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BOOK REVIEWS

A Review of *Evolution in Four Dimensions: Genetic, Epigenetic, Behavioral and Symbolic Variation in the History of Life*

Robert A. Olsen

Evolution in Four Dimensions: Genetic, Epigenetic, Behavioral and Symbolic Variation in the History of Life. Eva Jablonka and Marion Lamb, 2005, Cambridge, MA: MIT Press, 462 pp.

Recent attempts by Evolutionary Psychologists to explain the human decision process by proposing theories based on ecological adaptation have met with limited success. In particular, the difficulties associated with empirical testing have caused many critics to refer to these evolutionary theories as " just so stories" which are consistent with the historical development of mankind but that are not capable of falsification. More importantly, many of these evolutionary theories appear to be based on a modular theory of mind that implies a simplistic Darwinian inheritance process.

In this important new book, geneticists Jablonska and Lamb argue that the gene centered Neo –Darwinism that has dominated biological thought for the last 50 years(the Mendel-Darwin Grand Synthesis) is being replaced a new model that envisions human evolution and environmental adaptation as the result of four interacting inheritance processes. Thus human decision behavior does not just reflect chance genetic (DNA) variations that happened to provide adaptive advantage. While the focus of this book is heredity, the authors stress the following:

1. There is more to heredity than genes.
2. Some heredity variations are non random in origin.
3. Some acquired information is inherited.
4. Evolutionary change can result from instruction as well as selection.

The authors view heredity as an information transmission process and in successive chapters they explain in detail the following four transmission systems.

1. The genetic (DNA) inheritance.
2. Epigenetic inheritance (non DNA cellular transmission of traits).
3. Behavioral inheritance (socially mediated learning and imitation).
4. Symbolic inheritance (the ability to think and learn thru language).

In the last chapters of the book the authors provide many enlightening examples and explanations of how these four processes interact to create the complex patterns of human behavior that are so common today, but yet represent human adaptation to environments of the past.

This book is especially valuable because in offers a unifying framework within which to enclose and sort much of the interdisciplinary research relevant to Behavioral Finance and Economics. For example Jablonska and Lamb's theory of inheritance allows consideration of earlier Behaviorist learning theory as well as more current research on the role of emotion in decision making, social cooperation and the molecular biology and structure of the brain. This book is truly a tour de force but yet written in a manner that makes the subject material attainable to the non expert. There is some truth to the criticism that Behavioral Finance is a set of observations or models without a unifying theory. This book offers some insight and perspective needed to begin to remedy this problem.

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A Review of *The User Illusion: Cutting Consciousness Down to Size*

Robert A. Olsen

The User Illusion: Cutting Consciousness Down to Size. Tor Norretranders, 1998, New York: Penguin Viking, New York, 467 pp.

This best selling book from Europe has been around for a few years but has only recently been made available in English. The author is Denmark's leading science writer and in this book he amply demonstrates that a complex topic can be explained in a rigorous yet entertaining fashion. The book is primarily focused on decision making. However, in the process the author introduces readers to relevant concepts and research from information theory, complexity theory and the study of human consciousness.

The book begins with an extended discussion of mathematical computation and information theory. After developing a theory of the relationship between information and entropy (the greater the entropy the greater the information), the author introduces the reader to Godel's theorem and Alan Turing's halting problem. The conclusion reached is that humans can never escape the need for their own powers of judgment. That is, people will always know more than they can know. Formal axiomatic logic, based on conscious thought, can never be sufficient as the sole basis for good decision making in the natural world.

The next two sections of the book focus on the limits of language as an information transmission device and the "bandwidth" of human consciousness. Two principle conclusions reached are that language is deficient as an information communication device because it tends to ignore the context in which the information is transmitted and that the narrow bandwidth of human consciousness causes decision makers to see a simplified and artificial reality, much in the way that a computer interface hides what is really going on in the computer itself. The author argues that the unconscious mind knows much more than it can ever allow the conscious mind to see thru the narrow window of formal consciousness. Thus good decisions require affective as well as formally logical input. He points out that the human senses relay about 10 million times more pieces of information per second to the brain than can be consciously perceived. In summary, good decision making requires practice and personal experience, not just abstract logic.

The last section of the book is concerned with the implications of chaos, non-linearity and formal complexity for the decision process. The principal conclusion drawn is that reductionism will not render reality perfectly understandable and predictable. Even simple deterministic processes can lead to totally new outcomes that cannot be foreseen. Full human control of the natural world is beyond the power of human beings but that "is a good thing" because it is the "messiness" of reality that we enjoy and seek when we try to escape the ordered boredom of the "man made world" for the wildness of nature.

The book concludes with an extensive set of chapter notes and references for readers who wish more in depth treatment of the many topics covered. If you enjoy discussions that lead to new insights via surprising paths, this book offers a delightful journey.

A Review of *Behavioral Corporate Finance: Decisions That Create Value*

Robert A. Olsen

Behavioral Corporate Finance: Decisions That Create Value. Hersh Shefrin, 2006, New York: McGraw-Hill, 203 pp.

This well written new textbook is note worthy for two reasons. First it is the only book that focuses on the implications of behavioral finance research for Managerial or Corporate finance. As such it is structured for use as a supplement to a traditional financial management text. To date other behavioral finance books have focused on the area on Investments and have been primarily concerned with financial as opposed to real asset management. Second, this book is authored by a scholar who has been at the forefront of the drive to apply behavioral finance principles to real world business decisions. The author states that his main goal for the book is to help students to learn how to recognize and mitigate the effects of psychological obstacles on corporate finance decisions.

Individual chapters of the book are organized around the major categories of decisions that a financial manager makes. These include asset valuation, capital budgeting, risk management, capital structure, dividend policy, corporate governance, mergers and

acquisitions, and options. After a brief summary of the traditional approach to each issue the author discusses the nature and implications of specific behavioral concepts. These include the use of heuristics, psychological bias, framing, overconfidence, loss aversion. and groupthink, among others. To provide the reader with greater appreciation for the implications and operation of each behavioral concept, each chapter concludes with brief illustrations of business situations that manifest the phenomena and hints for mitigating the problems that might arise. End of chapter mini cases also allow the student practice in recognizing and responding to potential behavioral difficulties. Finally, there are also end of chapter questions as well as recommended additional readings. Instructors may also obtain an instructor's manual, power point slides and a test bank.

Prior to the publication of this book the introduction of behavioral concepts into managerial finance was difficult and largely unsatisfactory because it involved the use of readings taken from journals from many diverse fields with varying levels of readability. This book presents an efficient and consistent presentation of the major psychological difficulties that financial managers face written at a level that is appropriate for upper division finance undergraduates and masters students. In addition the text material has been class tested to assure readability and student interest.