White Paper 23 05 Neanderthal Ancestry Inference

Examines the scientific evidence of Neanderthal man, describing the way he lived and exploring how and why he may have become extinct
An acclaimed journalist travels the globe to solve the mystery of her ancestry, confronting the question at the heart of the American experience of immigration, race, and identity: Who are my people? “A thoughtful, beautiful meditation on what makes us who we are . . . and the values and ideals that bind us together as Americans.”—Barack Obama “A rich and revealing memoir . . . Futureface raises urgent questions having to do with history and complicity.”—The New York Times The daughter of a Burmese mother and a white American father, Alex Wagner grew up thinking of herself as a “futureface”—an avatar of a mixed-race future when all races would merge into a brown singularity. But when one family mystery leads to another, Wagner’s post-racial ideals fray as she becomes obsessed with the specifics of her own family’s racial and ethnic history. Drawn into the wild world of ancestry, she embarks upon a quest around the world—and into her own DNA—to answer the ultimate questions of who she really is and where she belongs. The journey takes her from Burma to Luxembourg, from ruined colonial capitals with records written on banana leaves to Mormon databases, genetic labs, and the rest of the twenty-first-century genealogy complex. But soon she begins to grapple with a deeper question: Does it matter? Is our enduring obsession with blood and land, race and identity, worth all the trouble it’s caused us? Wagner weaves together fascinating history, genetic science, and sociology but is really after deeper stuff than her own ancestry: in a time of conflict over who we are as a country, she tries to find the story where we all belong. Praise for Futureface “Smart, searching . . . Meditating on our ancestors, as Wagner’s own story shows, can suggest better ways of being ourselves.”—Maud Newton, The New York Times Book Review “Sincere and instructive . . . This timely reflection on American identity, with a bonus exposé of DNA ancestry testing, deserves a wide audience.”—Library Journal “The narrative is part Mary Roach–style participation-heavy research, part family history, and part exploration of existential loneliness. . . . The journey is worth taking.”—Kirkus Reviews “[A] ruminative exploration of ethnicity and identity . . . Wagner’s odyssey is an effective riposte to anti-immigrant politics.”—Publishers Weekly
'Beautiful, evocative, authoritative.' Professor Brian Cox 'Important reading not just for anyone interested in these ancient cousins of ours, but also for anyone interested in humanity.' Yuval Noah Harari Kindred is the definitive guide to the Neanderthals. Since their discovery more than 160 years ago, Neanderthals have metamorphosed from the losers of the human family tree to A-list hominins.Rebecca Wragg Sykes uses her experience at the cutting-edge of Palaeolithic research to share our new understanding of Neanderthals, shoving aside clichés of rag-clad brutes in an icy wasteland. She reveals them to be curious, clever connoisseurs of their world, technologically inventive and ecologically adaptable. Above all, they were successful survivors for more than 300,000 years, during times of massive climatic upheaval. Much of what defines us was also in Neanderthals, and their DNA is still inside us. Planning, co-operation, altruism, craftsmanship, aesthetic sense, imagination, perhaps even a desire for transcendence beyond mortality. Kindred does for Neanderthals what Sapiens did for us, revealing a deeper, more nuanced story where humanity itself is our ancient, shared inheritance.
Tumor progression is driven by mutations that confer growth advantages to different subpopulations of cancer cells. As a tumor grows, these subpopulations expand, accumulate new mutations, and are subjected to selective pressures from the environment, including anticancer interventions. This process, termed clonal evolution, can lead to the emergence of therapy-resistant tumors and poses a major challenge for cancer eradication efforts. Written and edited by experts in the field, this collection from Cold Spring Harbor Perspectives in Medicine examines cancer progression as an evolutionary process and explores how this way of looking at cancer may lead to more effective strategies for managing and treating it. The contributors review efforts to characterize the subclonal architecture and dynamics of tumors, understand the roles of chromosomal instability, driver mutations, and mutation order, and determine how cancer cells respond to selective pressures imposed by anticancer agents, immune cells, and other components of the tumor microenvironment. They compare cancer evolution to organismal evolution and describe how ecological theories and mathematical models are being used to understand the complex dynamics between a tumor and its microenvironment during cancer progression. The authors also discuss improved methods to monitor tumor evolution (e.g., liquid biopsies) and the development of more effective strategies for managing and treating cancers (e.g., immunotherapies). This volume will therefore serve as a vital reference for all cancer biologists as well as anyone seeking to improve clinical outcomes for patients with cancer.
"A good companion for those with a science background interested in learning more about human genetics." —Booklist Thanks to the popularity of personal genetic testing services, it's now easier than ever to get information about our own unique DNA—but who does this information really benefit? And, as genome editing and gene therapy transform the healthcare landscape, what do we gain—and what might we give up in return? Inside each of your cells is the nucleus, a small structure that contains all of the genetic information encoded by the DNA inside, your genome. Not long ago, the first human genome was sequenced at a cost of nearly $3 billion; now, this same test can be done for about $1,000. This new accessibility of genome sequence information creates huge potential for advances in how we understand and treat disease, among other things. It also raises significant concerns regarding ethics and personal privacy. In Mapping Humanity: How Modern Genetics Is Changing Criminal Justice, Personalized Medicine, and Our Identities, cellular biology expert Joshua Z. Rappoport provides a detailed look at how the explosion in genetic information as a result of cutting-edge technologies is changing our lives and our world. Inside, discover: • An in-depth look at how your personal genome creates the unique individual that you are • How doctors are using DNA sequencing to identify the underlying genetic causes of disease • Why the field of gene therapy offers amazing potential for medical breakthroughs—and why it's taking so long • The fantastic potential—and troubling concerns—surrounding genome editing • The real impact—and validity—of popular personal genetic testing products, such as 23andMe • Details of how molecular biology and DNA are changing the criminal justice system • Facts you should know about Genetically Modified Organisms (GMOs) Throughout, in compelling, accessible prose, Rappoport explores the societal, ethical, and economic impacts of this new era. Offering a framework for balancing the potential risks and benefits of genetic information technologies and genetic engineering, Mapping Humanity is an indispensable guide to navigating the possibilities and perils of our gene-centric future.
There have been many books, movies, and even TV commercials featuring Neandertals--some serious, some comical. But what was it really like to be a Neandertal? How were their lives similar to or different from ours? In How to Think Like a Neandertal, archaeologist Thomas Wynn and psychologist Frederick L. Coolidge team up to provide a brilliant account of the mental life of Neandertals, drawing on the most recent fossil and archaeological remains. Indeed, some Neandertal remains are not fossilized, allowing scientists to recover samples of their genes--one specimen had the gene for red hair and, more provocatively, all had a gene called FOXP2, which is thought to be related to speech. Given the differences between their faces and ours, their voices probably sounded a bit different, and the range of consonants and vowels they could generate might have been different. But they could talk, and they had a large (perhaps huge) vocabulary--words for places, routes, techniques, individuals, and emotions. Extensive archaeological remains of stone tools and living sites (and, yes, they did often live in caves) indicate that Neandertals relied on complex technical procedures and spent most of their lives in small family groups. The authors sift the evidence that Neandertals had a symbolic culture--looking at their treatment of corpses, the use of fire, and possible body coloring--and conclude that they probably did not have a sense of the supernatural. The book explores the brutal nature of their lives, especially in northwestern Europe, where men and women with spears hunted together for mammoths and wooly rhinoceroses. They were pain tolerant, very likely taciturn, and not easy to excite. Wynn and Coolidge offer here an eye-opening portrait of Neandertals, painting a remarkable

picture of these long-vanished people and providing insight, as they go along, into our own minds and culture.
An examination of our language instinct. Steven Mithen draws 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.
A powerful new theory of human nature suggests that our secret to success as a species is our unique friendliness “Brilliant, eye-opening, and absolutely inspiring—and a riveting read. Hare and Woods have written the perfect book for our time.”—Cass R. Sunstein, author of How Change Happens and co-author of Nudge For most of the approximately 300,000 years that Homo sapiens have existed, we have shared the planet with at least four other types of humans. All of these were smart, strong, and inventive. But around 50,000 years ago, Homo sapiens made a cognitive leap that gave us an edge over other species. What happened? Since Charles Darwin wrote about “evolutionary fitness,” the idea of fitness has been confused with physical strength, tactical brilliance, and aggression. In fact, what made us evolutionarily fit was a remarkable kind of friendliness, a virtuosic ability to coordinate and communicate with others that allowed us to achieve all the cultural and technical marvels in human history. Advancing what they call the “self-domestication theory,” Brian Hare, professor in the department of evolutionary anthropology and the Center for Cognitive Neuroscience at Duke University and his wife, Vanessa Woods, a research scientist and award-winning journalist, shed light on the mysterious leap in human cognition that allowed Homo sapiens to thrive. But this gift for friendliness came at a cost. Just as a mother bear is most dangerous around her cubs, we are at our most dangerous when someone we love is threatened by an “outsider.” The threatening outsider is demoted to sub-human, fair game for our worst instincts. Hare’s groundbreaking research, developed in close coordination with Richard Wrangham and Michael Tomasello, giants in the field of cognitive evolution, reveals that the same traits that make us the most tolerant species on the planet also make us the cruelest. Survival of the Friendliest offers us a new way to look at our cultural as well as cognitive evolution and sends a clear message: In order to survive and even to flourish, we need to expand our definition of who belongs.
Since the Western world first became aware of the existence of Neanderthals, this Pleistocene human has been a regular focus of interest among specialists and also among the general public. In fact, we know far more about Neanderthals than we do about any other extinct human population. Furthermore, over the past 150 years no other palaeospecies has been such a constant source of discussion and fierce debate among palaeoanthropologists and archaeologists. This book presents the status of our knowledge as well as the methods and techniques used to study this extinct population and it suggests perspectives for future research.
The past few years have witnessed a revolution in our ability to obtain DNA from ancient humans. This important new data has added to our knowledge from archaeology and anthropology, helped resolve long-existing controversies, challenged long-held views, and thrown up remarkable surprises. The emerging picture is one of many waves of ancient human migrations, so that all populations living today are mixes of ancient ones, and often carry a genetic component from archaic humans. David Reich, whose team has been at the forefront of these discoveries, explains what genetics is telling us about ourselves and our complex and often surprising ancestry. Gone are old ideas of any kind of racial âpurity.' Instead, we are finding a rich variety of mixtures. Reich describes the cutting-edge findings from the past few years, and also considers the sensitivities involved in tracing ancestry, with science sometimes jostling with politics and tradition. He brings an important wider message: that we should recognize that every one of us is the result of a long history of migration and intermixing of ancient peoples, which we carry as ghosts in our DNA. What will we discover next?
In this fascinating volume, the Middle Paleolithic archaeology of the Middle East is brought to the current debate on the origins of modern humans. These collected papers gather the most up-to-date archaeological discoveries of Western Asia - a region that is often overshadowed by African or European findings - but the only region in the world where both Neandertal and early modern human fossils have been found. The collection includes reports on such well known cave sites as Kebara, Hayonim, and Qafzeh, among others. The information and interpretations available here are a must for any serious researcher or student of anthropology or human evolution.
This is a story about you. It is the history of who you are and how you came to be. It is unique to you, as it is to each of the 100 billion modern humans who have ever drawn breath. But it is also our collective story, because in every one of our genomes we each carry the history of our species - births, deaths, disease, war, famine, migration and a lot of sex. In this captivating journey through the expanding landscape of genetics, Adam Rutherford reveals what our genes now tell us about human history, and what history can now tell us about our genes. From Neanderthals to murder, from redheads to race, dead kings to plague, evolution to epigenetics, this is a demystifying and illuminating new portrait of who we are and how we came to be.
What happens when media and politics become forms of entertainment? As our world begins to look more and more like Orwell's 1984, Neil's Postman's essential guide to the modern media is more relevant than ever. "It's unlikely that Trump has ever read Amusing Ourselves to Death, but his ascent would not have surprised Postman.” -CNN Originally published in 1985, Neil Postman’s groundbreaking polemic about the corrosive effects of television on our politics and public discourse has been hailed as a twenty-first-century book published in the twentieth century. Now, with television joined by more sophisticated electronic media—from the Internet to cell phones to DVDs—it has taken on even greater significance. Amusing Ourselves to Death is a prophetic look at what happens when politics, journalism, education, and even religion become subject to the demands of entertainment. It is also a blueprint for regaining control of our media, so that they can serve our highest goals. “A brilliant, powerful, and important book. This is an indictment that Postman has laid down and, so far as I can see, an irrefutable one.” –Jonathan Yardley, The Washington Post Book World
Scientists have long known that the popular image of the Neanderthal as a primitive, hairy, heavily browed, club-wielding brute is not supported by the fossil evidence. But to date, no such consensus has existed on the riddle of Neanderthals' disappearance. The Last Neanderthal , written by one of the most respected authorities on the subject and supported by a dazzling wealth of material, paints the first full portrait of the most familiar and haunting of human relatives. Drawing on the latest findings and sophisticated new techniques of analysis, Ian Tattersall marshals the best available evidence to unravel the mysteries of the Neanderthals - who they were, how they lived, how they succeeded for so long. Drawing on his own research and the work of others, Tattersall takes on the most fascinating question of all - what happened to them? This revised edition is fully updated to include information on Tattersall's recent survey of all known Neanderthal fossils, cutting-edge work with Neanderthal DNA, and new discoveries in Spain.
2019 PEN/E.O. Wilson Literary Science Writing Award Finalist "Science book of the year"—The Guardian One of New York Times 100 Notable Books for 2018 One of Publishers Weekly's Top Ten Books of 2018 One of Kirkus's Best Books of 2018 One of Mental Floss's Best Books of 2018 One of Science Friday's Best Science Books of 2018 “Extraordinary”—New York Times Book Review "Magisterial"—The Atlantic "Engrossing"—Wired "Leading contender as the most outstanding nonfiction work of the

year"—Minneapolis Star-Tribune Celebrated New York Times columnist and science writer Carl Zimmer presents a profoundly original perspective on what we pass along from generation to generation. Charles Darwin played a crucial part in turning heredity into a scientific question, and yet he failed spectacularly to answer it. The birth of genetics in the early 1900s seemed to do precisely that. Gradually, people translated their old notions about heredity into a language of genes. As the technology for studying genes became cheaper, millions of people ordered genetic tests to link themselves to missing parents, to distant ancestors, to ethnic identities... But, Zimmer writes, “Each of us carries an amalgam of fragments of DNA, stitched together from some of our many ancestors. Each piece has its own ancestry, traveling a different path back through human history. A particular fragment may sometimes be cause for worry, but most of our DNA influences who we are—our appearance, our height, our penchants—in inconceivably subtle ways.” Heredity isn’t just about genes that pass from parent to child. Heredity continues within our own bodies, as a single cell gives rise to trillions of cells that make up our bodies. We say we inherit genes from our ancestors—using a word that once referred to kingdoms and estates—but we inherit other things that matter as much or more to our lives, from microbes to technologies we use to make life more comfortable. We need a new definition of what heredity is and, through Carl Zimmer’s lucid exposition and storytelling, this resounding tour de force delivers it. Weaving historical and current scientific research, his own experience with his two daughters, and the kind of original reporting expected of one of the world’s best science journalists, Zimmer ultimately unpacks urgent bioethical quandaries arising from new biomedical technologies, but also long-standing presumptions about who we really are and what we can pass on to future generations.

Vince Luca is just like any other high school guy. His best friend, Alex, is trying to score vicariously through him; his brother is a giant pain; and his father keeps bugging him to get motivated. There is just one thing that really sets him apart for other kids—his father happens to be the head of a powerful crime organization. Needless to say, while Vince"s family"s connections can be handy for certain things (like when teachers are afraid to give him a bad grade), they can put a serious crimp in his dating life. How is he supposed to explain to a girl what his father does for a living? But when Vince meets a girl who finally seems to be worth the trouble, her family turns out to be the biggest problem of all. Because her father is an FBI agent—the one who wants to put his father away for good.

An influential geneticist traces his investigation into the genes of humanity's closest evolutionary relatives, explaining what his sequencing of the Neanderthal genome has revealed about their extinction and the origins of modern humans.

This volume presents the cutting-edge research of leading scientists, re-examining the major debates in Neanderthal research with the use of innovative methods and exciting new theoretical approaches. Coverage includes the re-evaluation of Neanderthal anatomy, inferred adaptations and habitual activities, developmental patterns, phylogenetic relationships, and the Neanderthal extinction; new methods include computer tomography, 3D geometric morphometrics, ancient DNA and bioenergetics. The book offers fresh insight into both Neanderthals and modern humans.

David Reich describes how the revolution in the ability to sequence ancient DNA has changed our understanding of the deep human past. This book tells the emerging story of our often surprising ancestry - the extraordinary ancient migrations and mixtures of populations that have made us who we are.

NEW YORK TIMES BESTSELLER • An “outstanding new intellectual biography of John Maynard Keynes [that moves] swiftly along currents of lucidity and wit” (The New York Times), illuminating the world of the influential economist and his transformative ideas “A timely, lucid and compelling portrait of a man whose enduring relevance is always heightened when crisis strikes.”—The Wall Street Journal WINNER: The Arthur Ross Book Award Gold Medal • The Hillman Prize for Book Journalism FINALIST: The National Book Critics Circle Award • The Sabew Best in Business Book Award NAMED ONE OF THE TEN BEST BOOKS OF THE YEAR BY PUBLISHERS WEEKLY AND ONE OF THE BEST BOOKS OF THE YEAR BY Jennifer Szalai, The New York Times • The Economist • Bloomberg • Mother Jones At the dawn of World War I, a young academic named John Maynard Keynes hastily folded his long legs into the sidecar of his brother-in-law’s motorcycle for an odd, frantic journey that would change the course of history. Swept away from his placid home at Cambridge University by the currents of the conflict, Keynes found himself thrust into the halls of European treasuries to arrange emergency loans and packed off to America to negotiate the terms of economic combat. The terror and anxiety unleashed by the war would transform him from a comfortable obscurity into the most influential and controversial intellectual of his day—a man whose ideas still retain the power to shock in our own time. Keynes was not only an economist but the preeminent anti-authoritarian thinker of the twentieth century, one who devoted his life to the belief that art and ideas could conquer war and deprivation. As a moral philosopher, political theorist, and statesman, Keynes led an extraordinary life that took him from intimate turn-of-the-century parties in London’s riotous Bloomsbury art scene to the fevered negotiations in Paris that shaped the Treaty of Versailles, from stock market crashes on two continents to diplomatic breakthroughs in the mountains of New Hampshire to wartime ballet openings at London’s extravagant Covent Garden. Along the way, Keynes reinvented Enlightenment liberalism to meet the harrowing crises of the twentieth century. In the United States, his ideas became the foundation of a burgeoning economics profession, but they also became a flash point in the broader political struggle of the Cold War, as Keynesian acolytes faced off against conservatives in an intellectual battle for the future of the country—and the world. Though many Keynesian ideas survived the struggle, much of the project to which he devoted his life was lost. In this riveting biography, veteran journalist Zachary D. Carter unearths the lost legacy of one of history’s most fascinating minds. The Price of Peace revives a forgotten set of ideas about democracy, money, and the good life with transformative implications for today’s debates over inequality and the power politics that shape the global order. LONGLISTED FOR THE CUNDILL HISTORY PRIZE

When a Harvard paleontologist disappears in the mountains of northern Asia, Matt Mattison and Susan Arnot--former lovers who are now academic rivals--set out to find their mentor and a species of humans who have existed for over forty thousand years

NOW IN ENGLISH FOR THE FIRST TIME¿ THE TRUE STORY OF THE MINNESOTA ICEMAN! The story begins at the end of 1968 in New Jersey, when zoologist Bernard Heuvelmans and biologist Ivan Sanderson first hear from a correspondent about the frozen corpse of an extremely hairy man-like creature being exhibited in the Midwest. Upon arrival in Minnesota, the two scientists come face to face with a ¿hominid¿ not of our species embedded in a block of ice. An inquiry into the origin of the specimen triggers a bizarre adventure involving the FBI, the Smithsonian, the Mafia, the Vietnam War, drug smuggling, Hollywood, and a secretive millionaire, giving much of the account the flavor of a riveting detective story. What happened is told in meticulous detail by Heuvelmans, who draws a startling conclusion as to the Iceman¿s nature based on a comparison of its anatomy with that of modern humans and fossil ancestors. But where Heuvelman¿s scientific tale ends, cryptozoologist Loren Coleman¿s begins, in a lengthy fact-filled afterword that brings this remarkable saga up-to-date.

The Government, in consultation with the Territories and other stakeholders, has developed a strategy of re-engagement: strengthening links between the Territories and the UK; strengthening governance; and enhancing support to the Territories. This White Paper sets out priorities for action in terms of defending the Territories; supporting successful economic development; preserving the Territories' rich environmental heritage and addressing the challenges of climate change; making government work better; community issues; and strengthening links with international and regional organisations or other countries. Taking this forward will require a partnership between the UK Government and

Territory Governments. The UK wants to strengthen political engagement between Ministers in the UK and the Territories, particularly through the proposed Joint Ministerial Council, and is determined to live up to its responsibilities to the Territories

Alcune impressionanti innovazioni tecnologiche permettono oggi di analizzare il dna antico, facendoci comprendere, soprattutto grazie ai contributi di David Reich, che la genomica è uno strumento importante per conoscere le popolazioni passate. Reich spiega con chiarezza ed eleganza senza pari come il genoma umano contenga in sé la storia della nostra specie. Mostra inoltre come la rivoluzione del genoma e il DNA antico stiano trasformando la comprensione della genealogia degli esseri umani moderni e come gli studi sul DNA portino alla luce la storia remota della diseguaglianza, della diversità tra le differenti popolazioni, tra i sessi e tra i vari individui entro una popolazione. Il suo saggio smentisce l'idea che non ci sarebbero significative differenze biologiche tra le popolazioni umane, e al tempo stesso utilizza la prova definitiva fornita dalla genomica per dimostrare che molto probabilmente le differenze esistenti non si conformano agli stereotipi comuni.

New York Times Bestseller A Summer Reading Pick for President Barack Obama, Bill Gates, and Mark Zuckerberg From a renowned historian comes a groundbreaking narrative of humanity's creation and evolution—a #1 international bestseller—that explores the ways in which biology and history have defined us and enhanced our understanding of what it means to be "human." One hundred thousand years ago, at least six different species of humans inhabited Earth. Yet today there is only one—homo sapiens. What happened to the others? And what may happen to us? Most books about the history of humanity pursue either a historical or a biological approach, but Dr. Yuval Noah Harari breaks the mold with this highly original book that begins about 70,000 years ago with the appearance of modern cognition. From examining the role evolving humans have played in the global ecosystem to charting the rise of empires, Sapiens integrates history and science to reconsider accepted narratives, connect past developments with contemporary concerns, and examine specific events within the context of larger ideas. Dr. Harari also compels us to look ahead, because over the last few decades humans have begun to bend laws of natural selection that have governed life for the past four billion years. We are acquiring the ability to design not only the world around us, but also ourselves. Where is this leading us, and what do we want to become? Featuring 27 photographs, 6 maps, and 25 illustrations/diagrams, this provocative and insightful work is sure to spark debate and is essential reading for aficionados of Jared Diamond, James Gleick, Matt Ridley, Robert Wright, and Sharon Moalem.

Blending evidence across science and design, Subtract: explores the other approach to problem-solving: proving why we overlook subtraction, and how we can access its untapped potential We pile on "to-dos" but don't consider "stop-doings." We create incentives for good behavior, but don't get rid of obstacles to it. We collect new-and-improved ideas, but don't prune the outdated ones. Every day, across challenges big and small, we neglect a basic way to make things better: we don't subtract. Leidy Klotz's pioneering research shows why. Whether we're building Lego models or cities, grilled-cheese sandwiches or strategic plans, our minds tend to add before taking away. Even when we do think of it, subtraction can be harder to pull off because an array of biological, cultural, and economic forces push us towards more. But we have a choice—our blind spot need not go on taking its toll on our cities, our institutions, and our minds. By diagnosing our neglect of subtraction, we can treat it. Subtract will change how you change your world. In these pages you'll meet subtracting exemplars: design geniuses, Nobel Prize-winners, rock-stars, and everyday heroes, who have subtracted to dismantle racism, advance knowledge, heal the planet, and even tell better jokes. These and more guiding lights show how we can revolutionize not just our day-to-day lives, but our collective legacy. More or less. A paradigm shift of a book, Subtract shows us how to find more of the options we've been missing—and empowers us to pursue them.

A leading researcher on human evolution proposes a new and controversial theory of how our species came to be In this groundbreaking and engaging work of science, world-renowned paleoanthropologist Chris Stringer sets out a new theory of humanity's origin, challenging both the multiregionalists (who hold that modern humans developed from ancient ancestors in different parts of the world) and his own "out of Africa" theory, which maintains that humans emerged rapidly in one small part of Africa and then spread to replace all other humans within and outside the continent. Stringer's new theory, based on archeological and genetic evidence, holds that distinct humans coexisted and competed across the African continent—exchanging genes, tools, and behavioral strategies. Stringer draws on analyses of old and new fossils from around the world, DNA studies of Neanderthals (using the full genome map) and other species, and recent archeological digs to unveil his new theory. He shows how the most sensational recent fossil findings fit with his model, and he questions previous concepts (including his own) of modernity and how it evolved. Lone Survivors will be the definitive account of who and what we were, and will change perceptions about our origins and about what it means to be human.

"Meaty, well-written." —Kirkus Reviews "Timely and informative." —The New York Times Book Review "By far the best book I have ever read on humanity's deep history." —E. O. Wilson, biologist and author of The Ants and On Human Nature Nicholas Wade's articles are a major reason why the science section has become the most popular, nationwide, in the New York Times. In his groundbreaking Before the Dawn, Wade reveals humanity's origins as never before—a journey made possible only recently by genetic science, whose incredible findings have answered such questions as: What was the first human language like? How large were the first societies, and how warlike were they? When did our ancestors first leave Africa, and by what route did they leave? By eloquently solving these and numerous other mysteries, Wade offers nothing less than a uniquely complete retelling of a story that began 500 centuries ago.

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The story of Neanderthal man. Was he our direct ancestor, or was he perhaps a more alien figure, genetically very different? This title brings us into the Neanderthal's world, his technology, his way of life, his origins and his relationship with us.

This novel of awesome beauty and power is a moving saga about people, relationships, and the boundaries of love. Nominated as one of America's best-loved novels by PBS's The Great American Read Through Jean M. Auel's magnificent storytelling we are taken back to the dawn of modern humans, and with a girl named Ayla we are swept up in the harsh and beautiful Ice Age world they shared with the ones who called themselves The Clan of the Cave Bear. A natural disaster leaves the young girl wandering alone in an unfamiliar and dangerous land until she is found by a woman of the Clan, people very different from her own kind. To them, blond, blue-eyed Ayla looks peculiar and ugly—she is one of the Others, those who have moved into their ancient homeland; but Iza cannot leave the girl to die and takes her with them. Iza and Creb, the old Mog-ur, grow to love her, and as Ayla learns the ways of the Clan and Iza's way of healing, most come to accept her. But the brutal and proud youth who is destined to become their next leader sees her differences as a threat to his authority. He develops a deep and abiding hatred for the strange girl of the Others who lives in their midst, and is determined to get his revenge. This eBook includes the full text of the novel plus the following additional content: • An Earth's Children® series sampler including free chapters from the other books in Jean M. Auel's bestselling series • A Q&A with the author about the Earth's Children® series

Who is a Native American? And who gets to decide? From genealogists searching online for their ancestors to fortune hunters hoping for a

slice of casino profits from wealthy tribes, the answers to these seemingly straightforward questions have profound ramifications. The rise of DNA testing has further complicated the issues and raised the stakes. In Native American DNA, Kim TallBear shows how DNA testing is a powerful—and problematic—scientific process that is useful in determining close biological relatives. But tribal membership is a legal category that has developed in dependence on certain social understandings and historical contexts, a set of concepts that entangles genetic information in a web of family relations, reservation histories, tribal rules, and government regulations. At a larger level, TallBear asserts, the "markers" that are identified and applied to specific groups such as Native American tribes bear the imprints of the cultural, racial, ethnic, national, and even tribal misinterpretations of the humans who study them. TallBear notes that ideas about racial science, which informed white definitions of tribes in the nineteenth century, are unfortunately being revived in twenty-first-century laboratories. Because today's science seems so compelling, increasing numbers of Native Americans have begun to believe their own metaphors: "in our blood" is giving way to "in our DNA." This rhetorical drift, she argues, has significant consequences, and ultimately she shows how Native American claims to land, resources, and sovereignty that have taken generations to ratify may be seriously—and permanently—undermined.

The genome's been mapped. But what does it mean? Arguably the most significant scientific discovery of the new century, the mapping of the twenty-three pairs of chromosomes that make up the human genome raises almost as many questions as it answers. Questions that will profoundly impact the way we think about disease, about longevity, and about free will. Questions that will affect the rest of your life. Genome offers extraordinary insight into the ramifications of this incredible breakthrough. By picking one newly discovered gene from each pair of chromosomes and telling its story, Matt Ridley recounts the history of our species and its ancestors from the dawn of life to the brink of future medicine. From Huntington's disease to cancer, from the applications of gene therapy to the horrors of eugenics, Matt Ridley probes the scientific, philosophical, and moral issues arising as a result of the mapping of the genome. It will help you understand what this scientific milestone means for you, for your children, and for humankind.

In Ancient Shock Monsters, Philosophers & Saviors, How Neanderthals Became Sapiens, the 'standard model' of academic history gets broken into pieces. Socrates, Jesus, Buddha, Greek hero's, Trojan hero's, and Chinese divine Kings are seen in an entirely new light. The Author must warn the Reader: prepare for a considerable shock; this is the first and only book to examine the hidden history, and the lives of our hybrid humanity. This book is dedicated to Stan Gooch, the world's first paleo-psychologist, for his brilliant insight into the neuropsychology of the Neanderthals and their descendants, and to the untold legions of Neanderthal-Sapiens souls that were our distant ancestors. Without them, we wouldn't be here. The basic, scientifically supported premise presented here, is that the reader, the author, and nearly everyone on the planet has 2-4% (or more) Neanderthal DNA in their body. Where and when did this Neon DNA come from, in our distant past? Who were these other ancestors of ours? The theme of this book, our premise, must also strongly suggest, even mandate, that our ancient ancestors surely must have contained much larger amounts of hybrid-DNA than we do today. "History is the Lie commonly agreed upon." Voltaire. Steven A. Key, in a former technological life, had a career taming the largest computer systems in the world-those mysterious mainframes. Now, he writes mysterious books. As a deep-researching computerist and technocrat, he was readily primed to combine his investigative skills with his deep personal interests in all things pertaining to Body-Mind and Spirit. Combining unique approaches to neuroscience, psychology, consciousness, and ancient history, Steven created the New Muse Book Series. His initial book, The Vikings Secret Yoga; The Supreme Adventure, is the first book of its kind in that it reveals the hidden Yoga of the tenth-century Norse poets.

Who We Are and How We Got HereAncient DNA and the new science of the human pastOxford University Press

"Even-handed, up-to-date, and clearly written. . . . If you want to navigate between the Scylla and Charybdis of Neanderthal controversies, you'll find no better guide." —Brian Fagan, author of Cro-Magnon In recent years, the common perception of the Neanderthal has been transformed thanks to new discoveries and paradigm-shattering scientific innovations. It turns out that the Neanderthals' behavior was surprisingly modern: they buried the dead, cared for the sick, hunted large animals in their prime, harvested seafood, and spoke. Meanwhile, advances in DNA technologies have forced a reassessment of the Neanderthals' place in our own past. For hundreds of thousands of years, Neanderthals evolved in Europe very much in parallel to the Homo sapiens line evolving in Africa, and, when both species made their first forays into Asia, the Neanderthals may even have had the upper hand. Here, Dimitra Papagianni and Michael A. Morse look at the Neanderthals through the full dramatic arc of their existence—from their evolution in Europe to their expansion to Siberia, their subsequent extinction, and ultimately their revival in popular novels, cartoons, cult movies, and TV commercials.

From the author of the New York Times bestselling Jedi Academy books comes a hilarious graphic novel series about two young cave kids living 40,000 years ago. "Lucy & Andy are Stone Age rock stars! I loved this book!" —Lincoln Peirce, author of the Big Nate series Lucy and Andy are a sister and brother who get into trouble much like any sister and brother. Only difference? Lucy and Andy live in the Stone Age! Discover their laugh-out-loud adventures as the Paleo pair take on a wandering baby sibling, bossy teens, cave paintings, and a mammoth hunt. But what will happen when they encounter a group of humans? Includes extra information about Neanderthal life that's sure to appeal to future paleontologists and science phobes alike! And don't miss Lucy and Andy's next outing, Lucy & Andy Neanderthal: The Stone Cold Age -- coming soon! A New York City Public Library Best 50 Books for Kids 2016! A Chicago Public Library Best of the Best 2016! "Jeffrey Brown returns from a galaxy far, far away to bring us a whole new slew of kid-friendly characters! Just beware of mammoth dung!" —Keith Knight, author of Jake the Fake and The Knight Life Every kid will love to go back in time with LUCY & ANDY!" —Judd Winick, author of Hilo: The Boy Who Saved the World Originally published in hardcover: Oxford; New York: Oxford Universtiy Press, 2009.

From the duo behind the massively successful and award-winning podcast Stuff You Should Know comes an unexpected look at things you thought you knew. Josh Clark and Chuck Bryant started the podcast Stuff You Should Know back in 2008 because they were curious—curious about the world around them, curious about what they might have missed in their formal educations, and curious to dig deeper on stuff they thought they understood. As it turns out, they aren't the only curious ones. They've since amassed a rabid fan base, making Stuff You Should Know one of the most popular podcasts in the world. Armed with their inquisitive natures and a passion for sharing, they uncover the weird, fascinating, delightful, or unexpected elements of a wide variety of topics. The pair have now taken their near-boundless "whys" and "hows" from your earbuds to the pages of a book for the first time—featuring a completely new array of subjects that they've long wondered about and wanted to explore. Each chapter is further embellished with snappy visual material to allow for rabbit-hole tangents and digressions—including charts, illustrations, sidebars, and footnotes. Follow along as the two dig into the underlying stories of everything from the origin of Murphy beds, to the

history of facial hair, to the psychology of being lost. Have you ever wondered about the world around you, and wished to see the magic in everyday things? Come get curious with Stuff You Should Know. With Josh and Chuck as your guide, there’s something interesting about everything (...except maybe jackhammers).