

# Neuroscienze Cognitive Dale Purves

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*Cognitive Neuroscience* Michael S. Gazzaniga 2000-04-17 Cognitive Neuroscience: A Reader provides the first definitive collection of readings in this burgeoning area of study.

**Neuroscience For Dummies** Frank Amthor 2016-04-14 Get on the fast track to understanding neuroscience Investigating how your senses work, how you move, and how you think and feel, *Neuroscience For Dummies*, 2nd Edition is your straight-forward guide to the most complicated structure known in the universe: the brain. Covering the most recent scientific discoveries and complemented with helpful diagrams and engaging anecdotes that help bring the information to life, this updated edition offers a compelling and plain-English look at how the brain and nervous system function. Simply put, the human brain is an endlessly fascinating subject: it holds the secrets to your personality, use of language, memories, and the way your body operates. In just the past few years alone, exciting new technologies and an explosion of knowledge have transformed the field of neuroscience—and this friendly guide is here to serve as your roadmap to the latest findings and research. Packed with new content on genetics and epigenetics and increased coverage of hippocampus and depression, this new edition of *Neuroscience For Dummies* is an eye-opening and fascinating read for readers of all walks of life. Covers how gender affects brain function Illustrates why some people are more sensitive to pain than others Explains what constitutes intelligence and its different levels Offers guidance on improving your learning What is the biological basis of consciousness? How are mental illnesses related to changes in brain function? Find the answers to these and countless other questions in *Neuroscience For Dummies*, 2nd Edition

**Inner Experience and Neuroscience** Donald D. Price 2012-08-03 A proposal for merging a science of human consciousness with neuroscience and psychology. The study of consciousness has advanced rapidly over the last two decades. And yet there is no clear path to creating models for a direct science of human

experience or for integrating its insights with those of neuroscience, psychology, and philosophy. In *Inner Experience and Neuroscience*, Donald Price and James Barrell show how a science of human experience can be developed through a strategy that integrates experiential paradigms with methods from the natural sciences. They argue that the accuracy and results of both psychology and neuroscience would benefit from an experiential perspective and methods. Price and Barrell describe phenomenologically based methods for scientific research on human experience, as well as their philosophical underpinnings, and relate these to empirical results associated with such phenomena as pain and suffering, emotions, and volition. They argue that the methods of psychophysics are critical for integrating experiential and natural sciences, describe how qualitative and quantitative methods can be merged, and then apply this approach to the phenomena of pain, placebo responses, and background states of consciousness. In the course of their argument, they draw on empirical results that include qualitative studies, quantitative studies, and neuroimaging studies. Finally, they propose that the integration of experiential and natural science can extend efforts to understand such difficult issues as free will and complex negative emotions including jealousy and greed.

*How Brains Seem to Work* Dale Purves 2010-04-30 This is the eBook version of the printed book. This Element is an excerpt from *Brains: How They Seem to Work* (9780137055098) by Dale Purves. Available in print and digital formats. Why the conventional explanations of how brains work is wrong--and a far more promising direction for research. The conventional conception of how brains work has not been substantiated despite an effort that now spans 50 years. When a path in science is pursued for this long without the emergence of a deeper understanding of the issue being addressed, doubts are usually warranted.

Developmental Neuroscience Susan E. Fahrbach 2013-08-11 A concise introductory textbook on the development of the nervous system 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

**Brains** Dale Purves 2010-01-08 For 50 years, the world's most brilliant neuroscientists have struggled to understand how human brains really work. Today, says Dale Purves, the dominant research agenda may have taken us as far as it can--and neuroscientists may be approaching a paradigm shift. In this highly personal book, Purves reveals how we got to this point and offers his notion of where neuroscience may be headed next. Purves guides you through a half-century of the most influential ideas in neuroscience and introduces the extraordinary scientists and physicians who created and tested them. Purves offers a critical assessment of the paths that neuroscience research has taken, their successes and their limitations, and then introduces an alternative approach for thinking about brains. Building on new research on visual perception, he shows why common ideas about brain networks can't be right and uncovers the factors that determine our subjective experience. The resulting insights offer a deeper understanding of what it means to be human. • Why we need a better conception of what brains are trying to do and how they do it Approaches to understanding the brain over the past several decades may be at an impasse • The surprising lessons that can be learned from what we see How complex neural processes owe more to trial-and-error experience than to logical principles • Brains--and the people who think about them Meet some of the extraordinary individuals who've shaped neuroscience • The "ghost in the machine" problem The ideas presented further undermine the concept of free will

*Principles of Cognitive Neuroscience* Dale Purves 2008 This title informs readers at all levels about the growing canon of cognitive neuroscience, and makes clear the challenges that remain to be solved by the next generation.

**Foundations of Human Memory** Michael Jacob Kahana 2014-05-01 Foundations of Human Memory provides an introduction to the scientific study of human memory with an emphasis on both the major theories of memory and the laboratory studies that have been used to test those theories and inspire their further development. Written with the undergraduate student in mind, the text assumes no specific background in the subject, but a general familiarity with scientific method and quantitative approaches to the treatment of data. Foundations of human memory is organized around the major empirical paradigms used to study memory in the laboratory and the theories used to explain data obtained using those paradigms. The text begins with a focus on memory for individual items, building up to memory for associations between items, and finally to memory for entire sequences of items and the problem of memory search. Several major theories of memory are considered in detail, including strength theory, summed-similarity theory, neural network based theories,

retrieved-context theory, and theories based on the division of memory into separate short-term and long-term storage systems. The text emphasizes basic research over applied problems, but brings in real-world examples and neuroscientific evidence as appropriate.

Neuroscience Dale Purves 2012 This classic textbook guides students through the challenges and excitement of the rapidly changing field of neuroscience. Accessible for both medical students and undergraduate neuroscience students, the 5th edition has been updated throughout to reflect the latest developments.

Sensory Perception Friedrich G. Barth 2012-10-13 Sensory perception: mind and matter aims at a deeper understanding of the many facets of sensory perception and their relations to brain function and cognition. It is an attempt to promote the interdisciplinary discourse between the neurosciences and psychology, which speaks the language of cognitive experiences, and philosophy, which has been thinking about the meaning and origin of consciousness since its beginning. Leading experts contribute to such a discourse by informing the reader about exciting modern developments, both technical and conceptual, and by pointing to the big gaps still to be bridged. The various chapters provide access to scientific research on sensory perception and the mind from a broad perspective, covering a large spectrum of topics which range from the molecular mechanisms at work in sensory cells to the study of the unconscious and to neurophilosophy.

**Functional Magnetic Resonance Imaging** Scott A. Huettel 2004

*Why Brains Don't Compute* Dale Purves 2021-05-07 This book examines what seems to be the basic challenge in neuroscience today: understanding how experience generated by the human brain is related to the physical world we live in. The 25 short chapters present the argument and evidence that brains address this problem on a wholly trial and error basis. The goal is to encourage neuroscientists, computer scientists, philosophers, and other interested readers to consider this concept of neural function and its implications, not least of which is the conclusion that brains don't "compute."

Principles of Neural Science Eric R. Kandel 1991

**Principi di neuroscienze cognitive** Dale Purves 2009

**Body and Brain** Dale Purves 1988 The major goal of developmental neurobiology is to understand how the nervous system is put together. A central theme that has emerged from research in this field over the last several decades is the crucial role of trophic interactions in neural assembly, and indeed throughout an animal's life. Trophic--which means nutritive--refers to long-term interdependencies between nerve cells and the cells they innervate. The theory of trophic effects presented in this book offers an explanation of how the vertebrate nervous system is related to--and regulated by--the body it serves. The theory rationalizes the nervous system's accommodation, throughout life, to

the changing size and form of the body it tenants, indicating the way connections between nerve cells change in response to stimuli as diverse as growth, injury, experience, and natural selection. Dale Purves, a leading neurobiologist best known for his work on the formation and maintenance of synaptic connections, presents this theory within the historical setting of earlier ideas about neural organization--from Weiss's theory of functional reorganization to the chemoaffinity theory championed by Sperry. In addition to illuminating eighty years of work on trophic interactions, this book asks its own compelling questions: Are trophic interactions characteristic of all animals or only of those with complex nervous systems? Are trophic interactions related to learning? What does the trophic theory of neural connections imply about the currently fashionable view that the nervous system operates according to Darwinian principles? Purves lays the theoretical foundation for practical exploration of trophic interactions as they apply to neural connections, a pursuit that will help us understand how our own nervous systems generate change. The ideas in this book not only enrich neurobiology but also convey the profound relevance of neuroscience to other fields of life science.

**Studyguide for Principles of Cognitive Neuroscience by Purves, Dale, Isbn 9780878935734** Cram101 Textbook Reviews 2013-12 Never HIGHLIGHT a Book Again! Includes all testable terms, concepts, persons, places, and events. Cram101 Just the FACTS101 studyguides gives all of the outlines, highlights, and quizzes for your textbook with optional online comprehensive practice tests. Only Cram101 is Textbook Specific. Accompanies: 9780878935734. This item is printed on demand.

*Why We See what We Do* Dale Purves 2003 This provocative book reviews a broad range of evidence leading to the conclusion that the visual system is not organised to generate a veridical representation of the physical world, but rather a statistical reflection of the visual history of the species and the individual observer. Thus, what humans actually see is a reflexive manifestation of past rather than a logical analysis of the present. The idea that the images we consciously entertain represent the historical significance of visual stimuli follows from the inability to decipher ambiguous retinal information analytically, and has far-reaching consequences not only for vision but brain function generally. The immediate benefit of this approach is that it provides a framework by which to understand a variety of fundamental visual illusions that are otherwise difficult, if not impossible, to explain.

*Development of the Nervous System* Dan H. Sanes 2005-11-02 Development of the Nervous System, Second Edition has been thoroughly revised and updated since the publication of the First Edition. It presents a broad outline of neural development principles as exemplified by key experiments and observations from past and recent times. The text is organized along a development pathway from the induction of the neural primordium to the emergence of behavior. It covers all the major topics including the patterning and growth of the nervous system, neuronal determination, axonal navigation and targeting, synapse formation and plasticity, and neuronal survival and death. This new text reflects the

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complete modernization of the field achieved through the use of model organisms and the intensive application of molecular and genetic approaches. The original, artist-rendered drawings from the First Edition have all been redone and colorized so that the entire text is in full color. This new edition is an excellent textbook for undergraduate and graduate level students in courses such as Neuroscience, Medicine, Psychology, Biochemistry, Pharmacology, and Developmental Biology. Updates information including all the new developments made in the field since the first edition. Now in full color throughout, with the original, artist-rendered drawings from the first edition completely redone, revised, colorized, and updated.

**Perceiving Geometry** Catherine Q. Howe 2005-12-06 During the last few centuries, natural philosophers, and more recently vision scientists, have recognized that a fundamental problem in biological vision is that the sources underlying visual stimuli are unknowable in any direct sense, because of the inherent ambiguity of the stimuli that impinge on sensory receptors. The light that reaches the eye from any scene conflates the contributions of reflectance, illumination, transmittance, and subsidiary factors that affect these primary physical parameters. Spatial properties such as the size, distance and orientation of physical objects are also conflated in light stimuli. As a result, the provenance of light reaching the eye at any moment is uncertain. This quandary is referred to as the inverse optics problem. This book considers the evidence that the human visual system solves this problem by incorporating past human experience of what retinal images have typically corresponded to in the real world.

**Modeling Neural Development** Arjen Van Ooyen 2003 An important collection showing how computational and mathematical modeling can be used to study the complexities of neural development.

**You and Your Brain** Dale Purves 2020-09-05 Experts worldwide have been researching the brain for over a century, but we still don't know everything. 'You and Your Brain' explains what we do know about how the human brain works for bright kids ages 10 to 15. Dale Purves pulls no punches in teaching young readers about the most mysterious part of the body. Using visual diagrams and pulling from Dr. Purves' career in neuroscience, the book inspires the next generation of scientists to discover what is yet to be known. Dale Purves is Geller Professor of Neurobiology Emeritus in the Duke Institute for Brain Sciences where he remains Research Professor. He has authored many books on the subject of neuroscience, most recently 'Music as Biology' and 'Brains as Engines of Association,' published by Harvard University Press and Oxford University Press, respectively.

**Why We See what We Do Redux** Dale Purves 2011 This expansion of the provocative arguments of the first edition, supported with much new evidence, has far-reaching consequences not only for understanding vision but brain function generally.

*Principles of Neurobiology* Liqun Luo 2020-09-05 *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.

**Research Involving Participants with Cognitive Disability and Differences** M. Ariel Cascio 2019 Research participants who have cognitive disabilities and differences may be considered a vulnerable population. This volume provides multidisciplinary insights into the ethical aspects of research that includes these populations, including conditions such as intellectual disability, autism, mild cognitive impairment, and psychiatric diagnoses.

Sylvius 4 Stephen Mark Williams 2007-06-30 ... features fully annotated surface views of the human brain, as well as interactive tools for dissection the central nervous system and viewing fully annotated cross-sections of preserved specimens and living subjects imaged by magnetic resonance... it incorporates a comprehensive, visually-rich, searchable database of more than 500 neuratomical terms that are concisely defined and visualized in photographs, magnetic resonance images, and illustrations.

The Hippocampus Book Per Andersen 2007 The hippocampus is one of a group of remarkable structures embedded within the brain's medial temporal lobe. Long known to be important for memory, it has been a prime focus of neuroscience research for many years. This volume offers an account of what the hippocampus does, and what happens when things go wrong.--[Source inconneue].

**The Oxford Compendium of Visual Illusions** Arthur Gilman Shapiro 2017 Visual illusions are compelling phenomena that draw attention to the brain's capacity to construct our perceptual world. The Compendium is a collection of over 100 chapters on visual illusions, written by the illusion creators or by vision scientists who have investigated mechanisms underlying the phenomena. --

**The Student's Guide to Cognitive Neuroscience** Jamie Ward 2015-02-11 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.

**Music as Biology** Dale Purves 2017-02-01 Why do human beings find some tone combinations consonant and others dissonant? Why do we make music using only a small number of scales out the billions that are possible? Dale Purves shows that rethinking music theory in biological terms offers a new approach to centuries-long debates about the organization and impact of music.

**Neuroscience 6th Edition** Purves 2017-10-12

*Concepts in the Brain* David Kemmerer 2019-02-21 For most native speakers of English, the meanings of ordinary words like "blue," "cup," "stumble," and "carve" seem quite natural and self-evident. It turns out, however, that they are far from universal, as shown by recent research in the discipline known as semantic typology. To be sure, the roughly 6,500 languages around the world do have many similarities in the sorts of concepts they encode. But they also vary greatly in numerous ways, such as how they partition particular conceptual domains, how they map those domains onto syntactic categories, which distinctions they force speakers to habitually attend to, and how deeply they weave certain notions into the fabric of their grammar. Although these insights from semantic typology have had a major impact on the field of psycholinguistics, they have been mostly neglected by the branch of cognitive neuroscience that studies how concepts are represented, organized, and processed in our brains. In *Concepts in the Brain*, David Kemmerer exposes this oversight and demonstrates its significance. He argues that as research on the neural substrates of semantic knowledge moves forward, it should, to the extent possible, expand its purview to embrace the broad spectrum of cross-linguistic variation in the lexical and grammatical representation of meaning. Otherwise, it will never be able to achieve a truly comprehensive, pan-human account of the cortical underpinnings of concepts. Richly illustrated and written in an accessible interdisciplinary style, the book begins by elaborating the



different perspectives on concepts that currently exist in the parallel fields of semantic typology and cognitive neuroscience. It then shows how a synthesis of these approaches can lead to a more unified and inclusive understanding of several domains of concrete meaning--specifically, objects, actions, and spatial relations. Finally, it explores a number of intriguing and controversial issues involving the interplay between language, cognition, and consciousness.

*Cognitive Neuroscience* Marie T. Banich 2018-04-05 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.

**Developmental Cognitive Neuroscience** Mark H. Johnson 2011-07-18 The third edition of *Developmental Cognitive Neuroscience* presents a thorough updating and enhancement of the classic text that introduced the rapidly expanding field of developmental cognitive neuroscience. Includes the addition of two new chapters that provide further introductory material on new methodologies and the application of genetic methods in cognitive development Includes several key discussion points at the end of each chapter Features a greater focus on mid-childhood and adolescence, to complement the previous edition's emphasis on early childhood Brings the science closer to real-world applications via a greater focus on fieldwork Includes a greater emphasis on structural and functional brain imaging

Handbook of Neuroscience for the Behavioral Sciences, Volume 1 Gary G. Berntson 2009-10-12 As technology has made imaging of the brain noninvasive and inexpensive, nearly every psychologist in every subfield is using pictures of the brain to show biological connections to feelings and behavior. *Handbook of Neuroscience for the Behavioral Sciences, Volume I* provides psychologists and other behavioral scientists with a solid foundation in the increasingly critical field of neuroscience. Current and accessible, this volume provides the information they need to understand the new biological bases, research tools, and implications of brain and gene research as it relates to psychology.

A Cognitive Approach to John Donne's Songs and Sonnets M. Winkleman 2013-04-03 Investigations into how the brain actually works have led to remarkable

discoveries and these findings carry profound implications for interpreting literature. This study applies recent breakthroughs from neuroscience and evolutionary psychology in order to deepen our understanding of John Donne's Songs and Sonnets.

**Fundamentals of Cognitive Neuroscience** Nicole M. Gage 2018-03-14 Fundamentals of Cognitive Neuroscience: A Beginner's Guide, Second Edition, is a comprehensive, yet accessible, beginner's guide on cognitive neuroscience. This text takes a distinctive, commonsense approach to help newcomers easily learn the basics of how the brain functions when we learn, act, feel, speak and socialize. This updated edition includes contents and features that are both academically rigorous and engaging, including a step-by-step introduction to the visible brain, colorful brain illustrations, and new chapters on emerging topics in cognition research, including emotion, sleep and disorders of consciousness, and discussions of novel findings that highlight cognitive neuroscience's practical applications. Written by two leading experts in the field and thoroughly updated, this book remains an indispensable introduction to the study of cognition. Presents an easy-to-read introduction to mind-brain science based on a simple functional diagram linked to specific brain functions Provides new, up-to-date, colorful brain images directly from research labs Contains "In the News" boxes that describe the newest research and augment foundational content Includes both a student and instructor website with basic terms and definitions, chapter guides, study questions, drawing exercises, downloadable lecture slides, test bank, flashcards, sample syllabi and links to multimedia resources

50 Psychology Ideas You Really Need to Know Adrian Furnham 2013-10-01 How different are men and women's brains? Does altruism really exist? Are our minds blank slates at birth? And do dreams reveal our unconscious desires? If you have you ever grappled with these concepts, or tried your hand as an amateur psychologist, 50 Psychology Ideas You Really Need to Know could be just the book for you. Not only providing the answers to these questions and many more, this series of engaging and accessible essays explores each of the central concepts, as well as the arguments of key thinkers. Author Adrian Furnham offers expert and concise introductions to emotional behavior, cognition, mental conditions--from stress to schizophrenia--rationality and personality development, amongst many others. This is a fascinating introduction to psychology for anyone interested in understanding the human mind.

**Neuroscience** Dale Purves 2018-04-05 A comprehensive, clearly written textbook that provides a balance of animal and human studies to discuss the dynamic field of neuroscience from cellular signaling to cognitive function. Neuroscience, Sixth Edition is intended primarily for medical, premedical, and undergraduate students. The book's length and accessibility of its writing are a successful combination that has proven to work equally well for medical students and in undergraduate neuroscience courses. Being both comprehensive and authoritative, the book is also appropriate for graduate and professional use. New to this edition: An expanded Cognitive Neuroscience unit includes new

chapters on Attention, Decision Making, and Evolution of Cognitive Functions  
Reorganisation across the book enhances continuity The Neural Signaling unit  
has been expansively updated Clinical Applications boxes have been added Web  
Essays provide novel or historical topics for special discussion.

**Brains as Engines of Association** Dale Purves 2019-04-01 Brains as Engines of  
Association tackles a fundamental question in neuroscience: what is the  
operating principle of the human brain? While a similar question has been asked  
and answered for virtually every other human organ during the last few  
centuries, how the brain operates has remained a central challenge in biology.  
Based on evidence derived from vision, audition, speech and music--much of it  
based on the author's own work over the last twenty years--Brains as Engines of  
Association argues that brains operate wholly on the basis of trial and error  
experience, encoded in neural circuitry over evolutionary and individual time.  
This concept of neural function runs counter to current concepts that view the  
brain as a computing machine, and research programs based on the idea that the  
only way to answer such questions is by reconstructing the connectivity of  
brains in their entirety. This view also implies that the best way to  
understand the details of brain function is to recapitulate their history using  
artificial neural networks. While this viewpoint has received support in the  
last few years from work showing that computers can win complex games, the  
brain plays a much more complex game--the "game" of biological survival--which  
Purves concludes is based on trial-and-error experience.

**Neuroscience- Fifth Edition** George J. Augustine Dale Purves 2011-11-25