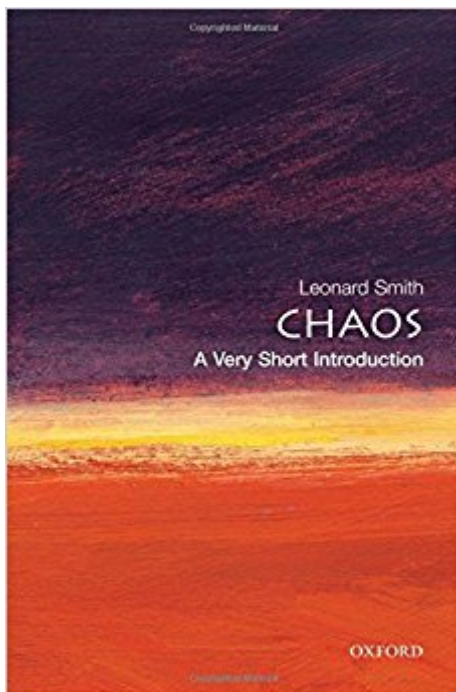The book was found

Chaos: A Very Short Introduction

Leonard Smith
CHAOS
A Very Short Introduction

OXFORD

Synopsis

Chaos exists in systems all around us. Even the simplest system can be subject to chaos, denying us accurate predictions of its behavior, and sometimes giving rise to astonishing structures of large-scale order. Here, Leonard Smith shows that we all have an intuitive understanding of chaotic systems. He uses accessible math and physics to explain Chaos Theory, and points to numerous examples in philosophy and literature that illuminate the problems. This book provides a complete understanding of chaotic dynamics, using examples from mathematics, physics, philosophy, and the real world, with an explanation of why chaos is important and how it differs from the idea of randomness. The author's real life applications include the weather forecast, a pendulum, a coin toss, mass transit, politics, and the role of chaos in gambling and the stock market. Chaos represents a prime opportunity for mathematical lay people to finally get a clear understanding of this fascinating concept.About the Series: Combining authority with wit, accessibility, and style, Very Short Introductions offer an introduction to some of life's most interesting topics. Written by experts for the newcomer, they demonstrate the finest contemporary thinking about the central problems and issues in hundreds of key topics, from philosophy to Freud, quantum theory to Islam.

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Customer Reviews

"Leonard Smith's Chaos (part of the Oxford Very Short Introduction series) will give you the clearest (but not too painful idea) of the maths involved... There's a lot packed into this little book, and for such a technical exploration it's surprisingly readable and enjoyable."-- popularscience.co.uk

Leonard Smith is a member of the Mathematics Faculty in Oxford and lectues on nonlinear

dynamical systems and chaos.

I enjoy this short introduction series. I have read several books from this series and have found that it is a good way to learn about topics I have always wanted to learn about but never found the time to study in depth. Nevertheless, I was a little disappointed with this book.I have heard about chaos theory for years and 'the butterfly effect,' that chaos theory invokes has almost become clichÃƒÂ©. Yet, I didn't understand what chaos theory was. That is why I picked up this book. Now, after reading it, if I understand rightly, it seems like chaos is an apparent lack of order within a system and chaos theory is an attempt to measure and model uncertainty within particular systems. Even though there is apparent disorder there is an underlying order in which small events can lead to complex results, thus the famous 'butterfly effect.' of chaos theory. The theory actually arose from attempts to understand and model weather patterns, and to predict future weather. It was out of the need to understand uncertainty in weather that the science grew.That was about as far as I got in my understanding of the ideas contained within. The author claimed readers didn't need to be mathematicians to understand what he was saying about chaos. Sure, he never threw any formulas at me. Yet, much of the concepts and jargon was derived from math. I feel to really appreciate what he was saying about chaos theory one needs a solid background in math. I found some of the jargon and math ideas intimidating and didn't feel like I was comprehending all of the concepts that the author was trying to communicate.Again, could have the author communicated the concepts better, or does the reader need the background to understand what the author was saying?I will leave that up to other readers to decide. Maybe they will appreciate the thoughts contained within better than I did. Yet, regardless, I recommend books from this series. It is a good way to quickly get up to speed on intellectual topics in vogue. I hope that the editors continue to produce new books in this series.

This book is more than just an introduction to chaos. it is a deep dive in the question of uncertainty, noise and modeling accuracy, including mathematical, scientific, statistical and philosophical points of view. it offer a deep analysis and great food for thought. while the first part of the book is ready to follow down to the details, the second part becomes increasingly more complex, requiring a deeper know-how to be correctly comprehended. But at the dentist the goal of the book was just to be a short introduction.

I found this in an interesting, but difficult read. That is not to say it was not a very helpful

introduction, but this is a very complex and potentially daunting subject. This 176 page read serves as a very good springboard to a whole lot more reading! Unfortunately, I can see myself doing a lot more studying in this area; but that's the fun of it! I must admit that I enjoy learning about math, science, and philosophy; and this has plenty of all those things! Pardon me, but my "geek" is showing! How embarrassing!I would recommend this book to those who enjoy science or math, but beware, this can easily lead to much heavier reading. Consider yourself warned!

This book starts out promising but, as one goes along, it drifts farther and farther from what an introduction to chaos should be.In particular, the book turns out to be largely a discussion of modeling and forecasting, with some emphasis on the relevant implications of chaos. Moreover, most of the examples and applications relate to weather and climate, which becomes boring after a while (especially considering the abundance of other options). Smith's bio reveals that this is exactly his specialty, so the book appears to be heavily shaped by his background and interests, rather than what's best for a general audience. As a result, many standard and important topics in chaos theory recieve little or no mention, and I think the book fails as a proper introduction to chaos.A further problem is that much of Smith's discussion is muddled, especially in the later chapters. It's as though he wants to probe deeply, but can't take time to really spell things out, so he winds up being unclear. This lack of clarity is exacerbated by his bending over backwards to avoid writing out even the simplest equations, which is cumbersome and annoying, not to mention out of place given Smith's efforts to present some fairly sophisticated material.Considering all of this, I can recommend the book only to people who are particularly interested in modeling, forecasting, and the relevant implications of chaos, especially as this relates to weather and climate. In this context, Smith's discussion of the differences between mathematical, physical, statistical, and philosophical perspectives is particularly insightful and useful.However, I can't recommend the book for a general audience, and I would definitely recommend against it as a first book on chaos. It's simply too incomplete and unbalanced for that purpose.

I understand this series is focused on providing an introduction to virtually anyone, but honestly, I doubt many people are reading a book about chaos who aren't at least a little well versed in math. If you already have a basic familiarity with chaos, this is not the novel for you - if you are completely new to the idea and/or a first year college student then go for it.

New insights, helpful for people whose job is forecasting.

this topic is too interesting, but it can be easily messed up by bad explanationsthis book is an excellent introduction, using clear real world examples and relating them to hardcore mathematical principles beautifully

An excellent introduction for the informed reader. It is not exhaustive, but is a good primer before digging deeper into the subject.

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