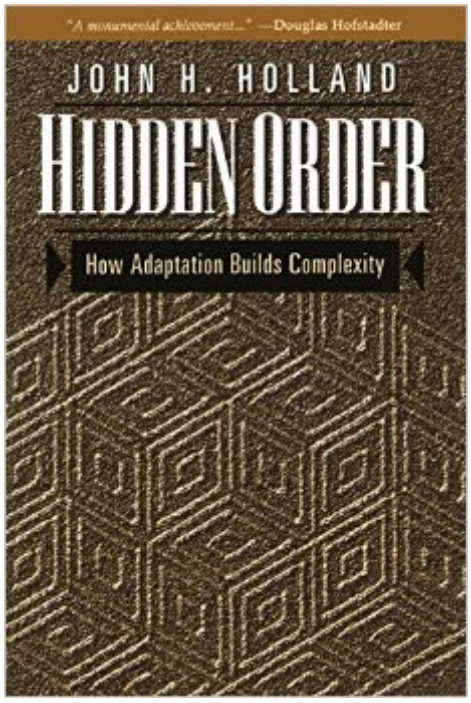
Hidden Order: How Adaptation Builds Complexity (Helix Books)



Synopsis

Explains how scientists who study complexity are convinced that certain constant processes are at work in all kinds of unrelated complex systems.

Book Information

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Customer Reviews

Although the order in "Hidden Order" may seem hidden before you read this book, it won't by the time you finish it.Many books on fashionable current topics like complexity theory and complex adaptive systems are very lively in expressing the potentials of the field. This one isn't. Most books in these fields are either way over the heads of non-mathematicians, or just recount the story of the origin of the field.This one is extremely modest and understated, but has the special merit of explaining the basic principles of complex adaptive systems in a way that any attentive reader can understand completely. It doesn't dwell on non-linearity, it just mentions it as one of the important principles that characterizes complex systems.This stands out as not only an exceptionally clear description of the basic principles with simple understandable examples, but also a surprisingly dull read if you're used to popular accounts rather than texts. Going from the popular accounts of Chaos and Complexity Theory to this is a little like spending months reading Dr. Seuss' charmingly excessive rhymes, and then going back to "See Spot Run."So it would be easy to miss what is so great about this book, that it actually makes the underlying principles of complex adaptive systems accessible to virtually anyone. Without the fanfare, without the hype, without the flashy graphics, Holland describes step by clear step how agents interacting with each other in certain ways that reflect 7 general principles end up organizing themselves into systems with their own properties.

There are several reasons why you might be reading reviews of Hidden Order: (1) perhaps you're wondering whether to get a book on complexity; or (2) perhaps you've decided that you want such a book, and are wondering whether this is the one for you. In either case, it's probably best to start by relating the way in which Holland introduces his subject. He does so by remarking on the coherence of systems such as immune systems, ecosystems, and cities, despite the diversity of the agents that inhabit them. He refers to such systems as complex adaptive systems, or cas. Holland's primary objective is to present, to the general reader, theory to "separate fundamental characteristics [general principles of cas] from fascinating idiosyncrasies and incidental features [of particular cas]" (p. 5). This point is crucial if you're reading this review for reason (2) above, since it distinguishes Hidden Order from several other popular accounts of complexity. Holland's book is inter-disciplinary, and so contrasts with books such as Kauffman's At Home in the Universe, the main focus of which is on biology. If you're looking for an account of complexity located within a specific discipline, then, Hidden Order is not for you. Neither is for you if, at the same time as reading about complexity theory, you'd like to read about some of the people responsible for the theory. If you'd like biography mixed with your complexity, I'd advise you to try Waldrop's Complexity. Waldrop tells the story, not only of complexity theory, but also of the Sante Fe Institute and some of the people associated with it, including Holland and Kauffman. Holland describes cas very clearly, making excellent use of examples and figures.

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