



# Chaos and Harmony: Perspectives on Scientific Revolutions of the 20th Century

By Trinh Xuan Thuan

Download now

Read Online ➔

## Chaos and Harmony: Perspectives on Scientific Revolutions of the 20th Century By Trinh Xuan Thuan

For 300 years, Trinh Xuan Thuan writes, since the time of Isaac Newton, scientists saw reality as a giant clock--a sterile mechanism in which one part acts on another in a deterministic fashion. But the discoveries of the last few decades have changed all that, conjuring up instead a universe brimming with unpredictability, creativity, and chance.

Writing with exceptional grace and clarity, Thuan vividly describes these important scientific discoveries, intriguing new theories about chaos, gravity, strange attractors, fractals, symmetry, superstrings, and the strangeness of atoms. Equally important, he reveals how these discoveries have shaped our view of the universe--for instance, how quantum mechanics brought indeterminism to the subatomic universe. Thuan deftly describes quantum mechanics, discusses its relationship to the theories of relativity (which deal inability to accept it. Indeed, throughout *Chaos and Harmony*, he makes clear as never before the mind-bending ideas of modern physics, such as the effect of gravity on time (it slows it down), the impossibility of crossing the speed-of-light barrier (it would actually reverse time), the role of fractals as "the language of nature," and the unreasonable effectiveness of mathematics in understanding the universe. From the subatomic world to the vast realm of quasars and galaxies, from the nature of mathematics to the fractal characteristics of the human circulatory system, Trinh Xuan Thuan takes us on a breathtaking tour of the universe. With striking examples and clear, plain language, he shows how science has actually restored mystery to the world around us--a world of symmetry *and* chaos, contingency *and* creativity.

↓ [Download Chaos and Harmony: Perspectives on Scientific Revo ...pdf](#)

📖 [Read Online Chaos and Harmony: Perspectives on Scientific Re ...pdf](#)

# Chaos and Harmony: Perspectives on Scientific Revolutions of the 20th Century

By Trinh Xuan Thuan

## Chaos and Harmony: Perspectives on Scientific Revolutions of the 20th Century By Trinh Xuan Thuan

For 300 years, Trinh Xuan Thuan writes, since the time of Isaac Newton, scientists saw reality as a giant clock--a sterile mechanism in which one part acts on another in a deterministic fashion. But the discoveries of the last few decades have changed all that, conjuring up instead a universe brimming with unpredictability, creativity, and chance.

Writing with exceptional grace and clarity, Thuan vividly describes these important scientific discoveries, intriguing new theories about chaos, gravity, strange attractors, fractals, symmetry, superstrings, and the strangeness of atoms. Equally important, he reveals how these discoveries have shaped our view of the universe--for instance, how quantum mechanics brought indeterminism to the subatomic universe. Thuan deftly describes quantum mechanics, discusses its relationship to the theories of relativity (which deal in inability to accept it. Indeed, throughout *Chaos and Harmony*, he makes clear as never before the mind-bending ideas of modern physics, such as the effect of gravity on time (it slows it down), the impossibility of crossing the speed-of-light barrier (it would actually reverse time), the role of fractals as "the language of nature," and the unreasonable effectiveness of mathematics in understanding the universe.

From the subatomic world to the vast realm of quasars and galaxies, from the nature of mathematics to the fractal characteristics of the human circulatory system, Trinh Xuan Thuan takes us on a breathtaking tour of the universe. With striking examples and clear, plain language, he shows how science has actually restored mystery to the world around us--a world of symmetry *and* chaos, contingency *and* creativity.

## Chaos and Harmony: Perspectives on Scientific Revolutions of the 20th Century By Trinh Xuan Thuan Bibliography

- Sales Rank: #1246102 in Books
- Published on: 2000-10-10
- Original language: French
- Number of items: 1
- Dimensions: 9.10" h x 1.40" w x 6.10" l,
- Binding: Hardcover
- 366 pages

 [Download Chaos and Harmony: Perspectives on Scientific Revo ...pdf](#)

 [Read Online Chaos and Harmony: Perspectives on Scientific Re ...pdf](#)

## Download and Read Free Online Chaos and Harmony: Perspectives on Scientific Revolutions of the 20th Century By Trinh Xuan Thuan

---

### Editorial Review

#### Amazon.com Review

Trinh Xuan Thuan, whose books of popular science are bestsellers in France, is an astronomer by training. In *Chaos and Harmony*, he reaches well beyond the immediate bounds of that field to consider the explosion of scientific knowledge of all kinds in the 20th century, and he muses on the very nature of scientific inquiry.

The most important aspect of a theory of science, in Trinh's view, is not that it be verifiable experimentally, but that it "allow beauty and truth to emerge into one." General relativity is a hallmark in this regard.

Unendingly rich in insight and implication, as well as "inevitable, simple, and congruent with the whole," it has enabled cosmologists to range across the whole of time and to conceive of such phenomena as black holes and curved space. Trinh applies his beauty-and-truth criterion to various problems, such as where the moon--the largest known satellite in the solar system--came from, how chaos theory can properly be applied to economic modeling, and why nature seems to favor symmetry. Along the way, Trinh pauses to remark on episodes in the history of science and to make gentle but provocative asides (for example, gainsaying Einstein to insist that God does indeed play dice with the universe). Elegant and lively, Trinh's book is a fine survey of contemporary scientific ideas and a look ahead at science's ongoing quest for a unifying Theory of Everything. --Gregory McNamee

#### Review

"Thuan's elegant prose vividly captures the interplay of chance and necessity that shapes our universe. An astonishing array of phenomena are woven together in a coherent way. Thuan conveys an appreciation of the complexity and beauty of our cosmos, and the excitement of our ability to understand it."--J. Richard Gott, III, Professor of Astrophysics, Princeton University

#### Language Notes

Text: English (translation)

Original Language: French

### Users Review

#### From reader reviews:

#### Maureen Daniels:

Now a day those who Living in the era where everything reachable by interact with the internet and the resources within it can be true or not need people to be aware of each details they get. How people have to be smart in obtaining any information nowadays? Of course the solution is reading a book. Examining a book can help people out of this uncertainty Information especially this Chaos and Harmony: Perspectives on Scientific Revolutions of the 20th Century book because this book offers you rich information and knowledge. Of course the info in this book hundred pct guarantees there is no doubt in it you probably know this.

**Nicolas Jones:**

Nowadays reading books be than want or need but also turn into a life style. This reading routine give you lot of advantages. Associate programs you got of course the knowledge the actual information inside the book this improve your knowledge and information. The details you get based on what kind of book you read, if you want drive more knowledge just go with education books but if you want feel happy read one having theme for entertaining for instance comic or novel. The particular Chaos and Harmony: Perspectives on Scientific Revolutions of the 20th Century is kind of e-book which is giving the reader unstable experience.

**Michelle Shaw:**

Reading a guide tends to be new life style in this era globalization. With reading through you can get a lot of information that can give you benefit in your life. Together with book everyone in this world can easily share their idea. Ebooks can also inspire a lot of people. A lot of author can inspire their reader with their story as well as their experience. Not only the story that share in the books. But also they write about the knowledge about something that you need instance. How to get the good score toefl, or how to teach your young ones, there are many kinds of book that exist now. The authors these days always try to improve their talent in writing, they also doing some analysis before they write on their book. One of them is this Chaos and Harmony: Perspectives on Scientific Revolutions of the 20th Century.

**Agatha Draper:**

Reserve is one of source of information. We can add our know-how from it. Not only for students but additionally native or citizen have to have book to know the up-date information of year in order to year. As we know those textbooks have many advantages. Beside most of us add our knowledge, can bring us to around the world. From the book Chaos and Harmony: Perspectives on Scientific Revolutions of the 20th Century we can acquire more advantage. Don't that you be creative people? Being creative person must like to read a book. Simply choose the best book that appropriate with your aim. Don't be doubt to change your life with that book Chaos and Harmony: Perspectives on Scientific Revolutions of the 20th Century. You can more appealing than now.

**Download and Read Online Chaos and Harmony: Perspectives on Scientific Revolutions of the 20th Century By Trinh Xuan Thuan #ZX1B5ITPMQU**

# **Read Chaos and Harmony: Perspectives on Scientific Revolutions of the 20th Century By Trinh Xuan Thuan for online ebook**

Chaos and Harmony: Perspectives on Scientific Revolutions of the 20th Century By Trinh Xuan Thuan Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Chaos and Harmony: Perspectives on Scientific Revolutions of the 20th Century By Trinh Xuan Thuan books to read online.

## **Online Chaos and Harmony: Perspectives on Scientific Revolutions of the 20th Century By Trinh Xuan Thuan ebook PDF download**

**Chaos and Harmony: Perspectives on Scientific Revolutions of the 20th Century By Trinh Xuan Thuan Doc**

**Chaos and Harmony: Perspectives on Scientific Revolutions of the 20th Century By Trinh Xuan Thuan Mobipocket**

**Chaos and Harmony: Perspectives on Scientific Revolutions of the 20th Century By Trinh Xuan Thuan EPub**

**ZX1B5ITPMQU: Chaos and Harmony: Perspectives on Scientific Revolutions of the 20th Century By Trinh Xuan Thuan**