# The Quark and the Jaguar: Adventures in the Simple and the Complex

*Murray Gell-Mann*
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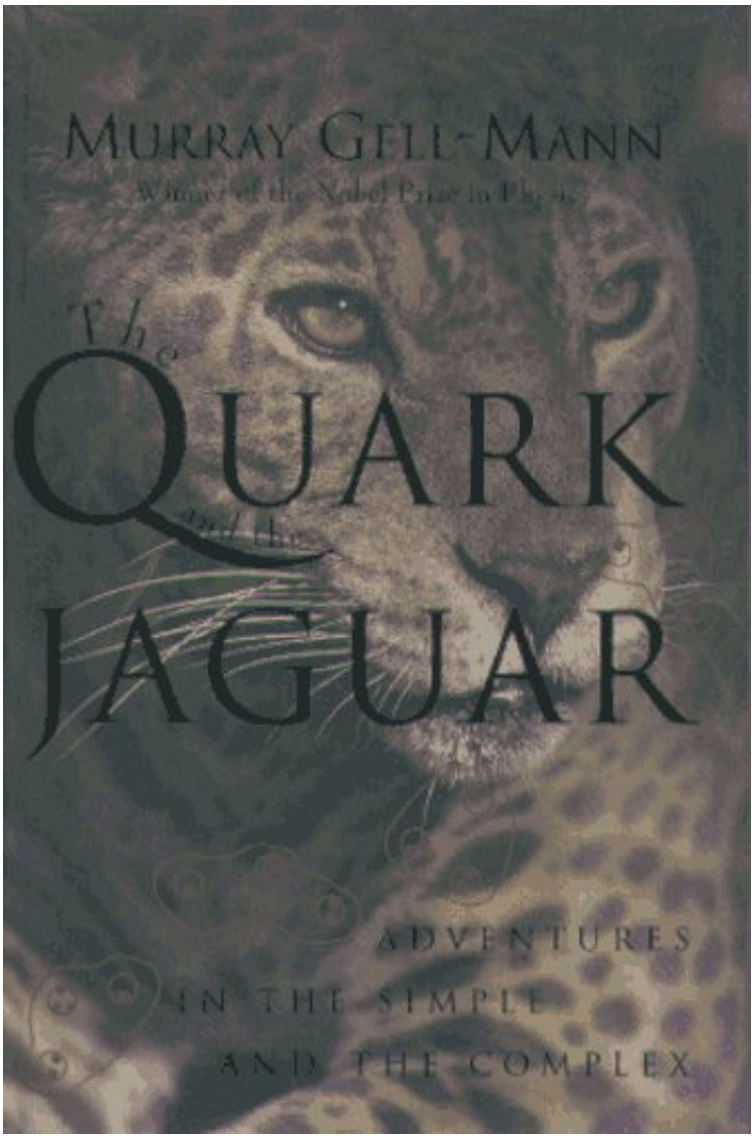




#86469 in Books W H Freeman n Co (Sd) 1994-04Ingredients: Example IngredientsOriginal language:EnglishPDF # 1 9.50 x 6.50 x 1.25l, #File Name: 0716725819392 pagesHardcover with picture of a jaguar, covered with glassine.5x10 inches 391 pages | File size: 43.Mb

**Murray Gell-Mann : The Quark and the Jaguar: Adventures in the Simple and the Complex** before purchasing it in order to gage whether or not it would be worth my time, and all praised The Quark and the Jaguar: Adventures in the Simple and the Complex:

4 of 4 people found the following review helpful. Great Introduction to QuarksBy William CarpenterGell-Mann's The Quark and the Jaguar: Adventures in the Simple and the Complex is a fascinating book. Included is the best (simple) explanation of quarks and sub-atomic particle physics that I have ever read. If you are interested in understand quarks (and the field of quantum mechanics and superstrings), you should read this book by the Nobel Laureate who discovered (and named) them.But the book has a lot more to it. There are chapters on evolution, language acquisition, science, time, superstition, and complex adaptive systems. The author is opinionated and fun to read.0 of 0 people found the following review helpful. An entry into a great scientists mind.By mark seligmanI bought this for a friend; read it when it first came out. Gell-Mann's thinking and writing are able to engage the full awe of the wonders of the world that is first rate science. When you watch a great athlete, you can get the feeling that you can duplicate the feat. Reading this book makes you think that you can have the kind of mind that a great scientist has. Of course, one can't be a great athlete or a Nobel worthy scientist, but this book made me feel that those things are within reach.1 of 1 people found the following review helpful. A very informative read.By Art A.Really liked this book. You don't have to be a scientist to learn a lot from this book. I especially liked the latter chapters where he talks about our responsibility to take care of our planet. This book was written a couple of decades ago but is still relevant.

A Nobel Prize-winning physicist discusses the science of simplicity and complexity, describing the intricate interrelationships that exist in nature between the simple (a quark in an atom) and the complex (the jaguar prowling its jungle environment). 25,000 first printing.

From Publishers WeeklyIn this sweeping synthesis, Nobel Prize-winning physicist Gell-Mann ponders the universe's mix of simplicity and complexity, regularity and randomness, as he ranges from quarks (the fundamental subatomic particles which he discovered) to complex adaptive systems like bacteria developing resistance to antibiotics, mobile robots, jaguars, and people interacting with and learning from their environment. Along with often technical chapters on information theory, time, biological evolution and the workings of the subatomic zoo of particles, Gell-Mann devotes special attention to superstring theory, the first viable candidate in physicists' search for a grand unified theory encompassing all the elementary particles and forces. Stressing the urgent need to control population and to preserve biological and cultural diversity, he advocates a multidisciplinary research agenda geared toward a sustainable future for the human race and the biosphere. $50,000 ad/promo; author tour. Copyright 1994 Reed Business Information, Inc.From Library JournalGell-Mann, a Nobel Prize-winning theoretical physicist and a pioneer in the science of complexity, here examines that important concept, focusing on complex adaptive systems. Such systems are capable of learning and are able to adapt or evolve successfully. The intricate processes used by a child to learn a language, for example, constitute a complex adaptive system, as do the processes used by bacteria to develop resistance to drugs. These systems provide a context or framework for a stimulating discussion of quantum mechanics and the unified theory. Gell-Mann also explores topics such as natural selection, species diversity, and the evolution of human culture in relation to complex adaptive systems. While the topics are technical in nature, Gell-Mann's presentation is clear and will be readily understood by scholars and informed lay readers. Recommended for academic and larger public libraries.Donald G. Frank, Harvard Univ., Cambridge, Mass.Copyright 1994 Reed Business Information, Inc.From Kirkus sProposition: Gell-Mann is a polymath. Polymaths can write about everything with authority. Well almost. The Nobel laureate in physics who coined ``quark'' and developed the ``standard model'' of particle physics continues to explore unified theories at the subatomic level of ``simplicity,'' so to speak. But here his concern is to make the leap to ``complex adaptive systems''--which means you, me, the jaguar, entire societies, and computers that can learn, etc. The result is a wide- ranging book, reflecting a mind that has never ceased to be curious and that has been able to indulge that curiosity through travel and contact with experts from diverse fields. Thus, the book opens with a description of his close encounter with a jaguarundi--a wild cat- -in the Guatemalan rain forest surrounding the Mayan ruins at Tikal. The moment was something of an epiphany: Gell-Mann perceived that out of the simple and uniform emerge the complex and individual--the organism or system with a history, able to interact with the environment. The book plays out this theme in chapters that move from quarks and superstring theory to biological evolution, language development, culture, consciousness, creativity, and the present world ecological dilemmas. Along the way, the author offers introductions to theoretical constructs like measures of complexity, randomness, and depth; and he gives discourses on entropy and the arrow of time. All in all, this is a wonderfully heady experience. It is not particle physics made easy; it is an insight into the mind of an idealist and theorist--and polymath--whose company is a pleasure to share. 