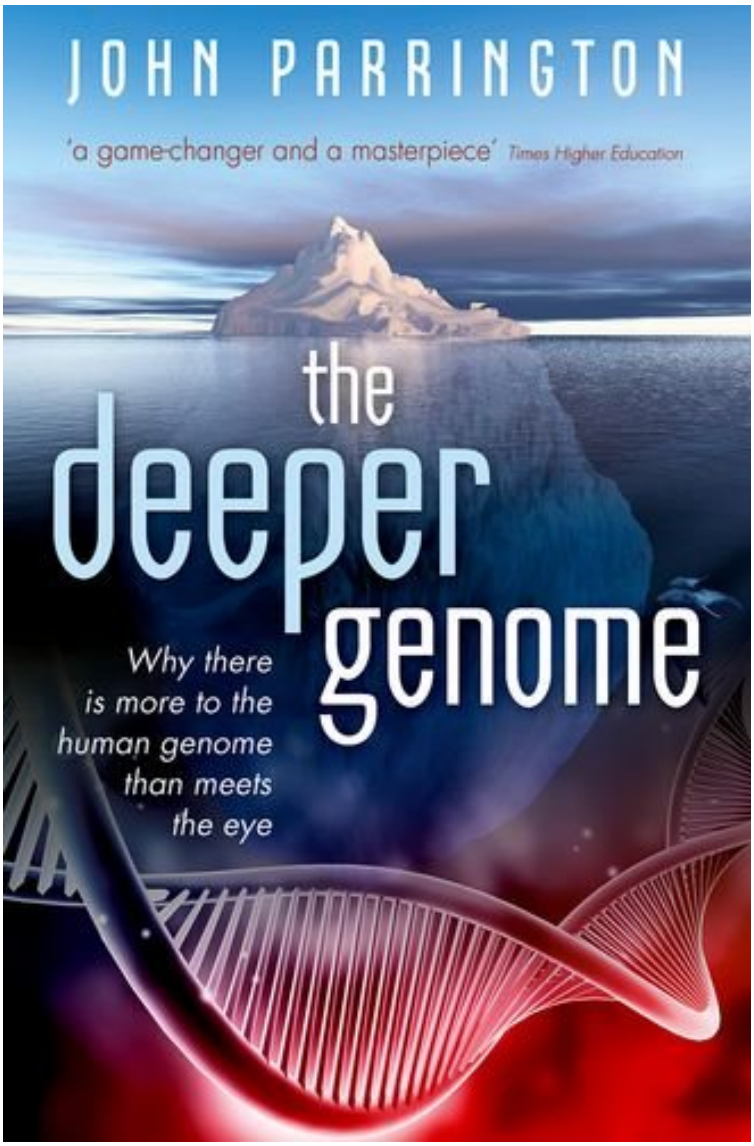
The Deeper Genome: Why there is more to the human genome than meets the eye

John Parrington
*DOC | *audiobook | ebooks | Download PDF | ePub*



#1261054 in Books Parrington John 2016-10-25Original language:EnglishPDF # 1 5.00 x .80 x 7.60l, .0 #File Name: 0199688745246 pagesThe Deeper Genome Why There Is More to the Human Genome Than Meets the Eye | File size: 43.Mb

John Parrington : The Deeper Genome: Why there is more to the human genome than meets the eye before purchasing it in order to gage whether or not it would be worth my time, and all praised The Deeper Genome: Why there is more to the human genome than meets the eye:

20 of 23 people found the following review helpful. Professional Overview with Fabulous BibliographyBy Herbert GintisasdfI study sociobiology in general, and the sociobiology of Homo sapiens in particular. The population genetics of the New Synthesis is now verging on a century old, and it is firmly grounded in a conception of genetic information transmission that is clearly out of date. I have been studying epigenetics and epistasis to understand the complex nature of multicellular organisms and social species. The most important thing I have learned so far is that the traditional idea of how information is passed from a biological entity to its daughter copies goes far beyond Mendelian segregation.This book describes contemporary genetic research in to complex information transfer mechanisms in the genome. It requires that the reader know something about molecular biology, but not that much. The description is very well done, and the bibliography is extensive and well directed.Most fascinating is the author's argument that the complexities of the genome require that we go beyond the "reductionism" that has guided microbiological research and theory for more than a century. It is not clear what the alternative is, but some of the readings in the bibliography do give some indications.4 of 4 people found the following review helpful. This is worth the many re-reads required to understand it ...By Llewellyn DrakeThis is worth the many re-reads required to understand it. I will read it again and probably again. It is complicated but not opaque.3 of 3 people found the following review helpful. Remarkable and RevolutionaryBy Robert F. SteeleA lot of technical stuff but if you are not a biochemist you can glide on and get the core of the information which is very interesting and revolutionary in its view of genetics.

Over a decade ago, as the Human Genome Project completed its mapping of the entire human genome, hopes ran high that we would rapidly be able to use our knowledge of human genes to tackle many inherited diseases, and understand what makes us unique among animals. But things didn't turn out that way. For a start, we turned out to have far fewer genes than originally thought - just over 20,000, the same sort of number as a fruit fly or worm. What's more, the proportion of DNA consisting of genes coding for proteins was a mere 2%. So, was the rest of the genome accumulated 'junk'? Things have changed since those early heady days of the Human Genome Project. But the emerging picture is if anything far more exciting. In this book, John Parrington explains the key features that are coming to light - some, such as the results of the international ENCODE programme, still much debated and controversial in their scope. He gives an outline of the deeper genome, involving layers of regulatory elements controlling and coordinating the switching on and off of genes; the impact of its 3D geometry; the discovery of a variety of new RNAs playing critical roles; the epigenetic changes influenced by the environment and life experiences that can make identical twins different and be passed on to the next generation; and the clues coming out of comparisons with the genomes of Neanderthals as well as that of chimps about the development of our species. We are learning more about ourselves, and about the genetic aspects of many diseases. But in its complexity, flexibility, and ability to respond to environmental cues, the human genome is proving to be far more subtle than we ever imagined.

"The Deeper Genome ... provides an elegant account of the profound and unexpected complexities of the human genome, and shows how many ideas developed in the 20th century are being overturned." --New Scientist"A compelling book that will enrich your knowledge of genetics and its potential." --New York Journal of Books"Overall, this is a faithful, engaging portrait of the twenty-first century genome." --NatureThis is a brilliant book - a wonderfully entertaining history of molecular biology and the surprises and controversies of a field still very much in flux, from early explorations to the emerging realisation that the human genome may be far more sophisticated than we ever imagined." --John Mattick, Director, Garvan Institute of Medical Research"The Deeper Genome is unique in that it provides an entertaining tale of personalities with lots of useful technical knowledge. We highly recommend the book as a supplement for classroom teaching as it covers fundamental concepts in an easily readable format. Students will likely find it even more interesting than many of the more standard textbooks. ... The Deeper Genome is a great read that definitely imparts knowledge in an entertaining fashion and connects the almost 99 percent of the genome that is not protein coding to all sorts of interesting questions. We highly recommend it." --Dov Greenbaum and Mark Gerstein, Cell"This informative, highly readable book addresses scientists' current understanding of noncoding DNA. ... All in all, this is a valuable book for anyone wishing to explore the newest discoveries, and the implications of these discoveries, in a rapidly expanding field. Highly recommended." --CHOICE"The Deeper Genome is unique in that it provides an entertaining tale of personalities with lots of useful technical knowledge. We highly recommend the book as a supplement for classroom teaching as it covers fundamental concepts in an easily readable format. Students will likely find it even more interesting than many of the more standard textbooks. ... The Deeper Genome is a great read that definitely imparts knowledge in an entertaining fashion and connects the almost 99 percent of the genome that is not protein coding to all sorts of interesting questions. We highly recommend it." --Dov Greenbaum and Mark Gerstein, Cell"This informative, highly readable book addresses scientists' current understanding of noncoding DNA. ... All in all, this is a valuable book for anyone wishing to explore the newest discoveries, and the implications of these discoveries, in a rapidly expanding field. Highly recommended." --CHOICEAbout the AuthorJohn Parrington, Associate Professor and University Lecturer in Cellular Molecular Pharmacology, University of OxfordJohn Parrington is an Associate Professor in Molecular and Cellular Pharmacology at the University of Oxford, and a

Tutorial Fellow in Medicine at Worcester College, Oxford. He has published over 80 peer-reviewed articles in science journals including Nature, Current Biology, Journal of Cell Biology, Journal of Clinical Investigation, The EMBO Journal, Development, Developmental Biology, and Human Reproduction. He has extensive experience writing popular science, having published articles in The Guardian, New Scientist, Chemistry World, and The Biologist. As a British Science Association Media Fellow he has worked as a science journalist at The Times for 7 weeks where he published 22 articles. He has also written science reports for the Wellcome Trust, British Council, and Royal Society.