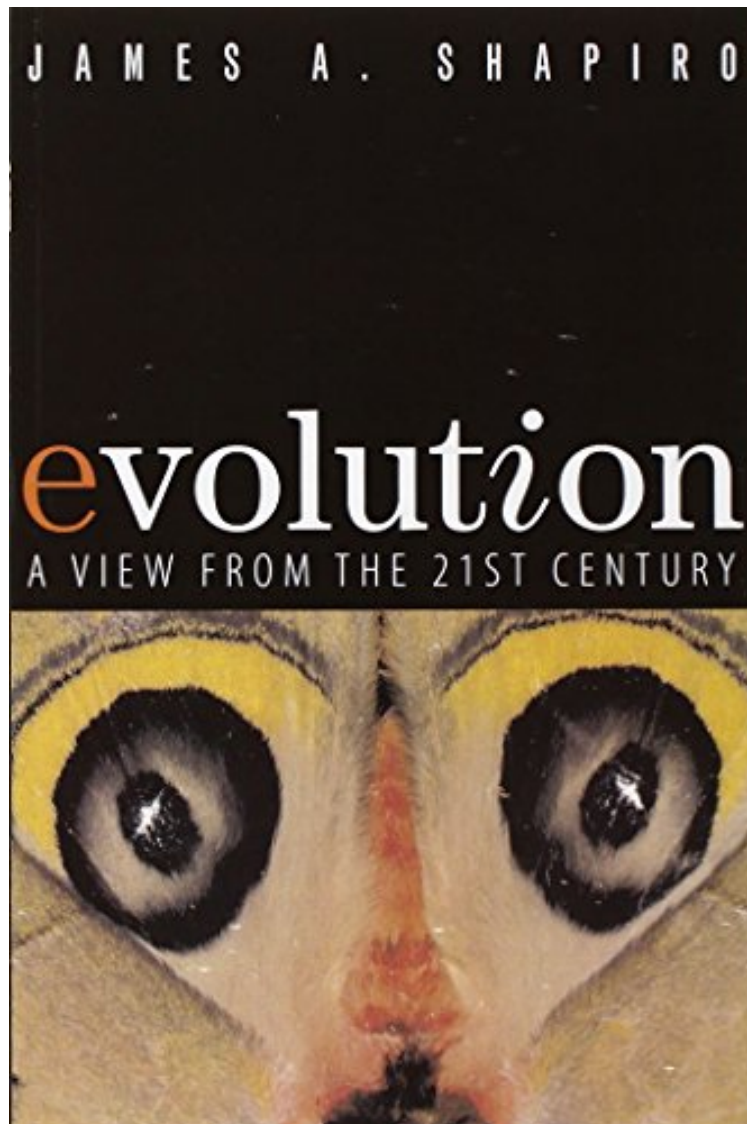


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Evolution: A View from the 21st Century (paperback)

James A. Shapiro

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James A. Shapiro : Evolution: A View from the 21st Century (paperback) before purchasing it in order to gage whether or not it would be worth my time, and all praised Evolution: A View from the 21st Century (paperback):

0 of 0 people found the following review helpful. Replacing mutation-selection with molecular LamarckismBy SendthelightCommon sense, as well as the principles of molecular biology, tells us that mutations degrade genetic information, instead of being creative. By declaring the death of the mutation-selection paradigm, Shapiro is truly a hero, wise and courageous.Recognizing the impotence of chance, Shapiro proposes that functional necessity guides targeted, coordinated, simultaneous, heritable changes to create a selective advantage. That is obviously Lamarckism,

with little empirical basis. Mechanisms of "natural genetic engineering" surely exist, but are pre-programmed for specific purposes. Their limits are obvious, and many of them are still more or less random. Why does the author seem to be exaggerating their creative power? Well, Darwinism may die, but naturalism will live for much longer. 1 of 2 people found the following review helpful. Desperately needs a good editor By T. Gwinn While it contains a great deal of interesting information, it desperately needs a good editor. The use of lengthy inline URLs for references (including wikipedia references) is cringeworthy and not at all professional. The author states up front that the intended audience is his peers, and as such, there is often use of quite technical language akin to what one might find in a peer-review paper on these topics. That is fine, but it limits the audience to such peers and to fairly adept lay-folk. There is a half-hearted attempt at a glossary in the back of the book, but it is wholly inadequate for a reader not equipped for this content. Further, the author (or editor) could improve the delineation of fact vs. speculation. There is nothing wrong with generating hypotheses from known facts, but multiple times the text is jumbled between fact and hypothesis. Despite its shortcomings, in its advancement of the state of our understanding of evolution, it is worthwhile reading for the astute reader. 1 of 2 people found the following review helpful. Must read By David A. Kincade This is a must read for anyone interested in the topic, period. Shapiro pulls together all the relevant information on the history of evolutionary thought including the "problems" with modern synthesis... and then puts them in a coherent framework.

James A. Shapiro proposes an important new paradigm for understanding biological evolution, the core organizing principle of biology. Shapiro introduces crucial new molecular evidence that tests the conventional scientific view of evolution based on the neo-Darwinian synthesis, shows why this view is inadequate to today's evidence, and presents a compelling alternative view of the evolutionary process that reflects the shift in life sciences towards a more information- and systems-based approach in *Evolution: A View from the 21st Century*. Shapiro integrates advances in symbiogenesis, epigenetics, and saltationism into a unified approach that views evolutionary change as an active cell process, regulated epigenetically and capable of making rapid large changes by horizontal DNA transfer, inter-specific hybridization, whole genome doubling, symbiogenesis, or massive genome restructuring. Evolution marshals extensive evidence in support of a fundamental reinterpretation of evolutionary processes, including more than 1,100 references to the scientific literature. Shapiro's work will generate extensive discussion throughout the biological community, and may significantly change your own thinking about how life has evolved. It also has major implications for evolutionary computation, information science, and the growing synthesis of the physical and biological sciences.

From the Author Most debates about evolution sound like the last fifty years of research in molecular biology had never occurred. *Evolution: A View from the 21st Century* aims to acquaint the reader with previously "inconceivable" but currently well-documented aspects of cell biology and genomics. This knowledge will prepare the reader for the inevitable surprises in evolutionary science as this new century runs its course. The capacity of living organisms to alter their own heredity is undeniable, and our current ideas about evolution have to incorporate this basic fact of life. The genome is no longer the read-only memory (ROM) system subject to accidental changes envisaged by conventional theory. We now understand genomes to be read-write (RW) information storage organelles at all time scales, from the single cell cycle to evolutionary eons.