

Developmental Neuroscience A Concise Introduction

Updated and expanded to 124 entries, The Cambridge Encyclopedia of Child Development remains the authoritative reference in the field.

Adult Attachment: A Concise Introduction to Theory and Research is an easy-to-read and highly accessible reference on attachment that deals with many of the key concepts and topics studied within attachment theory. This book is comprised of a series of chapters framed by common questions that are typically asked by novices entering the field of attachment. The content of each chapter focuses on answering this overarching question. Topics on the development of attachment are covered from different levels of analysis, including species, individual, and relationship levels, working models of attachment, attachment functions and hierarchies, attachment stability and change over time and across situations, relationship contexts, the cognitive underpinnings of attachment and its activation of enhancement via priming, the interplay between the attachment behavioral system and other behavioral systems, the effects of context on attachment, the contribution of physiology/neurology and genetics to attachment, the associations/differences between attachment and temperament, the conceptualization and measurement of attachment, and the association between attachment and psychopathology/therapy. Uses a question-and-answer format to address the most important topics within attachment theory Presents information in a simple, easy-to-understand way to ensure accessibility for novices in the field of attachment Covers the main concepts and issues that relate to attachment theory, thus ensuring readers develop a strong foundation in attachment theory that they can then apply to the study of relationships Addresses future directions in the field of attachment theory Concisely covers material, ensuring scholars and professionals can quickly get up-to-speed with the most recent research

Developmental Neuroscience A Concise Introduction

This textbook presents introductory ecology in an accessible, state-of-the-art format designed to cultivate the novice student's understanding of, and fascination with, the natural world. In a concise, engaging style, this text outlines the essential principles of ecology from the theoretical fundamentals to their practical applications. Full color artwork, simple pedagogical features, and a wide range of carefully-chosen examples make this book an ideal introduction to ecology for students at all levels. The third edition of this successful text is much more than a simple update, reflecting the vibrancy of the field. With hundreds of new examples, it contains for the first time a separate chapter on evolutionary ecology, with all other chapters, especially those on applied aspects, having been extensively revised and re-written. The new edition also features new artwork and an enhanced design, making this book as attractive as it is up-to-date and relevant. Outstanding features of the third

edition of Essentials of Ecology include: Dedicated website - available at www.blackwellpublishing.com/townsend, featuring study resources and web research questions Key Concepts - summarized at the beginning of each chapter History boxes outlining key landmarks in the development of ecology Quantitative boxes - allowing mathematical aspects of ecology to be explained clearly without interrupting the flow of the text Topical ECOncerns boxes - highlighting ethical, social and political questions in ecology Review questions - included at the end of each chapter

Neuroscience for Psychologists

Cognition, Brain, and Consciousness

Cognitive Neuroscience

A Concise Introduction to Theory and Research

The Neuroscience of Development

Glial Neurobiology

"This volume is a very valuable and much needed contribution." -Quarterly Review of Biology AT LAST - A comprehensive, accessible textbook on glial neurobiology! Glial cells are the most numerous cells in the human brain but for many years have attracted little scientific attention. Neurophysiologists concentrated their research efforts instead, on neurones and neuronal networks because it was thought that they were the key elements responsible for higher brain function. Recent advances, however, indicate this isn't exactly the case. Not only are astroglial cells the stem elements from which neurones are born, but they also control the development, functional activity and death of neuronal circuits. These ground-breaking developments have revolutionized our understanding of the human brain and the complex interrelationship of glial and neuronal networks in health and disease. Features of this book: an accessible introduction to glial neurobiology including an overview of glial cell function and its active role in neural processes, brain function and nervous system pathology an exploration of all the major types of glial cells including: the astrocytes, oligodendrocytes and microglia of the ACNS and Schwann cells of the peripheral nervous system; the book also presents a broad overview of glial receptors and ion channels an investigation into the role of glial cells in various types of brain diseases including stroke, neurodegenerative diseases such as Alzheimer's, Parkinson's and Alexander's disease, brain oedema, multiple sclerosis and many more a wealth of illustrations, including unique images from the authors' own libraries of images, describing the main features of glial cells Written by two leading experts in the field, Glial Neurobiology provides a concise, authoritative introduction to glial physiology and pathology for undergraduate/postgraduate neuroscience, biomedical, medical, pharmacy, pharmacology, and neurology, neurosurgery and physiology students. It is also an invaluable resource for researchers in neuroscience, physiology, pharmacology and pharmaceuticals.

The authors of the most cited neuroscience publication, *The Rat Brain in Stereotaxic Coordinates*, have written this introductory textbook for neuroscience students. The text is clear and concise, and offers an excellent introduction to the essential concepts of neuroscience. Based on contemporary neuroscience research rather than old-style medical school neuroanatomy. Thorough treatment of motor and sensory systems. A detailed chapter on human cerebral cortex. The neuroscience of consciousness, memory, emotion, brain injury, and mental illness. A comprehensive chapter on brain development. A summary of the techniques of brain research. A detailed glossary of neuroscience terms. Illustrated with over 130 color photographs and diagrams. This book will inspire and inform students of neuroscience. It is designed for beginning students in the health sciences, including psychology, nursing, biology, and medicine. Clearly and concisely written for easy comprehension by beginning students. Based on contemporary neuroscience research rather than the concepts of old-style medical school neuroanatomy. Thorough treatment of motor and sensory systems. A detailed chapter on human cerebral cortex. Discussion of the neuroscience of conscience, memory, cognitive function, brain injury, and mental illness. A comprehensive chapter on brain development. A summary of the techniques of brain research. A detailed glossary of neuroscience terms. Illustrated with over 100 color photographs and diagrams.

This textbook offers a concise introduction to the exciting field of developmental neuroscience, a discipline concerned with the mechanisms by which complex nervous systems emerge during embryonic growth. Bridging the divide between basic and clinical research, it captures the extraordinary progress that has been achieved in the field. It provides an opportunity for students to apply and extend what they have learned in their introductory biology courses while also directing them to the primary literature. This accessible textbook is unique in that it takes an in-depth look at a small number of key model systems and signaling pathways. The book's chapters logically follow the sequence of human brain development and explain how information obtained from models such as *Drosophila* and zebrafish addresses topics relevant to this area. Beginning with a brief presentation of methods for studying neural development, the book provides an overview of human development, followed by an introduction to animal models. Subsequent chapters consider the molecular mechanisms of selected earlier and later events, neurogenesis, and formation of synapses. Glial cells and postembryonic maturation of the nervous system round out later chapters. The book concludes by discussing the brain basis of human intellectual disabilities viewed from a developmental perspective. Focusing on the mechanistic and functional, this textbook will be invaluable to biology majors, neuroscience students, and premedical and pre-health-professions students. An accessible introduction to nervous system development. Suitable for one-semester developmental neuroscience course. Thorough review of key model systems. Selective coverage of topics allows professors to personalize courses. Investigative reading exercises at the end of each chapter. An online illustration package is

available to professors

Neurobiology of Language explores the study of language, a field that has seen tremendous progress in the last two decades. Key to this progress is the accelerating trend toward integration of neurobiological approaches with the more established understanding of language within cognitive psychology, computer science, and linguistics. This volume serves as the definitive reference on the neurobiology of language, bringing these various advances together into a single volume of 100 concise entries. The organization includes sections on the field's major subfields, with each section covering both empirical data and theoretical perspectives. "Foundational" neurobiological coverage is also provided, including neuroanatomy, neurophysiology, genetics, linguistic, and psycholinguistic data, and models. Foundational reference for the current state of the field of the neurobiology of language Enables brain and language researchers and students to remain up-to-date in this fast-moving field that crosses many disciplinary and subdisciplinary boundaries Provides an accessible entry point for other scientists interested in the area, but not actively working in it - e.g., speech therapists, neurologists, and cognitive psychologists Chapters authored by world leaders in the field - the broadest, most expert coverage available The Cambridge Encyclopedia of Child Development

Minds, Brains, and Law

The social construction of models of change

Introduction to Cognitive Neuroscience

A Concise Guide

Assessments, Treatments and Modeling in Aging and Neurological Disease

Demonstrates how the explanatory power of brain scans in particular and neuroscience more generally has been overestimated, arguing that the overzealous application of brain science has undermined notions of free will and responsibility.

Diagnosis, Management and Modeling of Neurodevelopmental Disorders: The Neuroscience of Development is a comprehensive reference on the diagnosis and management of neurodevelopment and associated disorders. The book discusses the mechanisms underlying neurological development and provides readers with a detailed introduction to the neural connections and complexities in biological circuitries, as well as the interactions between genetics, epigenetics and other micro-environmental processes. In addition, the book also examines the pharmacological and non-pharmacological interventions of development-related conditions. Provides the most comprehensive coverage of the broad range of topics relating to the neuroscience of aging Features sections on the genetics that influences aging and diseases of aging Contains an abstract, key facts, a mini

dictionary of terms, and summary points in each chapter Focuses on neurological diseases and conditions linked to aging, environmental factors and clinical recommendations Includes more than 500 illustrations and tables

Preceded by: Building brains / David Price ... [et al.]. 2011.

Explores how the explosion of neuroscience-based evidence in recent years has led to a fundamental change in how forensic psychology can inform working with criminal populations. This book communicates knowledge and research findings in the neurobiological field to those who work with offenders and those who design policy for offender rehabilitation and criminal justice systems, so that practice and policy can be neurobiologically informed, and research can be enhanced. Starting with an introduction to the subject of neuroscience and forensic settings, The Wiley Blackwell Handbook of Forensic Neuroscience then offers in-depth and enlightening coverage of the neurobiology of sex and sexual attraction, aggressive behavior, and emotion regulation; the neurobiological bases to risk factors for offending such as genetics, developmental, alcohol and drugs, and mental disorders; and the neurobiology of offending, including psychopathy, antisocial personality disorders, and violent and sexual offending. The book also covers rehabilitation techniques such as brain scanning, brain-based therapy for adolescents, and compassion-focused therapy. The book itself: Covers a wide array of neuroscience research Chapters by renowned neuroscientists and criminal justice experts Topics covered include the neurobiology of aggressive behavior, the neuroscience of deception, genetic contributions to psychopathy, and neuroimaging-guided treatment Offers conclusions for practitioners and future directions for the field. The Handbook of Forensic Neuroscience is a welcome book for all researchers, practitioners, and postgraduate students involved with forensic psychology, neuroscience, law, and criminology.

Foundations for the Science of Chronic Disease Prevention

Development of the Nervous System

Social Neuroscience and Public Health

Neurobiology of Language

The Student's Guide to Cognitive Neuroscience

Foundations of Neuroscience

Up to the 1960s, psychology was deeply under the influence of behaviourism, which focused on stimuli and responses, and regarded consideration of what may happen in the mind as unapproachable scientifically. This began to change with the devising of methods to try to tap into what was going on in

the 'black box' of the mind, and the development of 'cognitive psychology'. With the study of patients who had suffered brain damage or injury to limited parts of the brain, outlines of brain components and processes began to take shape, and by the end of the 1970s, a new science, cognitive neuroscience, was born. But it was with the development of ways of accessing activation of the working brain using imaging techniques such as PET and fMRI that cognitive neuroscience came into its own, as a science cutting across psychology and neuroscience, with strong connections to philosophy of mind. Experiments involving subjects in scanners while doing various tasks, thinking, problem solving, and remembering are shedding light on the brain processes involved. The research is exciting and new, and often makes media headlines. But there is much misunderstanding about what brain imaging tells us, and the interpretation of studies on cognition. In this Very Short Introduction Richard Passingham, a distinguished cognitive neuroscientist, gives a provocative and exciting account of the nature and scope of this relatively new field, and the techniques available to us, focusing on investigation of the human brain. He explains what brain imaging shows, pointing out common misconceptions, and gives a brief overview of the different aspects of human cognition: perceiving, attending, remembering, reasoning, deciding, and acting. Passingham concludes with a discussion of the exciting advances that may lie ahead. ABOUT THE SERIES: The Very Short Introductions series from Oxford University Press contains hundreds of titles in almost every subject area. These pocket-sized books are the perfect way to get ahead in a new subject quickly. Our expert authors combine facts, analysis, perspective, new ideas, and enthusiasm to make interesting and challenging topics highly readable.

Updated fully, this accessible and comprehensive text highlights the most important theoretical, conceptual and methodological issues in cognitive neuroscience. Written by two experienced teachers, the consistent narrative ensures that students link concepts across chapters, and the careful selection of topics enables them to grasp the big picture without getting distracted by details. Clinical applications such as developmental disorders, brain injuries and dementias are highlighted. In addition, analogies and examples within the text, opening case studies, and 'In Focus' boxes engage students and demonstrate the relevance of the material to real-world concerns. Students are encouraged to develop the critical thinking skills that will enable them to evaluate future developments in this fast-moving field. A new chapter on Neuroscience and Society considers how cognitive neuroscience issues relate to the law, education, and ethics, highlighting the clinical and real-world relevance. An expanded online package

includes a test bank.

Assessments, Treatments and Modeling in Aging and Neurological Disease: The Neuroscience of Aging is a comprehensive reference on the diagnosis and management of neurological aging and associated disorders. The book discusses the mechanisms underlying neurological aging and provides readers with a detailed introduction to the aging of neural connections and complexities in biological circuitries, as well as the interactions between genetics, epigenetics and other micro-environmental processes. It also examines pharmacological and non-pharmacological interventions of age-related conditions that affect the brain, including Alzheimer's, stroke and multiple sclerosis. Provides the most comprehensive coverage of the broad range of topics related to the neuroscience of aging Features sections on diagnosis and biomarkers of neurological aging, Alzheimer's and stroke Contains an abstract, key facts, a mini dictionary of terms, and summary points in each chapter Focuses on neurological diseases and conditions linked to aging, environmental factors and clinical recommendations Includes more than 500 illustrations and tables

"Reflecting recent changes in the way cognition and the brain are studied, this thoroughly updated fourth edition of this bestselling textbook provides a comprehensive and student-friendly guide to cognitive neuroscience. This book will be invaluable as a core text for undergraduate modules in cognitive neuroscience and can also be used as a key text on courses in cognition, cognitive neuropsychology, biopsychology or brain and behavior. New material for this edition includes more on the impact of genetics on cognition and new coverage of the cutting-edge field of connectomics. Student-friendly pedagogy is included in every chapter, alongside an extensive companion website"--

Brainwashed

An Introduction to Neural Development

Essentials of Ecology

Cognitive Development for Academic Achievement

Diagnosis, Management and Modeling of Neurodevelopmental Disorders

Building Brains

Representing Development presents the different social representations that have formed the idea of development in Western thinking over the past three centuries. Offering an acute perspective on the current state of developmental science and providing constructive insights into future pathways, the book draws together twelve contributors with a variety of multidisciplinary and

international perspectives to focus upon development in fields including biology, psychology and sociology. Chapters and commentaries in this volume present a variety of perspectives surrounding social representation and development, addressing their contemporary enactments and reflecting on future theoretical and empirical directions. The first section of the book provides an historical account of early representations of development that, having come from life science, has shaped the way in which developmental science has approached development. Section two focuses upon the contemporary issues of developmental psychology, neuroscience and developmental science at large. The final section offers a series of commentaries pointing to the questions opened by the previous chapters, looking to outline the future lines of developmental thinking. This book will be of particular interest to child psychologists, educational psychologists and sociologists or historians of science, as well as academics and students interested in developmental and life sciences.

A reader-friendly exploration of the science of emotion. After years of neglect by both mainstream biology and psychology, the study of emotions has emerged as a central topic of scientific inquiry in the vibrant new discipline of affective neuroscience. Elizabeth Johnston and Leah Olson trace how work in this rapidly expanding field speaks to fundamental questions about the nature of emotion: What is the function of emotions? What is the role of the body in emotions? What are "feelings," and how do they relate to emotions? Why are emotions so difficult to control? Is there an emotional brain? The authors tackle these questions and more in this "tasting menu" of cutting-edge emotion research. They build their story around the path-breaking 19th century works of biologist Charles Darwin and psychologist and philosopher William James. James's 1884 article "What Is an Emotion?" continues to guide contemporary debate about minds, brains, and emotions, while Darwin's treatise on "The Expression of Emotions in Animals and Humans" squarely located the study of emotions as a critical concern in biology. Throughout their study, Johnston and Olson focus on the key scientists whose work has shaped the field, zeroing in on the most brilliant threads in the emerging tapestry of affective neuroscience. Beginning with early work on the brain substrates of emotion by such workers such as James Papez and Paul MacLean, who helped define an emotional brain, they then examine the role of emotion in higher brain functions such as cognition and decision-making. They then investigate the complex interrelations of emotion and pleasure, introducing along the way the work of major researchers such as Antonio Damasio and Joseph LeDoux. In doing so, they braid diverse strands of inquiry into a lucid and concise introduction to this burgeoning field, and begin to answer some of the most compelling questions in the field today. How does the science of "normal" emotion inform our understanding of emotional disorders? To what extent can we regulate our emotions? When can we trust our emotions and when might they lead us astray? How do emotions affect our memories, and vice versa? How can we best describe the relationship between emotion and cognition? Johnston and Olson lay out the most salient questions of contemporary affective neuroscience in this study, expertly situating them in their biological, psychological, and philosophical contexts. They offer a compelling vision of an increasingly exciting and ambitious field for mental health professionals and the interested lay audience, as

well as for undergraduate and graduate students.

The field of public health is primarily concerned with understanding and improving physical health from a large group perspective (i.e., communities and whole populations). The field of social neuroscience, on the other hand, is primarily concerned with examining brain-behavior relationships that unfold in a social context. Both of these are rapidly developing fields of inquiry, and their boundaries have only recently begun to overlap. This book discusses collaborative research findings at the intersection of social neuroscience and public health that promise to fundamentally change the way scientists, public health practitioners, and the general public view physical health within the larger social context. Eighteen chapters are organized under the following major sections: cognition and health outcomes; neuroscientific aspects of health communication; health behavior and the neurobiology of self-regulation; neurobiological processes in health decision making; ecological and social context; neuroscience methods; and future directions.

Cognition, Brain, and Consciousness, Second Edition, provides students and readers with an overview of the study of the human brain and its cognitive development. It discusses brain molecules and their primary function, which is to help carry brain signals to and from the different parts of the human body. These molecules are also essential for understanding language, learning, perception, thinking, and other cognitive functions of our brain. The book also presents the tools that can be used to view the human brain through brain imaging or recording. New to this edition are Frontiers in Cognitive Neuroscience text boxes, each one focusing on a leading researcher and their topic of expertise. There is a new chapter on Genes and Molecules of Cognition; all other chapters have been thoroughly revised, based on the most recent discoveries. This text is designed for undergraduate and graduate students in Psychology, Neuroscience, and related disciplines in which cognitive neuroscience is taught. New edition of a very successful textbook Completely revised to reflect new advances, and feedback from adopters and students Includes a new chapter on Genes and Molecules of Cognition Student Solutions available at <http://www.baars-gage.com/> For Teachers: Rapid adoption and course preparation: A wide array of instructor support materials are available online including PowerPoint lecture slides, a test bank with answers, and eFlashcards on key concepts for each chapter. A textbook with an easy-to-understand thematic approach: in a way that is clear for students from a variety of academic backgrounds, the text introduces concepts such as working memory, selective attention, and social cognition. A step-by-step guide for introducing students to brain anatomy: color graphics have been carefully selected to illustrate all points and the research explained. Beautifully clear artist's drawings are used to 'build a brain' from top to bottom, simplifying the layout of the brain. For students: An easy-to-read, complete introduction to mind-brain science: all chapters begin from mind-brain functions and build a coherent picture of their brain basis. A single, widely accepted functional framework is used to capture the major phenomena. Learning Aids include a student support site with study guides and exercises, a new Mini-Atlas of the Brain and a full Glossary of technical terms and their definitions. Richly illustrated with hundreds of carefully selected color graphics to enhance understanding.

Critical Thinking

The Brain

Autism

A New Introduction to Psychological Theory and Current Debate

How the Human Brain Is Built

The new edition of Fundamentals of Computational Neuroscience build on the success and strengths of the first edition. Completely redesigned and revised, it introduces the theoretical foundations of neuroscience with a focus on the nature of information processing in the brain.

This exceptionally concise volume offers a rich survey of the field's fundamental research and concepts at an unbeatable price--with formats for less than \$40! The text also includes a robust media and supplements package for instructors and students, including LaunchPad. No other text/media resource for the course offers such an attractive combination of authority and affordability. Richard Griggs has updated the book throughout, especially in the chapters on neuroscience, sensation and perception, learning, social psychology, and abnormal psychology--all while maintaining the book's trademark brevity.

Winner of the Inaugural Expanded Reason Award: A wide-ranging exploration of the role of childhood experiences in adult morality. Moral development has traditionally been considered a matter of reasoning—of learning and acting in accordance with abstract rules. On this model, largely taken for granted in modern societies, acts of selfishness, aggression, and ecological mindlessness are failures of will, moral problems that can be solved by acting in accordance with a higher rationality. But both ancient philosophy and recent scientific scholarship emphasize implicit systems, such as action schemas and perceptual filters that guide behavior and shape human development. In this integrative book, Darcia Narvaez argues that morality goes “all the way down” into our neurobiological and emotional development, and that a person’s moral architecture is largely established early on in life. Moral rationality and virtue emerge “bottom up” from lived experience, so it matters what that experience is. Bringing together deep anthropological history, ethical philosophy, and contemporary neurobiological science, she demonstrates where modern industrialized societies have fallen away from the cultural practices that made us human in the first place. Neurobiology and the Development of Human Morality advances the field of developmental moral psychology in three key ways. First, it provides an evolutionary framework for early childhood experience grounded in developmental systems theory, encompassing not only genes but a wide array of environmental and epigenetic factors. Second, it proposes a neurobiological basis for the development of moral sensibilities and cognition, describing ethical functioning at multiple levels of complexity and

context before turning to a theory of the emergence of wisdom. Finally, it embraces the sociocultural orientations of our ancestors and cousins in small-band hunter-gatherer societies—the norm for 99% of human history—for a re-envisioning of moral life, from the way we value and organize child raising to how we might frame a response to human-made global ecological collapse. Integrating the latest scholarship in clinical sciences and positive psychology, Narvaez proposes a developmentally informed ecological and ethical sensibility as a way to self-author and revise the ways we think about parenting and sociality. The techniques she describes point towards an alternative vision of moral development and flourishing, one that synthesizes traditional models of executive, top-down wisdom with “primal” wisdom built by multiple systems of biological and cultural influence from the ground up.

The second edition of an essential resource to the evolving field of developmental cognitive neuroscience, completely revised, with expanded emphasis on social neuroscience, clinical disorders, and imaging genomics. The publication of the second edition of this handbook testifies to the rapid evolution of developmental cognitive neuroscience as a distinct field. Brain imaging and recording technologies, along with well-defined behavioral tasks—the essential methodological tools of cognitive neuroscience—are now being used to study development. Technological advances have yielded methods that can be safely used to study structure-function relations and their development in children's brains. These new techniques combined with more refined cognitive models account for the progress and heightened activity in developmental cognitive neuroscience research. The Handbook covers basic aspects of neural development, sensory and sensorimotor systems, language, cognition, emotion, and the implications of lifelong neural plasticity for brain and behavioral development. The second edition reflects the dramatic expansion of the field in the seven years since the publication of the first edition. This new Handbook has grown from forty-one chapters to fifty-four, all original to this edition. It places greater emphasis on affective and social neuroscience—an offshoot of cognitive neuroscience that is now influencing the developmental literature. The second edition also places a greater emphasis on clinical disorders, primarily because such research is inherently translational in nature. Finally, the book's new discussions of recent breakthroughs in imaging genomics include one entire chapter devoted to the subject. The intersection of brain, behavior, and genetics represents an exciting new area of inquiry, and the second edition of this essential reference work will be a valuable resource for researchers interested in the development of brain-behavior relations in the context of both typical and atypical development.

The Serotonin System

The Conceptual Foundations of Law and Neuroscience

A Concise Introduction

An Introduction

Handbook of Developmental Cognitive Neuroscience, second edition

An Introduction to Functional Neuroanatomy

Cognitive neuroscientists have deepened our understanding of the complex relationship between mind and brain and complicated the relationship between mental attributes and law. New arguments and conclusions based on functional magnetic resonance imaging (fMRI), electroencephalography (EEG), and other increasingly sophisticated technologies are being applied to debates and processes in the legal field, from lie detection to legal doctrine surrounding criminal law, including the insanity defense to legal theory. In Minds, Brains, and Law, Michael S. Pardo and Dennis Patterson analyze questions that lie at the core of implementing neuroscientific research and technology within the legal system. They examine the arguments favoring increased use of neuroscience in law, the scientific evidence available for the reliability of neuroscientific evidence in legal proceedings, and the integration of neuroscientific research into substantive legal doctrines. The authors also explore the basic philosophical questions that lie at the intersection of law, mind, and neuroscience. In doing so, they argue that mistaken inferences and conceptual errors arise from mismatched concepts, such as the disconnect between lying and what constitutes "lying" in many neuroscientific studies. The empirical, practical, ethical, and conceptual issues that Pardo and Patterson seek to redress will deeply influence how we negotiate and implement the fruits of neuroscience in law and policy in the future. This paperback edition contains a new Preface covering developments in this subject since the hardcover edition published in 2013.

Development of the Nervous System, Fourth Edition provides an informative and up-to-date account of our present understanding of the basic principles of neural development as exemplified by key experiments and observations from past and recent times. This book reflects the advances made over the last few years, demonstrating their promise for both therapy and molecular understanding of one of the most complex processes in animal development. This information is critical for neuroscientists, developmental biologists, educators, and students at various stages of their career, providing a clear presentation of the frontiers of this exciting and medically important area of developmental biology. The book includes a basic introduction to the relevant aspects of neural development, covering all the major topics that form the basis of a comprehensive, advanced undergraduate and graduate curriculum, including the patterning and growth of the nervous system, neuronal determination, axonal navigation and targeting, neuron survival and death, synapse formation and plasticity. Provides broad coverage of concepts and experimental strategies Includes full color schematics and photographs of critical experiments Outlines the molecular and genetic basis for most developmental events Written at a level that is appropriate for advanced undergraduates and beyond Includes designs of critical experiments that are easy to understand

Based on Francesca Happé's best-selling textbook, Autism: An Introduction to Psychological Theory, this completely new edition provides a concise overview of contemporary psychological theories about autism. Fletcher-Watson and Happé explore the relationship between theories of autism at psychological (cognitive), biological and behavioural levels, and consider their clinical and educational impact. The authors summarise what is known about the biology and behavioural features of autism, and provide concise but comprehensive accounts of all influential psychological models including 'Theory of Mind' (ToM) models, early social development models and alternative information processing models such as 'weak central coherence' theory. The book also discusses more recent attempts to understand autism, including the 'Double Empathy Problem' and Bayesian theories. In each case, the authors describe the theory, review the evidence and provide critical

analysis of its value and impact. Recognising the multiplicity of theoretical views, and rapidly changing nature of autism research, each chapter considers current debates and major questions that remain for the future. Importantly, the book includes the voices of autistic people, including parents and practitioners, who were asked to provide commentaries on each chapter, helping to contextualise theory and research evidence with accounts of real-life experience. The book embraces neurodiversity whilst recognising the real needs of autistic people and their families. Thus Autism: A New Introduction to Psychological Theory and Current Debate provides the reader with a critical overview of psychological theory but also embeds this within community perspectives, making it a relevant and progressive contribution to understanding autism, and essential reading for students and practitioners across educational, clinical and social settings.

Provides a highly visual, readily accessible introduction to the main events that occur during neural development and their mechanisms Building Brains: An Introduction to Neural Development, 2nd Edition describes how brains construct themselves, from simple beginnings in the early embryo to become the most complex living structures on the planet. It explains how cells first become neural, how their proliferation is controlled, what regulates the types of neural cells they become, how neurons connect to each other, how these connections are later refined under the influence of neural activity, and why some neurons normally die. This student-friendly guide stresses and justifies the generally-held belief that a greater knowledge of how nervous systems construct themselves will help us find new ways of treating diseases of the nervous system that are thought to originate from faulty development, such as autism spectrum disorders, epilepsy, and schizophrenia. A concise, illustrated guide focusing on core elements and emphasizing common principles of developmental mechanisms, supplemented by suggestions for further reading Text boxes provide detail on major advances, issues of particular uncertainty or controversy, and examples of human diseases that result from abnormal development Introduces the methods for studying neural development, allowing the reader to understand the main evidence underlying research advances Offers a balanced mammalian/non-mammalian perspective (and emphasizes mechanisms that are conserved across species), drawing on examples from model organisms like the fruit fly, nematode worm, frog, zebrafish, chick, mouse and human Associated Website includes all the figures from the textbook and explanatory movies Filled with full-color artwork that reinforces important concepts; an extensive glossary and definitions that help readers from different backgrounds; and chapter summaries that stress important points and aid revision, Building Brains: An Introduction to Neural Development, 2nd Edition is perfect for undergraduate students and postgraduates who may not have a background in neuroscience and/or molecular genetics. “This elegant book ranges with ease and authority over the vast field of developmental neuroscience. This excellent textbook should be on the shelf of every neuroscientist, as well as on the reading list of every neuroscience student.” —Sir Colin Blakemore, Oxford University “With an extensive use of clear and colorful illustrations, this book makes accessible to undergraduates the beauty and complexity of neural development. The book fills a void in undergraduate neuroscience curricula.” —Professor Mark Bear, Picower Institute, MIT. Highly Commended, British Medical Association Medical Book Awards 2012 Published with the New York Academy of Sciences

The Wiley Blackwell Handbook of Forensic Neuroscience

The Neuroscience of Aging

Conn's Translational Neuroscience

Developmental Neuroscience

Neurobiology and the Development of Human Morality: Evolution, Culture, and Wisdom (Norton Series on Interpersonal Neurobiology)

Medical Neurobiology

Conn's Translational Neuroscience provides a comprehensive overview reflecting the depth and breadth of the field of translational neuroscience, with input from a distinguished panel of basic and clinical investigators. Progress has continued in understanding the brain at the molecular, anatomic, and physiological levels in the years following the 'Decade of the Brain,' with the results providing insight into the underlying basis of many neurological disease processes. This book alternates scientific and clinical chapters that explain the basic science underlying neurological processes and then relates that science to the understanding of neurological disorders and their treatment. Chapters cover disorders of the spinal cord, neuronal migration, the autonomic nervous system, the limbic system, ocular motility, and the basal ganglia, as well as demyelinating disorders, stroke, dementia and abnormalities of cognition, congenital chromosomal and genetic abnormalities, Parkinson's disease, nerve trauma, peripheral neuropathy, aphasia, sleep disorders, and myasthenia gravis. In addition to concise summaries of the most recent biochemical, physiological, anatomical, and behavioral advances, the chapters summarize current findings on neuronal gene expression and protein synthesis at the molecular level.

Authoritative and comprehensive, Conn's Translational Neuroscience provides a fully up-to-date and readily accessible guide to brain functions at the cellular and molecular level, as well as a clear demonstration of their emerging diagnostic and therapeutic importance. Provides a fully up-to-date and readily accessible guide to brain functions at the cellular and molecular level, while also clearly demonstrating their emerging diagnostic and therapeutic importance. Features contributions from leading global basic and clinical investigators in the field. Provides a great resource for researchers and practitioners interested in the basic science underlying neurological processes. Relates and translates the current science to the understanding of neurological disorders and their treatment.

A revelatory tale of how the human brain develops, from conception to birth and beyond. By the time a baby is born, its brain is equipped with billions of intricately crafted neurons wired together through trillions of interconnections to form a compact and breathtakingly efficient supercomputer. Zero to Birth takes you on an extraordinary journey to the very edge of creation, from the moment of an egg's fertilization through each step of a human brain's development in the womb—and even a little beyond. As pioneering experimental neurobiologist W. A. Harris guides you through the process of how the brain is built, he takes up the biggest questions that scientists have asked about the developing brain, describing many of the thrilling discoveries that were foundational to our current understanding. He weaves in a remarkable evolutionary story that begins billions of years ago in the Proterozoic eon, when multicellular animals first emerged from single-cell organisms, and reveals how the growth of a fetal brain over nine months reflects the brain's evolution through the ages. Our brains have much in common with those of other animals, and Harris offers an illuminating look at how comparative animal studies have been crucial to understanding what makes a human brain human. An unforgettable chronicle of one of nature's greatest achievements, Zero to Birth describes how the brain's incredible feat of orchestrated growth ensures that

every brain is unique, and how breakthroughs at the frontiers of science are helping us to decode many traits that only reveal themselves later in life.

Medical Neurobiology, Second Edition continues the work of Dr. Peggy Mason as one of the few single author textbooks available. Written in an engaging style for the vast majority of medical students who will choose to specialize in internal medicine, orthopedics, oncology, cardiology, emergency medicine, and the like, as well as the student interested in neurology, psychiatry, or ophthalmology, this textbook provides a sturdy scaffold upon which a more detailed specialized knowledge can be built. Unlike other neuroscience textbooks, this new edition continues to focus exclusively on the human, covering everything from neuroanatomy to perception, motor control, homeostasis, and pathophysiology. Dr. Mason uniquely explains how disease and illness affect one's neurobiological functions and how they manifest in a person. Thoroughly updated as a result of student feedback, the topics are strictly honed and logically organized to meet the needs of the time-pressed student studying on-the-go. This textbook allows the reader to effortlessly absorb fundamental information critical to the practice of medicine through the use of memorable stories, metaphors, and clinical cases. Students will gain the tools and confidence to make novel connections between the nervous system and human disease. This is the perfect reference for any medical student, biology student, as well as any clinician looking to expand their knowledge of the human nervous system. New To the Second Edition of Medical Neurobiology: ♦ New sections on cerebral palsy, brain cancer, traumatic brain injury, neurodegenerative diseases, aphasia, and Kallmann syndrome; ♦ Incorporates easy to understand visual guides to brain development, eye movements, pupillary light reflex, pathways involved in Horner's syndrome; ♦ Presents real-life dilemmas faced by clinicians are discussed from both the medical point of view and the patient's perspective; and ♦ Additional reading lists are provided at the end of each chapter that include first-hand accounts of neurological cases and scientific discoveries (e.g. HM). Key Features Include: ♦ Written in an accessible and narrative tone; ♦ Uses metaphors and clinical examples to help the reader absorb the fundamentals of neurobiology; and ♦ Highly illustrated with over 300 figures and tables for full comprehension of topics covered.

This integrative text spotlights what educators need to know about children's cognitive development across grade levels (PreK-12) and content areas. The book provides a concise introduction to developmental neuroscience and theories of learning. Chapters on general cognitive abilities probe such crucial questions as what children are capable of remembering at different ages, what explains differences in effort and persistence, and how intelligence and aptitudes relate to learning. Domain-specific chapters focus on the development of key academic skills in reading, writing, math, science, and history. Multiple influences on academic achievement and motivation are explored, including school, family, cultural, and socioeconomic factors. Each chapter concludes with clear implications for curriculum and instruction.

History, Neuropharmacology, and Pathology

Adult Attachment

Representing Development

The Feeling Brain: The Biology and Psychology of Emotions

Cognitive Neuroscience of Language

Fundamentals of Computational Neuroscience

A much-needed guide to thinking critically for oneself and how to tell a good argument from a bad one. Includes topical examples from politics, sport, medicine, music, chapter summaries, glossary and exercises.

This textbook offers a concise introduction to the exciting field of developmental neuroscience, a discipline concerned with the mechanisms by which complex nervous systems emerge during embryonic growth. Bridging the divide between basic and clinical research, it captures the extraordinary progress that has been achieved in the field. It provides an opportunity for students to apply and extend what they have learned in their introductory biology courses while also directing them to the primary literature. This accessible textbook is unique in that it takes an in-depth look at a small number of.

The Serotonin System: History, Neuropharmacology, and Pathology provides an up-to-date accounting on the physiology and pathophysiology of serotonin and the role it plays in behavioral functions. In addition, the book explores the potential roles of 5-HT1 in neurodevelopmental disorders and summarizes the history of the discovery and development of serotonergic drugs for the treatment of neuropsychiatric disorders. This concise, yet thorough, volume is the perfect introduction to this critical neurotransmitter. It is ideal for students and researchers new to the study of behavior, neuropsychiatry or neuropharmacology, but is also a great resource for established investigators who want a greater perspective on serotonin. Examines the role of serotonin in physiological functions and neuropsychiatric disorders Provides in-depth knowledge on all aspects of the serotonin system Explores serotonergic receptors as targets for both current and new therapeutic compounds

This textbook is intended to give an introduction to neuroscience for students and researchers with no biomedical background. Primarily written for psychologists, this volume is a digest giving a rapid but solid overview for people who want to inform themselves about the core fields and core concepts in neuroscience but don't need so many anatomical or biochemical details given in "classical" textbooks for future doctors or biologists. It does not require any previous knowledge in basic science, such as physics or chemistry. On the other hand, it contains chapters that do go beyond the issues dealt with in most neuroscience textbooks: One chapter about mathematical modelling in neuroscience and another about "tools of neuroscience" explaining important methods. The book is divided in two parts. The first part presents core concepts in neuroscience: Electrical Signals in the Nervous System Basics of Neuropharmacology Neurotransmitters The second part presents an overview of the neuroscience fields of special interest for psychology: Clinical Neuropharmacology Inputs, Outputs and Multisensory Processing Neural Plasticity in Humans Mathematical Modeling in Neuroscience Subjective Experience and its Neural Basis The last chapter, "Tools of Neuroscience" presents important methodological approaches in neuroscience with a special focus on brain imaging. Neuroscience for Psychologists aims to fill a gap in the teaching literature by providing an introductory text for psychology students that can also be used in other social sciences courses, as well as a complement in courses of neurophysiology, neuropharmacology or similar in careers outside as well as inside biological or medical fields. Students of data sciences, chemistry and physics as well as engineering interested in neuroscience will also profit from the text.

Zero to Birth

Psychology: A Concise Introduction

A Textbook

The Seductive Appeal of Mindless Neuroscience

Building Skills and Motivation

Netter's Atlas of Neuroscience E-Book

Reflecting recent changes in the way cognition and the brain are studied, this thoroughly updated third edition of the best-selling textbook provides a comprehensive and student-friendly guide to cognitive neuroscience. Jamie Ward provides an easy-to-follow introduction to neural structure and function, as well as all the key methods and procedures of cognitive neuroscience, with a view to helping students understand how they can be used to shed light on the neural basis of cognition. The book presents an up-to-date overview of the latest theories and findings in all the key topics in cognitive neuroscience, including vision, memory, speech and language, hearing, numeracy, executive function, social and emotional behaviour and developmental neuroscience, as well as a new chapter on attention. Throughout, case studies, newspaper reports and everyday examples are used to help students understand the more challenging ideas that underpin the subject. In addition each chapter includes: Summaries of key terms and points Example essay questions Recommended further reading Feature boxes exploring interesting and popular questions and their implications for the subject. Written in an engaging style by a leading researcher in the field, and presented in full-color including numerous illustrative materials, this book will be invaluable as a core text for undergraduate modules in cognitive neuroscience. It can also be used as a key text on courses in cognition, cognitive neuropsychology, biopsychology or brain and behavior. Those embarking on research will find it an invaluable starting point and reference. The Student's Guide to Cognitive Neuroscience, 3rd Edition is supported by a companion website, featuring helpful resources for both students and instructors. Language is one of our most precious and uniquely human capacities, so it is not surprising that research on its neural substrates has been advancing quite rapidly in

recent years. Until now, however, there has not been a single introductory textbook that focuses specifically on this topic. *Cognitive Neuroscience of Language* fills that gap by providing an up-to-date, wide-ranging, and pedagogically practical survey of the most important developments in the field. It guides students through all of the major areas of investigation, beginning with fundamental aspects of brain structure and function, and then proceeding to cover aphasia syndromes, the perception and production of speech, the processing of language in written and signed modalities, the meanings of words, and the formulation and comprehension of complex expressions, including grammatically inflected words, complete sentences, and entire stories. Drawing heavily on prominent theoretical models, the core chapters illustrate how such frameworks are supported, and sometimes challenged, by experiments employing diverse brain mapping techniques. Although much of the content is inherently challenging and intended primarily for graduate or upper-level undergraduate students, it requires no previous knowledge of either neuroscience or linguistics, defining technical terms and explaining important principles from both disciplines along the way.

Ideal for students of neuroscience and neuroanatomy, the new edition of *Netter's Atlas of Neuroscience* combines the didactic well-loved illustrations of Dr. Frank Netter with succinct text and clinical points, providing a highly visual, clinically oriented guide to the most important topics in this subject. The logically organized content presents neuroscience from three perspectives: an overview of the nervous system, regional neuroscience, and systemic neuroscience, enabling you to review complex neural structures and systems from different contexts. You may also be interested in: A companion set of flash cards, *Netter's Neuroscience Flash Cards, 3rd Edition*, to which the textbook is cross-referenced. Coverage of both regional and systemic neurosciences allows you to learn structure and function in different and important contexts. Combines the precision and beauty of Netter and Netter-style illustrations to highlight key neuroanatomical concepts and clinical correlations. Reflects the current understanding of the neural components and supportive tissue, regions, and systems of the brain, spinal cord, and periphery. Uniquely informative drawings provide a quick and memorable overview of

anatomy, function, and clinical relevance. Succinct and useful format utilizes tables and short text to offer easily accessible "at-a-glance" information. Provides an overview of the basic features of the spinal cord, brain, and peripheral nervous system, the vasculature, meninges and cerebrospinal fluid, and basic development. Integrates the peripheral and central aspects of the nervous system. Bridges neuroanatomy and neurology through the use of correlative radiographs. Highlights cross-sectional brain stem anatomy and side-by-side comparisons of horizontal sections, CTs and MRIs. Expanded coverage of cellular and molecular neuroscience provides essential guidance on signaling, transcription factors, stem cells, evoked potentials, neuronal and glial function, and a number of molecular breakthroughs for a better understanding of normal and pathologic conditions of the nervous system. Micrographs, radiologic imaging, and stained cross sections supplement illustrations for a comprehensive visual understanding. Increased clinical points -- from sleep disorders and inflammation in the CNS to the biology of seizures and the mechanisms of Alzheimer's -- offer concise insights that bridge basic neuroscience and clinical application.