

Libro Neurociencia Y Conducta Kandel

This revised edition incorporates the latest discoveries in the rapidly changing fields of neuroscience and physiological psychology and offers the most comprehensive and integrative coverage of research and theory in contemporary behavioural neuroscience.

The investigation of the relationships between a behavior pattern and its underlying sensory and neurophysiological mechanisms in both man and animals dates back well into the last century. However, the concepts and findings of ethology and experimental psychology, together with an improved understanding of how the nervous system is organized and how neurons interact with each other, have only in the last 30 years laid the groundwork for an in-depth analysis. The many technological advances achieved in neurophysiology and neuroanatomy have also played an important role in this. The study of the neuronal bases of behavior - for which the term "neuroethology" has been coined - has thus become one of the central themes of neuroscience. Kenneth David Roeder, who died in 1979, was one of the pioneers of this field of research. It is to him that the contributions in this book are dedicated. K.D. Roeder was among the first to attempt to define the correlation between the natural behavior of an experimental animal and the activity of single sensory and nerve cells. The questions he asked, his experimental approach, and his fundamental discoveries are presented in an introductory chapter.

Scientist, inventor, and pioneering environmentalist James Lovelock brings together a richly illustrated collection of essays on earth and human science from 12 of today's leading thinkers. From stars to cells, quantum theory to capitalism, ancient fossils to Artificial Intelligence, this book delivers a holistic understanding of our planet and...

Esta obra reúne ensayos publicados por el autor en distintas revistas académicas, de manera que el lector podrá apreciar mejor un trabajo de lectura y escritura interdisciplinaria, sobre temas que surgieron de la actividad pedagógica y terapéutica. La compilación reúne en un mismo espacio una experiencia vital sobre preocupaciones que vinculan de manera compleja construcciones del pensar y dinámicas del hacer y el sentir. Con una mirada holística, comprensiva y compleja, el autor recurre al método comparado, para describir, explicar y criticar los contextos psico-socio-históricos en los cuales se dan, genealógicamente, los sistemas discursivos de diferentes saberes, sobre todo, los saberes ético, epistemológico y psicológico.

La columna vertebral es el eje central de nuestro esqueleto, es una región extensa en la que se centra un importante número de síntomas y dolencias. En este libro se exponen las diferentes áreas científicas de estudio que hacen referencia a la columna vertebral (anatomía, fisiología, patología y posturología). El lector encontrará explicadas las bases sobre el funcionamiento de la columna vertebral junto con los orígenes de los problemas que más comúnmente suelen afectarla (artrosis, hernias, pinzamientos, hiperlordosis, escoliosis, etc.). También se destaca la importancia de los malos hábitos posturales o de movimiento en la aparición de los diferentes procesos patológicos/dolorosos y se detallan las actitudes correctas para la adecuada utilización de la columna. Se incluye, además, un abanico de ejercicios, clasificados por regiones vertebrales, enfocados a mejorar el equilibrio estructural, desarrollar conciencia corporal y a prevenir, reducir e incluso eliminar los frecuentes dolores que suelen aparecer en la espalda. Asimismo, la mayor parte de los conceptos tratados se acompañan de imágenes y dibujos que clarifican y agilizan la exposición de los temas. Álex Monasterio Uría es fisioterapeuta y ha desarrollado su actividad profesional en diferentes servicios hospitalarios y sanitarios, entre los que destacan los Servicios de Ortopedia y Traumatología y de Reumatología del Hospital San Pablo de Barcelona. Ejerce la docencia en la Escola Universitària d'Infermeria, Fisioteràpia, Dietètica y Nutrició Blanquerna (Universidad Ramon Llull). También imparte cursos monográficos orientados a estudiantes y profesores de yoga y demás disciplinas basadas en el movimiento. Para más información sobre las actividades que realiza el autor puede visitar: www.columna-sana.com.

A substantial and transforming revision of the classic text. This edition features nearly 50% new material written by the next generation of leaders in the field of surgery. Highlight include the latest advances and techniques in transplantation, expanded coverage of surgical oncology, a completely new chapter on trauma written by the leading figure on the subject, and a state-of-the-art review of recent findings concerning systemic and metabolic response to injury. Furthermore, in keeping with the implications of managed care, the latest minimally invasive techniques for the surgical treatment and management of disease have been integrated throughout the text. Lastly, the scientific principles underlying pathophysiology and surgical intervention accompany discussion of surgical diagnosis and management.

Effectively and confidently interpret even the most challenging radiographic study A Doody's Core Title! "...should be a part of every emergency medicine resident's personal library. In addition to residents, I would highly recommend this book to medical students, midlevel providers and any other physician who is interested in improving their ability to interpret radiographic studies necessary to diagnose common emergency medicine patient complaints."--Annals of Emergency Medicine 4 STAR DOODY'S REVIEW! "The purpose is to help improve the reader's skills in ordering and interpreting radiographs. The focus is on conventional radiographs, as well as noncontrast head CT. For emergency physicians this is a vital skill, which can greatly aid in making difficult diagnoses. The book is well written and thorough in addressing how to read radiographs, as well as covering easy to miss findings. The numerous pictures and radiographs are invaluable in demonstrating the author's teaching points and in engaging the reader in the clinical cases....This well written book will be extremely useful for practicing emergency physicians. The clinical cases are interesting and help challenge the reader to improve their skills at evaluating radiographs more thoroughly."--Doody's Review Service Emergency Radiology: Case Studies is a one-of-a-kind text specifically designed to help you fine-tune your emergency radiographic interpretation and problem-solving skills. Illustrated with hundreds of high-resolution images, this reference covers the full range of clinical problems in which

radiographic studies play a key role. Dr. David Schwartz, a leading educator, takes you step-by-step through the radiographic analysis of medical, surgical, and traumatic disorders, giving you an unparalleled review of the use and interpretation of radiographic studies in emergency diagnosis. Features 55 cases studies that highlight challenging areas in emergency diagnosis, including imaging studies with subtle, equivocal, or potentially misleading findings Detailed coverage of the broad spectrum of disorders for which radiographs are utilized in emergency practice Coverage of chest and abdominal radiology, the extremities, cervical spine and facial radiology, and head CT Cohesive template for each chapter, beginning with a case presentation, followed by a comprehensive discussion of the disorder under consideration Sections begin with an overview of the pertinent radiographic technique, anatomy, and method of radiographic interpretation Diagnosis-accelerating radiographs, ultrasound images, CT scans, and MR images Invaluable “pearls and pitfalls” of radiographic interpretation

An accessible resource to the structure and chemistry of the brain explains how its systems shape our perceptions, feelings, and behaviors, while outlining the author's theory of the dynamic interaction between the four major brain systems. Reprint. 25,000 first printing.

Turn to Fundamental Neuroscience for a thorough, clinically relevant understanding of this complicated subject! Integrated coverage of neuroanatomy, physiology, and pharmacology, with a particular emphasis on systems neurobiology, effectively prepares you for your courses, exams, and beyond. Easily comprehend and retain complex material thanks to the expert instruction of Professor Duane Haines, recipient of the Henry Gray/Elsevier Distinguished Teacher Award from the American Association of Anatomists and the Distinguished Teacher Award from the Association of American Colleges. Access the complete contents online at www.studentconsult.com, plus 150 USMLE-style review questions, sectional images correlated with the anatomical diagrams within the text, and more. Grasp important anatomical concepts and their clinical applications thanks to correlated state-of-the-art imaging examples, anatomical diagrams, and histology photos. Retain key information and efficiently study for your exams with clinical highlights integrated and emphasized within the text.

"Principles of Neurobiology, Second Edition presents the major concepts of neuroscience with an emphasis on how we know what we know. The text is organized around a series of key experiments to illustrate how scientific progress is made and helps upper-level undergraduate and graduate students discover the relevant primary literature. Written by a single author in a clear and consistent writing style, each topic builds in complexity from electrophysiology to molecular genetics to systems level in a highly integrative approach. Students can fully engage with the content via thematically linked chapters and will be able to read the book in its entirety in a semester-long course. Principles of Neurobiology is accompanied by a rich package of online student and instructor resources including animations, figures in PowerPoint, and a Question Bank for adopting instructors"--

More than 200 exquisite, hand-painted illustrations - created by, and in the style of, master medical illustrator Frank H. Netter, MD - capture the essential clinical aspects of over 200 major neurologic disorders seen in hospital and office practice. With its masterful combination of artwork, succinct text, and tables, and its compact format, Netter's Concise Neurology delivers quick and convenient access to vital clinical knowledge! Guides you through neurologic and relevant medical examination. Explores anatomy, anatomic localization, differential diagnosis, and diagnosis of presenting symptoms. Reviews the pathophysiology, clinical presentation, diagnosis, and management of specific conditions. Provides access to frequently needed anatomic and tabular reference information.

Semiótica –estudios contemporáneos– es una pluralidad de textos cuyo eje de articulación es la semiótica. Esta condición plural de la obra se expresa, no solo en el tipo de acontecimientos, temas y problemas que abordan los autores, sino también en las perspectivas y líneas desde las cuales lo hacen. Es por ello que el presente libro puede resultar de mucha utilidad, tanto para quienes inician el estudio de la semiótica, como para los investigadores de las ciencias sociales y humanas (comunicadores, sociólogos, artistas, educadores, psicólogos, estudiosos de la literatura, entre otros).

It has been remarked that if the brain were so simple we could understand it, we would be so simple we couldn't. However, as the authors of this accessible guide demonstrate, there are at least some things we do understand about the brain, and this knowledge can shed new light on our conception of ourselves and the workings of our minds. Covering crude ancient neuroscience, sleep, language and even philosophical questions about the nature of consciousness, this lively and entertaining introduction assumes no previous scientific knowledge and will fascinate readers of all backgrounds.

Presenta artículos sobre las diferentes tendencias de la psicología contemporánea.

This accessible undergraduate text is the first to make teaching the neuropsychology course easier. Rains provides adequate depth and explanatory material to inspire student interest and motivation, and his in-depth approach not only makes the material easier for students to grasp, but reveals the exciting questions of the field remaining to be answered. PRINCIPLES OF HUMAN NEUROPSYCHOLOGY's other hallmark is to foster an appreciation for the interdisciplinary nature of neuropsychology by employing a levels of analysis approach—from single cell recording to the effects of large lesions.

Este libro es un manual introductorio de Lingüística que está concebido para una asignatura básica semestral de primer curso de cualquier Grado de la rama de Humanidades. Por lo tanto, el texto no requiere conocimientos previos específicos: parte del nivel que se supone a cualquier persona que ha superado el Bachillerato, y trata de avanzar lo más rápidamente posible hacia una cierta base de especialidad. El libro ofrece una visión panorámica de la Lingüística, que sirve como presentación inicial y como marco de referencia para asignaturas posteriores.

The coronavirus disease 2019 (COVID-19) outbreak has spread throughout the globe and much time has passed since it was declared as a pandemic by the World Health Organization (WHO). COVID-19: Diagnosis and Management provides clinicians and scholars all the information on this disease in 2 volumes. Readers will find a concise and visual reference for this viral disease and will be equipped with the knowledge to assess and manage Sar-Cov-2 infection cases in clinical settings. This book is divided into two parts (I and II). Part I provides comprehensive information about 1) History of Coronaviruses, 2) Epidemiology of COVID-19, 3) Clinical presentation of this viral disease and 4) COVID-19 diagnosis. Part II covers broader topics about this communicable disease including 1) the prevention and treatment methodology, 2) mortality and long-term complications, 3) COVID-19 vaccines and future perspectives. Key Features: Covers all the aspects of COVID-19 making this a perfect textbook for virology and medical students. Chapter wise description and segregation of topics from pathophysiology to diagnosis and management of COVID-19. Six chapters in the first part which focus on clinical basics of COVID-19. Six chapters in the first part which cover broader topics for practical infection control. Multiple tables and figures which summarize and highlight important points. Presents a summary of the current standards for the evaluation and diagnosis of COVID-19. Features a detailed list of references, abbreviations, and symbols. This book is an essential textbook reference for medical students, scientists (virologists, pulmonologists) and public health officials who

are required to understand COVID-19 diagnosis and management as part of their clinical training or professional work.

This book provides new insights about learning by synthesising existing and emerging findings from cognitive and brain science.

La concepción que podemos tener de la naturaleza humana afecta a todos los aspectos de nuestra vida, desde la forma en que educamos a nuestros hijos hasta las ideas políticas que defendemos. Sin embargo, en un momento en que la ciencia está avanzando espectacularmente en estos temas, muchas personas se muestran hostiles al respecto. Temen que los descubrimientos sobre los patrones innatos del pensar y el sentir se puedan emplear para justificar la desigualdad, subvertir el orden social, anular la responsabilidad personal y confundir el sentido y el propósito de la vida. En *La tabla rasa*, Steven Pinker explora la idea de la naturaleza humana y sus aspectos éticos, emocionales y políticos. Demuestra que muchos intelectuales han negado su existencia al defender tres dogmas entrelazados: la "tabla rasa" (la mente no tiene características innatas), el "buen salvaje" (la persona nace buena y la sociedad la corrompe) y el "fantasma en la máquina" (todos tenemos un alma que toma decisiones sin depender de la biología). Cada dogma sobrelleva una carga ética, y por eso sus defensores se obcecaban en tácticas desesperadas para desacreditar a los científicos que los cuestionan. Pinker aporta calma y serenidad a estos debates al mostrar que la igualdad, el progreso, la responsabilidad y el propósito nada tienen que temer de los descubrimientos sobre la complejidad de la naturaleza humana. Con un razonamiento claro, sencillez en la exposición y ejemplos procedentes de la ciencia y la historia, el autor desmonta incluso las amenazas más inquietantes. Y demuestra que un reconocimiento de la naturaleza humana basado en la ciencia y el sentido común, lejos de ser peligroso, puede ser un complemento a las ideas sobre la condición humana que miles de miles de artistas y filósofos han generado. Todo ello aderezado con un estilo que, en sus obras anteriores, le sirvió para conseguir muchos premios y el aplauso internacional: ingenio, lucidez y agudeza en el análisis de todos los asuntos, sean grandes o pequeños.

With its modular organization, consistent chapter structure, and contemporary perspective, this groundbreaking survey is ideal for courses on learning and memory, and is easily adaptable to courses that focus on either learning or memory. Instructors can assign the chapters they want from four distinctive modules (introduction, learning, memory, and integrative topics), with each chapter addressing behavioral processes, then the underlying neuroscience, then relevant clinical perspectives. The book is further distinguished by its full-color presentation and coverage that includes comparisons between studies of human and nonhuman brains. The new edition offers enhanced pedagogy and more coverage of animal learning.

This popular text gives students a comprehensive and readable introduction to contemporary issues in learning and behaviour, while providing balanced coverage of classical and instrumental conditioning.

Neurociencia y conducta PRENTICE HALL Principios de neurociencia En busca de la memoria Katz Editores

"A stunning book."—Oliver Sacks *Memory binds our mental life together. We are who we are in large part because of what we learn and remember. But how does the brain create memories?* Nobel Prize winner Eric R. Kandel intertwines the intellectual history of the powerful new science of the mind—a combination of cognitive psychology, neuroscience, and molecular biology—with his own personal quest to understand memory. A deft mixture of memoir and history, modern biology and behavior, *In Search of Memory* brings readers from Kandel's childhood in Nazi-occupied Vienna to the forefront of one of the great scientific endeavors of the twentieth century: the search for the biological basis of memory.

This volume explores the literacy education master's degree program developed at Universidad de Guadalajara in Jalisco, Mexico, with the aim of addressing the nation's emerging social, economic, technological, and political needs. Developing the program required taking into account the cultural diversity, historical economic disparities, indigenous and colonial cultures, and power inequities of the Mexican nation. These conditions have produced economic structures that maintain the status quo that concentrates wealth and opportunity in the hands of the very few, creating challenges for the education and economic life for the majority of the population. The program advocates providing tools for youth to critique and change their surroundings, while also learning the codes of power that provide them a repertoire of navigational means for producing satisfying lives. Rather than arguing that the program can be replicated or taken to scale in different contexts, the editors focus on how their process of looking inward to consider Mexican cultures enabled them to develop an appropriate educational program to address Mexico's historically low literacy rates. They show that if all teaching and learning is context-dependent, then focusing on the process of program development, rather than on the outcomes that may or may not be easily applied to other settings, is appropriate for global educators seeking to provide literacy teacher education grounded in national concerns and challenges. The volume provides a process model for developing an organic program designed to address needs in a national context, especially one grounded in both colonial and heritage cultures and one in which literacy is understood as a tool for social critique, redress, advancement, and equity.

The past ten years have seen an explosion of useful research surrounding human motivation and emotion; new insights allow researchers to answer the perennial questions, including "What do people want?" and "Why do they want what they want?" By delving into the roots of motivation, the emotional processes at work, and the impacts on learning, performance, and well-being, this book provides a toolbox of practical interventions and approaches for use in a wide variety of settings. In the midst of the field's "golden age," there has never been a better time to merge new understanding and practical application to improve people's lives. Useful in schools, the workplace, clinical settings, health care, sports, industry, business, and even interpersonal relationships, these concepts are profoundly powerful; incorporated into the state-of-the-art intervention programs detailed here, they can enhance people's motivation, emotion, and outlook while answering the core questions of any human interaction.

¿Podrá la ciencia transformar la perspectiva del derecho penal? ¿Podremos comprender por completo el comportamiento humano cuando develamos los misterios del encéfalo? *Derecho penal y neurociencia* explora la relación entre el derecho y las ciencias encargadas de analizar el sistema nervioso central, con el objetivo de buscar respuestas científicas a fenómenos delictivos y victimológicos. En este libro, el lector podrá ingresar en una de las discusiones más novedosas y polémicas del siglo XXI: la relación entre la neurociencia y el derecho.

Gracias a un cerebro de un kilo y medio, los humanos somos los seres más hábiles y complejos de la Tierra. La evolución genética nos ha llevado a tener un cerebro versátil que determina nuestras interacciones con el entorno, acumula experiencia y programa nuestra conducta. Este libro nos permite descubrir cómo funciona este órgano fundamental para andar, pensar, hacer

la digestión, amar, odiar o ser feliz.

This text provides students with the basic knowledge of neuroanatomy needed to practise medicine. Each chapter starts with a neurological case history which sets the scene. This is then followed by a chapter outline for quick access to material, and chapter objectives to focus the student on the most important material in that chapter.

El experto Nestor Braidot analiza como rentabilizar al máximo nuestro cerebro. "Nestor Braidot vuelve a sorprendernos con un libro de origen científico totalmente comprensible para cualquier lector que este interesado en el funcionamiento del organo mas importante del cuerpo humano: el cerebro. Con una prosa agil y lleno de anécdotas personales que acercan el tema al lector, Braidot convierte en fascinante el ya de por si interesante mundo neuronal. Esta obra es una herramienta imprescindible para la gente del marketing y la publicidad" Javier Piedrahila - Director y fundador MarketingDirecto.com y de MarketingComunidad.com "Estamos en el siglo de las neurociencias. Aprender sobre la arquitectura cerebral son retos pendientes para la comunidad científica. Necesitamos saber interpretar las señales de operaciones cognitivas relacionadas con el pensamiento" Monica Deza Pulido - Vicepresidenta de McCann Worldgroup España "Es de agradecer el enorme esfuerzo que ha realizado Nestor Braidot para poner a disposición del lector temas importantes de neurociencia con una sencillez encomiable. Siempre he dicho que este tipo de libros son imprescindibles para preparar al gran publico para los descubrimientos que la nuerociencia esta desvelando y los que aun quedan por descubrir" Francisco J Rubia - Neurofisiólogo y profesor emerito de la Universidad Complutense de Madrid. "Una obra fantástica en la que Nestor Braidot explica de forma clara los aspectos mas importantes para comprender como funciona nuestro cerebro y como interactuamos con el mundo que nos rodea" Silvia Damiano - Directora de About my Brain y autora del libro Implícame (Gestión 2000)

The goal of this sixth edition of Principles of Neural Science is to provide readers with insight into how genes, molecules, neurons, and the circuits they form give rise to behavior. With the exponential growth in neuroscience research over the 40 years since the first edition of this book, an increasing challenge is to provide a comprehensive overview of the field while remaining true to the original goal of the first edition, which is to elevate imparting basic principles over detailed encyclopedic knowledge.

Brought together for the first time in a single volume, these eight important and fascinating essays by Nobel Prize-winning psychiatrist Eric Kandel provide a breakthrough perspective on how biology has influenced modern psychiatric thought. Complete with commentaries by experts in the field, Psychiatry, Psychoanalysis, and the New Biology of Mind reflects the author's evolving view of how biology has revolutionized psychiatry and psychology and how potentially could alter modern psychoanalytic thought. The author's unique perspective on both psychoanalysis and biological research has led to breakthroughs in our thinking about neurobiology, psychiatry, and psychoanalysis -- all driven by the central idea that a fuller understanding of the biological processes of learning and memory can illuminate our understanding of behavior and its disorders. These wonderful essays cover the mechanisms of psychotherapy and medications, showing that both work at the same level of neural circuits and synapses, and the implications of neurobiological research for psychotherapy; the ability to detect functional changes in the brain after psychotherapy, which enables us, for the first time, to objectively evaluate the effects of psychotherapy on individual patients; the need for animal models of mental disorders; for example, learned fear, to show how molecules and cellular mechanisms for learning and memory can be combined in various ways to produce a range of adaptive and maladaptive behaviors; the unification of behavioral psychology, cognitive psychology, neuroscience, and molecular biology into the new science of the mind, charted in two seminal reports on neurobiology and molecular biology given in 1983 and 2000; the critical role of synapses and synaptic strength in both short- and long-term learning; the biological and social implications of the mapping of the human genome for medicine in general and for psychiatry and mental health in particular; The author concludes by calling for a revolution in psychiatry, one that can use the power of biology and cognitive psychology to treat the many mentally ill persons who do not benefit from drug therapy. Fascinating reading for psychiatrists, psychoanalysts, social workers, residents in psychiatry, and trainees in psychoanalysis, Psychiatry, Psychoanalysis, and the New Biology of Mind records with elegant precision the monumental changes taking place in psychiatric thinking. It is an invaluable reference work and a treasured resource for thinking about the future.

La memoria -capacidad de adquirir y almacenar información sumamente diversa, desde las nimiedades de la vida cotidiana hasta las complejas abstracciones de la geografía y del álgebra- es uno de los aspectos más notables del comportamiento humano: confiere continuidad a nuestra vida y nos brinda una imagen coherente del pasado que pone en perspectiva la experiencia actual. Pero, ¿cómo se generan los recuerdos en el cerebro? Hasta hace unas pocas décadas, la mera idea de explicar los recuerdos y otros aspectos de la mente mediante estudios biológicos e interacciones moleculares era inconcebible. Sin embargo, el estudio biológico de la mente se ha transformado, desde entonces, en una posibilidad viable y una realidad concreta. En este libro se entretajan dos historias: la historia intelectual de los extraordinarios adelantos producidos en el estudio de la mente en los últimos cincuenta años y la historia de la vida y la carrera científica de uno de los mayores artífices de esos adelantos: el Premio Nobel Eric Kandel. Impulsado por una curiosidad vehemente y contagiosa, Kandel describe la trama de esta cautivante historia intelectual, uno de cuyos hilos fue su empeño por comprender la memoria. Comenzando por sus recuerdos de infancia en la Viena ocupada por los nazis, el autor hace una crónica de su descollante carrera, desde su deslumbramiento inicial con la historia, el psicoanálisis y los estudios de neurobiología, hasta sus innovadores trabajos sobre los procesos celulares y moleculares de la memoria que lo hicieron acreedor de los mayores reconocimientos científicos. Hábil combinación de recuerdos personales e historia, de la biología moderna y los estudios sobre el comportamiento, 'En busca de la memoria' es un libro en que se entrecruzan una brillante travesía intelectual y una de las empresas científicas más grandes del siglo XX: la indagación de los fundamentos biológicos de la memoria.

A Nobel Prize-winning neuroscientist's probing investigation of what brain disorders can tell us about human nature Eric R. Kandel, the winner of the Nobel Prize in Physiology or Medicine for his foundational research into memory storage in the brain, is one of the pioneers of modern brain science. His work continues to shape our understanding of how learning and memory work and to break down age-old barriers between the sciences and the arts. In his seminal new book, The Disordered Mind, Kandel draws on a lifetime of pathbreaking research and the work of many other leading neuroscientists to take us on an unusual tour of the brain. He confronts one of the most difficult questions we face: How does our mind, our individual sense of self, emerge from the physical matter of the brain? The brain's 86 billion neurons communicate with one another through very precise connections. But sometimes those connections are disrupted. The

brain processes that give rise to our mind can become disordered, resulting in diseases such as autism, depression, schizophrenia, Parkinson's, addiction, and post-traumatic stress disorder. While these disruptions bring great suffering, they can also reveal the mysteries of how the brain produces our most fundamental experiences and capabilities—the very nature of what it means to be human. Studies of autism illuminate the neurological foundations of our social instincts; research into depression offers important insights on emotions and the integrity of the self; and paradigm-shifting work on addiction has led to a new understanding of the relationship between pleasure and willpower. By studying disruptions to typical brain functioning and exploring their potential treatments, we will deepen our understanding of thought, feeling, behavior, memory, and creativity. Only then can we grapple with the big question of how billions of neurons generate consciousness itself.

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