas that have the potential to reshape key aspects of the biological and social sciences. Populations of organisms evolve in response to changing environments; bodies and minds depend on a wide array of circumstances for their development; cultures create complex relationships with the natural world even as they alter it irrevocably. The chapters in this volume share a commitment to unraveling the mysteries of this entangled life.

Psychobiography is often attacked by critics who feel that it trivializes complex adult personalities, "explaining the large deeds of great individuals," as George Will wrote, "by some slight the individual suffered at a tender age--say, 7, when his mother took away a lollipop." Worse yet, some writers have clearly abused psychobiography--for instance, to grind axes from the right (Nancy Clinch on the Kennedy family) or from the left (Fawn Brodie on Richard Nixon)--and others have offered woefully inept diagnoses (such as Albert Goldman's portrait of Elvis Presley as a "split personality" and a "delusional paranoid"). And yet, as Alan Elms argues in Uncovering Lives, in the hands of a skilled practitioner, psychobiography can rival the very best traditional biography in the insights it offers. Elms makes a strong case for the value of psychobiography, arguing in large part from example. Indeed, most of the book features Elms's own fascinating case studies of over a dozen prominent figures, among them Sigmund Freud (the father of psychobiography), B.F. Skinner, Isaac Asimov, L. Frank Baum, Vladimir Nabokov, Jimmy Carter, George Bush, Saddam Hussein, and Henry Kissinger. These profiles make intriguing reading. For example, Elms discusses the fiction of Isaac Asimov in light of

the latter's acrophobia (fear of heights) and mild agoraphobia (fear of open spaces)--and Elms includes excerpts from a series of letters between himself and Asimov. He reveals an unintended subtext of The Wizard of Oz--that males are weak, females are strong (think of Scarecrow, Tin Man, the Lion, and the Wizard, versus the good and bad witches and Dorothy herself)--and traces this in part to Baum's childhood heart disease, which kept him from strenuous activity, and to his relationship with his mother-in-law, Matilda Joslyn Gage, a distinguished advocate of women's rights. And in a fascinating chapter, he examines the abused childhood of Saddam Hussein, the privileged childhood of George Bush, and the radically different psychological paths that led these two men into the Persian Gulf War. Elms supports each study with extensive research, much of it never presented before--for instance, on how some of the most revealing portions of C.G. Jung's autobiography were deleted in spite of his protests before publication. Along the way, Elms provides much insight into how psychobiography is written. Finally, he proposes clear guidelines for judging high quality work, and offers practical tips for anyone interested in writing in this genre. Written with great clarity and wit, Uncovering Lives illuminates the contributions that psychology can make to biography. Elms's enthusiasm for his subject is contagious and will inspire would-be psychobiographers as well as win over the most hardened skeptics.

George Johnson has written this non-majors textbook from the ground up to be an engaging and accessible learning tool with an emphasis on "how things work and why things happen the way they do." Essentials of The Living World focuses on concepts rather than terminology and technical information, and features a straightforward, clear writing style and a wide variety of media assets to enhance the content of the textbook.

This volume explores problems in the history of science at the intersection of life sciences and agriculture, from the mid-eighteenth to the mid-twentieth century. Taking a comparative national perspective, the book examines agricultural practices in a broad sense, including the practices and disciplines devoted to land management, forestry, soil science, and the improvement and management of crops and livestock. The life sciences considered include genetics, microbiology, ecology, entomology, forestry, and deal with US, European, Russian, Japanese, Indonesian, Chinese contexts. The book shows that the investigation of the border zone of life sciences and agriculture raises many interesting questions about how science develops. In particular it challenges one to re-examine and take seriously the intimate connection between scientific development and the practical goals of managing and improving – perhaps even recreating – the living world to serve human ends. Without close attention to this zone it is not possible to understand the emergence of new disciplines and transformation of old disciplines, to evaluate the role and impact of such major figures of science as Humboldt and Mendel, or to appreciate how much of the history of modern biology has been driven by national ambitions and imperialist expansion in competition with rival nations.

Behavioral strategy has evolved as a field the last decades both intellectually and institutionally. This volume examines the relatively new field of behavioral strategy and its contribution to strategic management, with papers reflecting the past and present of behavioral strategy as a field, as well as possible avenues for future developments.

Traces the growth of the Christian Science Church from its foundation by Mary Baker Eddy; explains its philosophy

towards sickness, medical care, and death; and discusses the legal controversies surrounding the church.

Growing at an ever-increasing pace for over a century, the solid body of concepts and facts that constitute the science of learning demand a comprehensive, systematic introduction. Completely up-to-date and written in a direct, easy-to-read style that is suitable for undergraduates, The Science of Learning is such an introduction. Because its focus is on what is known rather than what is speculated, this book differs from other learning texts by not dwelling on which theories are or are not in vogue. The text's comprehensive coverage makes it an ideal reference for more advanced scholars and specialists in learning and related fields.

Since its introduction in the latter half of the 1980s, the meticulous study of distinct criminal career dimensions, like onset, frequency, and crime mix, has yielded a wealth of information on the way crime develops over the life-span. Policymakers in turn have used this information in their efforts to tailor criminal justice interventions to be both effective and efficient. Life-course criminology studies the ways in which the criminal career is embedded in the totality of the individual life-course and seeks to clarify the causal mechanisms governing this process. The Routledge International Handbook of Life-Course Criminology provides an authoritative collection of international theoretical and empirical research into the way that criminal behavior develops over the life-span, which causal mechanisms are involved in shaping this development, and to what degree criminal justice interventions are successful in redirecting offenders' criminal trajectories. Drawing upon qualitative and quantitative research this handbook covers theory, describes and compares criminal career patterns across different countries, tests current explanations of criminal development, and using cutting-edge methods, assesses the intended and unintended effects of formal interventions. This book is the first of its kind to offer a comprehensive overview of state-of-the-art developments in criminal career and life-course research, providing unique perspectives and exclusive local knowledge from over 50 international scholars. This book is an ideal companion for teachers and researchers engaged in the field of developmental and life-course criminology.

The first general history of the Shakers, from their origins in 18th-century England to the present day. Drawing on written and oral testimony by Shakers over the past two centuries, Stein offers a full and often revisionist account of the movement. 57 illustrations.

Of all the books written about the problems of sustainable development and environmental protection, Sustainable Development: Science, Ethics, and Public Policy is one of the first to examine the role of science, economics and law, and ethics as generally applied to decision making on sustainable development, particularly in respect to the recommendations contained in Agenda 21. Specifically, the book examines the role, capabilities, and certain strengths and weaknesses of these disciplines and their ethical implications in the context of sustainable development problems.

Such an analysis is necessary to determine whether sustainable development problems create important new challenges and problems for government so that, where appropriate, new tools or approaches may be designed to overcome limitations or take advantage of the strengths of current scientific, economic and legal capabilities. Audience: Environmental professionals, whether academic, governmental or industrial, or in the private consultancy sector. Also suitable as an upper level text or reference.

The riveting true story of the women who launched America into space. In the 1940s and 50s, when the newly minted Jet Propulsion Laboratory needed quick-thinking mathematicians to calculate velocities and plot trajectories, they didn't turn to male graduates. Rather, they recruited an elite group of young women who, with only pencil, paper, and mathematical prowess, transformed rocket design, helped bring about the first American satellites, and made the exploration of the solar system possible. For the first time, Rise of the Rocket Girls tells the stories of these women -- known as "human computers" -- who broke the boundaries of both gender and science. Based on extensive research and interviews with all the living members of the team, Rise of the Rocket Girls offers a unique perspective on the role of women in science: both where we've been, and the far reaches of space to which we're heading. "If Hidden Figures has you itching to learn more about the women who worked in the space program, pick up Nathalia Holt's lively, immensely readable history, Rise of the Rocket Girls." -- Entertainment Weekly

In the final years of the twentieth century, émigrés from engineering and computer science devoted themselves to biology and resolved that if the aim of biology is to understand life, then making life would yield better theories than experimentation. Armed with the latest biotechnology techniques, these scientists treated biological media as elements for design and manufacture: viruses named for computers, bacterial genomes encoding passages from James Joyce, chimeric yeast buckling under the metabolic strain of genes harvested from wormwood, petunias, and microbes from Icelandic thermal pools. In Synthetic: How Life Got Made, cultural anthropologist Sophia Roosth reveals how synthetic biologists make new living things in order to understand better how life works. The first book-length ethnographic study of this discipline, Synthetic documents the social, cultural, rhetorical, economic, and imaginative transformations biology has undergone in the post-genomic age. Roosth traces this new science from its origins at MIT to start-ups, laboratories, conferences, and hackers’ garages across the United States—even to contemporary efforts to resurrect extinct species. Her careful research reveals that rather than opening up a limitless new field, these biologists’ own experimental tactics circularly determine the biological features, theories, and limits they fasten upon. Exploring the life sciences emblematic of our time, Synthetic tells the origin story of the astonishing claim that biological making fosters biological knowing.

This book brings together state-of-the-art papers describing comprehensive approaches to residuals management and emphasizes the need for interdisciplinary solutions to complex environmental problems. Originally published in 1972

A thoughtful new look at the entwined histories of genetic medicine and eugenics, with probing discussion of the moral risks of seeking human perfection

The health of scientific enterprise has become a critical political and social issue as nation states tackle austerity, diversity, global challenges, whilst simultaneously supporting a competitive and innovative national economy. A key asset in achieving such ambitions is for a scholarly information system which enables the fruits of the research effort to be disseminated efficiently. As the information support system struggles with adapting from a print-based to a digital process, the dysfunctionality current within STEM publishing in particular becomes evident. New ways of supporting research are emerging which require a new approach to publishing, an approach which takes on board the many demographic, social, technical and administrative changes taking place in both science itself and society. A radical strategic assessment is required and this book tracks key aspects required for any new future strategy. This book provides a catalogue of issues to which a future STEM information industry will need to adapt. They range from the effects of technology on the neurological processes of research to the growing use of technology to speed up the exchange of information among groups and collaboratories; from considerations about quality control yet maintaining intellectual ownership; from changing from an elitist STEM system favouring academics to a more democratic process with wider appeal. There is the neglected non-academic market and its need to share in the results of the research effort, often through partnership and being part of a ‘hive mind’. This is the large world of the unaffiliated knowledge workers, of which academia is numerically but a small part. The many changes taking place in scholarly information dictate that the future is unlikely to be a smooth and gradual evolution from the past. Radical new approaches are required, a revolution which takes on board the perfect storm of changes listed in this book. Just as such changes have changed the face of industries such as music and retail in recent years, so similar dramatic changes are likely to result in a restructuring of STEM into a more technologically-focused industry within the next decade. The implications for the current STEM stakeholders are profound.

"Beyond Adversary Democracy should be read by everyone concerned with democratic theory and practice."—Carol Pateman, Politics

"Sociologists recurrently complain about how seldom it is that we produce books that combine serious theorizing about important issues of public policy with original and sensitive field research. Several rounds of enthusiastic applause, then, are due Jane Mansbridge . . . for having produced a dense and well written book whose subject is nothing less ambitious than the theory of democracy and its problems of equality, solidarity, and consensus. Beyond Adversary Democracy, however, is not simply a work of political theory; Mansbridge explores her abstract subject matter by close studies (using ethnographic, documentary, and questionnaire methods) of two small actual democracies operating at their most elemental American levels (1) a New England town meeting ("Selby," Vermont) and (2) an urban crisis center ("Helpline"), whose 41 employees shared a New Left-Counterculture belief in participatory democracy and consensual decision-making. [Mansbridge] is a force to contend with. It is in our common interest that she be widely read."—Bennett M. Berger, Contemporary Sociology

Between 1870 and 1940, life expectancy in the United States skyrocketed while the percentage of senior citizens age sixty-five and older more than doubled—a phenomenon owed largely to innovations in medicine and public health. At the same time, the Great Depression was a major tipping point for age discrimination and poverty in the West: seniors were living longer and retiring earlier, but without adequate means to support themselves and their families. The economic disaster of the 1930s alerted scientists, who were actively researching the processes of aging, to the profound social implications of their work—and by the end of the 1950s, the field of gerontology emerged. Old Age, New Science explores how a group of American and British life scientists contributed to gerontology’s development as a multidisciplinary field. It examines the foundational “biosocial visions” they shared, a byproduct of both their research and the social problems they encountered. Hyung Wook Park shows how these visions shaped popular discourses on aging, directly influenced the institutionalization of gerontology,

and also reflected the class, gender, and race biases of their founders.
Ruth A. Tucker's book is a comprehensive survey of all the major alternative religions in the United States, including the new groups since the 1960s.
"The great book of nature," said Galileo, "can be read only by those who know the language in which it is written. And this language is mathematics." A richly illustrated celebration of the beauty and elegance of this ever-evolving language, Mathematics: The Science of Patterns explores the many ways mathematics helps us understand our perceptions of reality--both the physical, biological, and social worlds without, and the realm of ideas and thoughts within.
First multi-year cumulation covers six years: 1965-70.
Science, engineering, and technology permeate nearly every facet of modern life and hold the key to solving many of humanity's most pressing current and future challenges. The United States' position in the global economy is declining, in part because U.S. workers lack fundamental knowledge in these fields. To address the critical issues of U.S. competitiveness and to better prepare the workforce, A Framework for K-12 Science Education proposes a new approach to K-12 science education that will capture students' interest and provide them with the necessary foundational knowledge in the field. A Framework for K-12 Science Education outlines a broad set of expectations for students in science and engineering in grades K-12. These expectations will inform the development of new standards for K-12 science education and, subsequently, revisions to curriculum, instruction, assessment, and professional development for educators. This book identifies three dimensions that convey the core ideas and practices around which science and engineering education in these grades should be built. These three dimensions are: crosscutting concepts that unify the study of science through their common application across science and engineering; scientific and engineering practices; and disciplinary core ideas in the physical sciences, life sciences, and earth and space sciences and for engineering, technology, and the applications of science. The overarching goal is for all high school graduates to have sufficient knowledge of science and engineering to engage in public discussions on science-related issues, be careful consumers of scientific and technical information, and enter the careers of their choice. A Framework for K-12 Science Education is the first step in a process that can inform state-level decisions and achieve a research-grounded basis for improving science instruction and learning across the country. The book will guide standards developers, teachers, curriculum designers, assessment developers, state and district science administrators, and educators who teach science in informal environments.
David D. Kumar and Daryl E. Chubin We live in an information age. Technology abounds: information tech nology, communication technology, learning technology. As a once popular song went, "Something's happening here, but it's just not exactly clear." The world appears to be a smaller, less remote place. We live in it, but we are not necessarily closely tied to it. We lack a satisfactory understanding of it. So we are left with a paradox: In an information age, information alone will neither inform nor improve us as citizens nor our democracy, society, or in stitutions. No, improvement will take some effort. It is a heavy burden to be reflective, indeed analytical, and disciplined but only constructively constrained by different perspectives. The science-based technology that makes for the complexity, contro versy, and uncertainty of life sows the seeds of understanding in Science, Technology, and Society. STS, as it is known, encompasses a hybrid area of scholarship now nearly three decades old. As D. R. Sarewitz,a former geologist now congressional staffer and an author, put it After all, the important and often controversial policy dilemmas posed by issues such as nuclear energy, toxic waste disposal, global climate change, or biotech nology cannot be resolved by authoritative scientific knowledge; instead, they must involve a balancing of technical considerations

with other criteria that are explicitly nonscientific: ethics, esthetics, equity, ideology. Trade-offs must be made in light of inevitable uncertainties (Sarewitz, 1996, p. 182).