

The Prehistory Of The Mind A Search For The Origins Of Art Religion And Science

What lies at the root of the long entanglement between science and religion? The curiosity that leads to the search for religious understanding and the curiosity that leads to the search for scientific understanding have common origins in aspects of the human mind that go back as far as the earliest records of human intellectual endeavour. Their relationship developed as the categories of religion and science became distinct and new information was discovered. The struggle to make sense of the world as a whole seems to be an urgent and fundamental requirement in all human societies - an ultimate curiosity that creates a slipstream of interest in which penultimate curiosities about particular aspects of the physical world have (to a greater or lesser extent) been able to swim.

'When, why, and how did language evolve?' 'Why do only humans have language?' This book looks at these and other questions about the origins and evolution of language. It does so via a rich diversity of perspectives, including social, cultural, archaeological, palaeoanthropological, musicological, anatomical, neurobiological, primatological, and linguistic. Among the subjects it considers are: how far sociality is a prerequisite for language; the evolutionary links between language and music; the relation between natural selection and niche construction; the origins of the lexicon; the role of social play in language development; the use of signs by great apes; the evolution of syntax; the evolutionary biology of language; the insights offered by Chomsky's biolinguistic approach to mind and language; the emergence of recursive language; the selectional advantages of the human vocal tract; and why women speak better than men. The authors, drawn from all over the world, are prominent linguists, psychologists, cognitive scientists, archaeologists, primatologists, social anthropologists, and specialists in artificial intelligence. As well as explaining what is understood about the evolution of language, they look squarely at the formidable obstacles to knowing more - the absence of direct evidence, for example; the problems of using indirect evidence; the lack of a common conception of language; confusion about the operation of natural selection and other processes of change; the scope for misunderstanding in a multi-disciplinary field, and many more. Despite these difficulties, the authors in their stylish and readable contributions to this book are able to show just how much has been achieved in this most fruitful and fascinating area of research in the social, natural, and cognitive sciences.

The Cycladic Islands of Greece played a central role in Aegean prehistory, and many new discoveries have been made in recent years at sites ranging in date from the Mesolithic period to the end of the Bronze Age. In the well-illustrated chapters of this book, based on the recent conference held at the McDonald Institute for Archaeological Research in Cambridge, international scholars including leading Greek archaeologists offer new information about recent developments, many arising from hitherto unpublished excavations. The book contains novel theoretical insights into the workings of culture process in the prehistoric cultures of the islands. It will be an indispensable resource for students and scholars interested in the prehistory of the Aegean and in the contributions made to its development by the prehistoric inhabitants of the Cyclades.

A unique interdisciplinary study of the relationships between climate, hydrology and human society from 20,000 years ago to the present day within the Jordan Valley. It describes how state-of-the-art models can simulate the past, present and future climates of the Near East, reviews and provides new evidence for environmental change from geological deposits, builds hydrological models for the River Jordan and associated wadis and explains how present day urban and rural communities manage their water supply. The volume provides a new approach and new methods that can be applied for exploring the relationships between climate, hydrology and human society in arid and semi-arid regions throughout the world. It is an invaluable reference for researchers and advanced students concerned with the impacts of climate change and hydrology on human society, especially in the Near East.

An account of the different ways in which things have become cognitive extensions of the human body, from prehistory to the present. An increasingly influential school of thought in cognitive science views the mind as embodied, extended, and distributed rather than brain-bound or "all in the head." This shift in perspective raises important questions about the relationship between cognition and material culture, posing major challenges for philosophy, cognitive science, archaeology, and anthropology. In *How Things Shape the Mind*, Lambros Malafouris proposes a cross-disciplinary analytical framework for investigating the ways in which things have become cognitive extensions of the human body. Using a variety of examples and case studies, he considers how those ways might have changed from earliest prehistory to the present. Malafouris's Material Engagement Theory definitively adds materiality—the world of things, artifacts, and material signs—into the cognitive equation. His account not only questions conventional intuitions about the boundaries and location of the human mind but also suggests that we rethink classical archaeological assumptions about human cognitive evolution.

Uses prehistoric artifacts to develop a theory about how human intelligence has evolved

"Things have a social life. They also lead cognitive lives, working subtly in our minds. But just how is it that human thought has become so deeply involved in and expressed through material things? There is today a wide recognition that material culture regulates and shapes the ways in which people perceive, think and act. But just how does that work? This is one of the most challenging research topics for the archaeology and anthropology of human cognition. The understanding of the working of past and present material culture - its cognitive efficacy - is becoming a key issue in the cognitive and social sciences more widely. This volume, with innovative case studies ranging from prehistory to the present, seeks to establish a cross-disciplinary framework and to set out future directions for research. Its aim is to redress the balance of the cognitive equation by at last bringing materiality firmly into the cognitive fold. But how can we integrate artefacts - material culture - into existing theories of human cognition? How do we understand the significant role of the human use of the things we have ourselves created in the development of human intelligence? The distinguished contributors here argue that the boundaries of the mind must now be understood as extending beyond the individual and to include the world of the artefact if we are fully to grasp how interactions among people, things, space and time have come, over thousands of years, to shape the transformations in human cognition that have made us what we are."--Publisher's description.

Evolutionary ('phylogenetic') trees were first used to infer lost histories nearly two centuries ago by manuscript scholars reconstructing original texts. Today, computer methods are enabling phylogenetic trees to transform genetics, historical linguistics and even the archaeological study of artefact shapes and styles. But which phylogenetic methods are best suited to retracing the evolution of languages? And which

types of language data are most informative about deep prehistory? In this book, leading specialists engage with these key questions. Essential reading for linguists, geneticists and archaeologists, these studies demonstrate how phylogenetic tools are illuminating previously intractable questions about language prehistory. This innovative volume arose from a conference of linguists, geneticists and archaeologists held at Cambridge in 2004.

Creaturely Theology is a ground-breaking scholarly collection of essays that maps out the agenda for the future study of the theology of the non-human and the post-human. A wide range of first-rate contributors show that theological reflection on non-human animals and related issues are an important though hitherto neglected part of the agenda of Christian theology and related disciplines.

The origins of religion and ritual in humans have been the focus of centuries of thought in archaeology, anthropology, theology, evolutionary psychology and more. Play and ritual have many aspects in common, and ritual is a key component of the early cult practices that underlie the religious systems of the first complex societies in all parts of the world. This book examines the formative cults and the roots of religious practice from the earliest times until the development of early religion in the Near East, in China, in Peru, in Mesoamerica and beyond. Here, leading prehistorians and other specialists bring a fresh approach to the early practices that underlie the faiths and religions of the world. They demonstrate the profound role of play ritual and belief systems and offer powerful new insights into the emergence of early civilization.

This volume presents a collection of interdisciplinary collaborations between contemporary art, heritage, anthropological, and archaeological practitioners. Departing from the proceedings of the Sixth World Archaeological Congress's 'Archaeologies of Art' theme and *Ábhar agus Meon* exhibitions, it includes papers by seminal figures as well as experimental work by those who are exploring the application of artistic methods and theory to the practice of archaeology. *Art and archaeology: collaborations, conversations, criticisms* encourages the creative interplay of various approaches to 'art' and 'archaeology' so these new modes of expression can contribute to how we understand the world. Established topics such as cave art, monumental architecture and land art will be discussed alongside contemporary video art, performance art and relational arts practices. Here, the parallel roles of artists as makers of new worlds and archaeologists as makers of past worlds are brought together to understand the influences of human creativity.

In *Landscape of the Mind*, John F. Hoffecker explores the origin and growth of the human mind, drawing on archaeology, history, and the fossil record. He suggests that, as an indirect result of bipedal locomotion, early humans developed a feedback relationship among their hands, brains, and tools that evolved into the capacity to externalize thoughts in the form of shaped stone objects. When anatomically modern humans evolved a parallel capacity to externalize thoughts as symbolic language, individual brains within social groups became integrated into a "neocortical Internet," or super-brain, giving birth to the mind. Noting that archaeological traces of symbolism coincide with evidence of the ability to generate novel technology, Hoffecker contends that human creativity, as well as higher order consciousness, is a product of the superbrain. He equates the subsequent growth of the mind with human history, which began in Africa more than 50,000 years ago. As anatomically modern humans spread across the globe, adapting to a variety of climates and habitats, they redesigned themselves technologically and created alternative realities through tools, language, and art. Hoffecker connects the rise of civilization to a hierarchical reorganization of the super-brain, triggered by explosive population growth. Subsequent human history reflects to varying degrees the suppression of the mind's creative powers by the rigid hierarchies of nationstates and empires, constraining the further accumulation of knowledge. The modern world emerged after 1200 from the fragments of the Roman Empire, whose collapse had eliminated a central authority that could thwart innovation. Hoffecker concludes with speculation about the possibility of artificial intelligence and the consequences of a mind liberated from its organic antecedents to exist in an independent, nonbiological form.

In its first two decades, much of cognitive science focused on such mental functions as memory, learning, symbolic thought, and language acquisition -- the functions in which the human mind most closely resembles a computer. But humans are more than computers, and the cutting-edge research in cognitive science is increasingly focused on the more mysterious, creative aspects of the mind. *The Way We Think* is a landmark synthesis that exemplifies this new direction. The theory of conceptual blending is already widely known in laboratories throughout the world; this book is its definitive statement. Gilles Fauconnier and Mark Turner argue that all learning and all thinking consist of blends of metaphors based on simple bodily experiences. These blends are then themselves blended together into an increasingly rich structure that makes up our mental functioning in modern society. A child's entire development consists of learning and navigating these blends. *The Way We Think* shows how this blending operates; how it is affected by (and gives rise to) language, identity, and concept of category; and the rules by which we use blends to understand ideas that are new to us. The result is a bold, exciting, and accessible new view of how the mind works.

Descartes boldly claimed: "I think, therefore I am." But one might well ask: Why do we think? How? When and why did our human ancestors develop language and culture? In other words, what makes the human mind human? *Evolution of Mind, Brain, and Culture* offers a comprehensive and scientific investigation of these perennial questions. Fourteen essays bring together the work of archaeologists, cultural and physical anthropologists, psychologists, philosophers, geneticists, a neuroscientist, and an environmental scientist to explore the evolution of the human mind, the brain, and the human capacity for culture. The volume represents and critically engages major theoretical approaches, including Donald's stage theory, Mithen's cathedral model, Tomasello's joint intentionality, and Boyd and Richerson's modeling of the evolution of culture in relation to climate change. No recent publication combines this breadth of evidential and theoretical perspective. The essays range in topic from the macroscopic (the evolution of social cooperation) to the microscopic (examining genetic data to infer evolutions in brain structure and function), and from the ancient (paleoanthropological reconstructions of hominin cognitive abilities) to the modern (including modern hominin's similarities to our primate cousins). Considered together, these essays constitute a fascinating, detailed look at what makes us human. *PMIRC*, volume 5

How did humans develop the capacity for symbolic imagination? In this ground-breaking book, Warren Colman provides a reformulation of archetypal symbols as emergent from humans' embodied and affective engagement with their social and material environment. Beginning with the oldest known figurative image in the world, the 40,000-year-old Lion Man of Hohlenstein-Stadel in Germany, he traces the emergence of symbolic imagination through the origins of language, the growth of human sociality and co-operation, and the creative use of material objects, from the earliest stone tools through the cave paintings and figures of Upper Paleolithic Europe and beyond. This leads to a consideration of how the imaginal world of the spirit may have come into being, not as separate from the material world but through active participation within a world alive with meaning.

A fascinating and incisive examination of our language instinct from award-winning science writer Steven Mithen. Along with the concepts of consciousness and intelligence, our capacity for language sits right at the core of what makes us human. But while the evolutionary origins of language have provoked speculation and impassioned debate, music has been neglected if not ignored. Like language it is a universal feature of human culture, one that is a permanent fixture in our daily lives. In *THE SINGING NEANDERTHALS*, Steven Mithen redresses the balance, drawing on a huge range of sources, from neurological case studies through child psychology and the communication systems of non-human primates to the latest paleoarchaeological evidence. The result is a fascinating and provocative work and a succinct riposte to those, like Steven Pinker, who have dismissed music as a functionless and unimportant evolutionary byproduct.

Offers an explanation for the origins of prehistoric cave art, providing a glimpse into the mind of humankind's earliest ancestors and insights into the relationship between consciousness and artistic representation. Reprint.

Featuring contributions from leading figures such as Noam Chomsky, Don Ross, Andrew Brook and Patricia Kitcher, this book traces the philosophical roots behind contemporary understandings of cognition, forming both a convincing case for the centrality of philosophy to the history of neuroscience and cognitive psychology, as well as a revealing insight into the way in which ideas have developed, influenced and ultimately moulded our modern view of the mind

Since the 1970s the cognitive sciences have offered multidisciplinary ways of understanding the mind and cognition. The MIT Encyclopedia of the Cognitive Sciences (MITECS) is a landmark, comprehensive reference work that represents the methodological and theoretical diversity of this changing field. At the core of the encyclopedia are 471 concise entries, from Acquisition and Adaptationism to Wundt and X-bar Theory. Each article, written by a leading researcher in the field, provides an accessible introduction to an important concept in the cognitive sciences, as well as references or further readings. Six extended essays, which collectively serve as a roadmap to the articles, provide overviews of each of six major areas of cognitive science: Philosophy; Psychology; Neurosciences; Computational Intelligence; Linguistics and Language; and Culture, Cognition, and Evolution. For both students and researchers, MITECS will be an indispensable guide to the current state of the cognitive sciences.

"Archaeological Theory, 2nd Edition" is the most current and comprehensive introduction to the field available. Thoroughly revised and updated, this engaging text offers students an ideal entry point to the major concepts and ongoing debates in archaeological research. Exploring the many ways of approaching the human past, from positivism to post-modernism, Johnson reveals the historical origins of different schools of thought and sets theories against the practical problems they are intended to solve, as well as against wider developments in other disciplines. A lucid and concise guide to the most updated thinking and terminology in the field, "Archaeological Theory, 2nd Edition" remains an invaluable resource for students and archaeologists of all stripes.

Poetry. Award-winning SF author Brian Aldiss ventures into new territory with this, his first, full-length poetry collection. Named Grand Master by the Science Fiction Writers of America in 2000, Aldiss authored *The Saliva Tree*, the *Helliconia* series, *Trillion Year Spree*, and *Jocasta*-books beloved to SF lovers everywhere. Three of his works have been adapted to the big screen, including Spielberg's 2001 film *AI: Artificial Intelligence*. Whether you're a current or potential Aldiss fan, you'll enjoy the range, vigor and intimate self-portrait of these poems. This self-revealing volume allows readers to

Offers an alternative perspective on the nature of belief and the structure of the human mind.

The rapid evolutionary development of modern *Homo sapiens* over the past 200,000 years is a topic of fevered interest in numerous disciplines. How did humans, while undergoing few physical changes from their first arrival, so quickly develop the capacities to transform their world? Gary Tomlinson's *Culture and the Course of Human Evolution* is aimed at both scientists and humanists, and it makes the case that neither side alone can answer the most important questions about our origins. Tomlinson offers a new model for understanding this period in our emergence, one based on analysis of advancing human cultures in an evolution that was simultaneously cultural and biological—a biocultural evolution. He places front and center the emergence of culture and the human capacities to create it, in a fashion that expands the conceptual framework of recent evolutionary theory. His wide-ranging vision encompasses arguments on the development of music, modern technology, and metaphysics. At the heart of these developments, he shows, are transformations in our species' particular knack for signmaking. With its innovative synthesis of humanistic and scientific ideas, this book will be an essential text.

This comprehensive, fully illustrated Companion answers the need for an in-depth archaeology reference that provides authoritative coverage of this complex and interdisciplinary field. The work brings together the myriad strands and the great temporal and spatial breadth of the field into two thematically organized volumes. In twenty-six authoritative and clearly-written essays, this Companion explores the origins, aims, methods and problems of archaeology. Each essay is written by a scholar of international standing and illustrations complement the text.

As a well-established scientific fact, biological evolution still provokes heated debates all over the world about its compatibility with religious beliefs. Moreover, the Darwinian theory, although remaining the general framework of life sciences, is in itself undergoing a sort of evolution by virtue of recent advancements in different biological disciplines, which lead to better assess the ideas that Darwin introduced more than 150 years ago. Finally, both the scientific fact of evolution and the Darwinian theory are concerns of philosophy and theology in relation to difficult issues such as the teleology ascribable to the realm of life, the meaning and relevance of ontological emergence, the mechanist and reductionist view of living beings, the level of complexity peculiar to biological systems, the relationships between evolution and Creation, the presence of contingency in nature, the ontological discontinuity between animals and the human being, and so on. The Conference held at the Pontifical Gregorian University represented a multidisciplinary attempt at dealing with such a cluster of intellectual problems, and this volume of proceedings testifies not only the event in its uniqueness but also the efforts made in order to establish a true dialogue beyond any kind of cheap agreement or ideological closure. The volume gathers the contributions provided by 37 prominent scholars - scientists, philosophers and theologians - coming from major academic institutions like the University of Cambridge, the University of Oxford, the Pontifical Academy of Sciences, the Stanford University, the College de France, the University of California, the University of Arizona, the Institute Catholique de Toulouse, the Center for Theology and Natural Sciences, and the University of Notre Dame that also participated to the organization of the Conference. Even if a lot of work is still to be done, this volume shows that important steps have been made towards a critical view of biological evolution, in which an appropriate philosophical mediation allows scientific knowledge and theological reflection to profitably interact. This seems crucial for establishing a culture that is both updated and an appropriate context for the human development of future generations.

Contemporary life is so deeply reliant upon digital technology that the computer has come to dominate almost every aspect of our culture. What is the philosophical and spiritual significance of this dependence on electronic technology, both for our relationship to nature and for the future of humanity? And, what processes in human perception and awareness have produced the situation we find ourselves in? As Jeremy Naydler elucidates in this penetrating study, we cannot understand the emergence of the computer without seeing it within the wider context of the evolution of human consciousness, which has taken place over millennia. Modern consciousness, he shows, has evolved in conjunction with the development of machines and under their intensifying shadow. The computer was the product of a long historical development, culminating in the scientific revolution of the 17th century. It was during this period that the first mechanical calculators were invented and the project to create more complex 'thinking machines' began in earnest. But the seeds were sown many hundreds of years earlier, deep in antiquity. Naydler paints a vast panorama depicting human development and the emergence of electronic technology. His painstaking research illuminates an urgent question that concerns

