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Description

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Emergence: The Connected Lives of Ants, Brains, Cities, and Software

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by Steven Johnson

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Very occasionally, a scientist comes along who can capture the excitement of scientific theory and write about it in ways that make the reader feel smart. Carl Sagan could do it, and Steven Johnson also has the gift. Newsweek Magazine listed Johnson, author of “Being Digital” and “The Tipping Point,” as one the “50 people who matter most on the Internet.” “Being Digital” is a book about emergence theory, the concept of bottom-up self-organization and adaptation which allows simple elements to come together to conduct intelligent, higher-level behavior—a whole that is greater than the sum of its parts. Historically, this organizational and adaptive behavior pattern has happened organically, without hierarchy or conscious planning, and has resulted in elegant solutions to problems. In today’s world of technology, artificial emergence is replacing organic emergence, but with similar results. Anyone who uses the Internet, whether for looking up information, making purchases, or communicating with others, is helping to shape the Internet—helping it to emerge. Amazingly, the book is hard to put down, thanks in large part to the broad scope that the author uses to examine emergence theory. Johnson sees emergence at work everywhere—from the cells of the human body to silk guilds in 12th Century Florence, urban development in the great cities of the world and on to software design and usage patterns on the Internet. Johnson makes it all interesting, whether he is talking about the behavior of slime mold, ants, or humans. Anyone knows an ant can’t move a rubber tree plant, but ants, without direction, rules, or leadership, apparently with only high hopes and a sort of collective intelligence, can organize into complex colonies that effectively adapt to changing conditions in their environment. Much remains to be seen regarding whether or not the Internet will also emerge through the collective intelligence of its users. The book is lucid, informative, entertaining, and highly recommended.
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