



Emergence and Embodiment: New Essays on Second-Order Systems Theory (Science and Cultural Theory)

From Duke University Press Books

 Download

 Read Online

Emergence and Embodiment: New Essays on Second-Order Systems Theory (Science and Cultural Theory) From Duke University Press Books

Emerging in the 1940s, the first cybernetics—the study of communication and control systems—was mainstreamed under the names artificial intelligence and computer science and taken up by the social sciences, the humanities, and the creative arts. In *Emergence and Embodiment*, Bruce Clarke and Mark B. N. Hansen focus on cybernetic developments that stem from the second-order turn in the 1970s, when the cyberneticist Heinz von Foerster catalyzed new thinking about the cognitive implications of self-referential systems. The crucial shift he inspired was from first-order cybernetics' attention to homeostasis as a mode of autonomous self-regulation in mechanical and informatic systems, to second-order concepts of self-organization and autopoiesis in embodied and metabiotic systems. The collection opens with an interview with von Foerster and then traces the lines of neocybernetic thought that have followed from his work.

In response to the apparent dissolution of boundaries at work in the contemporary technosciences of emergence, neocybernetics observes that cognitive systems are operationally bounded, semi-autonomous entities coupled with their environments and other systems. Second-order systems theory stresses the recursive complexities of observation, mediation, and communication. Focused on the neocybernetic contributions of von Foerster, Francisco Varela, and Niklas Luhmann, this collection advances theoretical debates about the cultural, philosophical, and literary uses of their ideas. In addition to the interview with von Foerster, *Emergence and Embodiment* includes essays by Varela and Luhmann. It engages with Humberto Maturana's and Varela's creation of the concept of autopoiesis, Varela's later work on neurophenomenology, and Luhmann's adaptations of autopoiesis to social systems theory. Taken together, these essays illuminate the shared commitments uniting the broader discourse of neocybernetics.

Contributors. Linda Brigham, Bruce Clarke, Mark B. N. Hansen, Edgar Landgraf, Ira Livingston, Niklas Luhmann, Hans-Georg Moeller, John Protevi, Michael Schiltz, Evan Thompson, Francisco J. Varela, Cary Wolfe

 [Download Emergence and Embodiment: New Essays on Second-Ord
...pdf](#)

 [Read Online Emergence and Embodiment: New Essays on Second-O
...pdf](#)

Emergence and Embodiment: New Essays on Second-Order Systems Theory (Science and Cultural Theory)

From Duke University Press Books

Emergence and Embodiment: New Essays on Second-Order Systems Theory (Science and Cultural Theory) From Duke University Press Books

Emerging in the 1940s, the first cybernetics—the study of communication and control systems—was mainstreamed under the names artificial intelligence and computer science and taken up by the social sciences, the humanities, and the creative arts. In *Emergence and Embodiment*, Bruce Clarke and Mark B. N. Hansen focus on cybernetic developments that stem from the second-order turn in the 1970s, when the cyberneticist Heinz von Foerster catalyzed new thinking about the cognitive implications of self-referential systems. The crucial shift he inspired was from first-order cybernetics' attention to homeostasis as a mode of autonomous self-regulation in mechanical and informatic systems, to second-order concepts of self-organization and autopoiesis in embodied and metabiotic systems. The collection opens with an interview with von Foerster and then traces the lines of neocybernetic thought that have followed from his work.

In response to the apparent dissolution of boundaries at work in the contemporary technosciences of emergence, neocybernetics observes that cognitive systems are operationally bounded, semi-autonomous entities coupled with their environments and other systems. Second-order systems theory stresses the recursive complexities of observation, mediation, and communication. Focused on the neocybernetic contributions of von Foerster, Francisco Varela, and Niklas Luhmann, this collection advances theoretical debates about the cultural, philosophical, and literary uses of their ideas. In addition to the interview with von Foerster, *Emergence and Embodiment* includes essays by Varela and Luhmann. It engages with Humberto Maturana's and Varela's creation of the concept of autopoiesis, Varela's later work on neurophenomenology, and Luhmann's adaptations of autopoiesis to social systems theory. Taken together, these essays illuminate the shared commitments uniting the broader discourse of neocybernetics.

Contributors. Linda Brigham, Bruce Clarke, Mark B. N. Hansen, Edgar Landgraf, Ira Livingston, Niklas Luhmann, Hans-Georg Moeller, John Protevi, Michael Schiltz, Evan Thompson, Francisco J. Varela, Cary Wolfe

Emergence and Embodiment: New Essays on Second-Order Systems Theory (Science and Cultural Theory) From Duke University Press Books Bibliography

- Sales Rank: #848576 in Books
- Published on: 2009-10-30
- Original language: English
- Number of items: 1
- Dimensions: 9.10" h x .70" w x 6.10" l, .95 pounds
- Binding: Paperback
- 296 pages

 [Download Emergence and Embodiment: New Essays on Second-Ord ...pdf](#)

 [Read Online Emergence and Embodiment: New Essays on Second-O ...pdf](#)

Download and Read Free Online Emergence and Embodiment: New Essays on Second-Order Systems Theory (Science and Cultural Theory) From Duke University Press Books

Editorial Review

Review

“Emergence and Embodiment is an outstanding collection of sharp, well-crafted essays by prominent authors in the field of science and literature studies, all of whom have made major contributions to discussions of cybernetics, poststructuralism, and posthumanism. Here they demonstrate the viability of neocybernetics as a resource for resolving the dilemmas of the posthuman raised by newer fields of artificial life, complexity theory, and cellular automata.”—**Tim Lenoir**, Kimberly J. Jenkins Chair of New Technologies and Society, Duke University

“Emergence and Embodiment provides a useful overview and detailed analyses of the complex field of neocybernetics and its major thinkers. It indicates the significance and breadth of interdisciplinary work being done in the wake of Humberto Maturana, Francisco Varela, Heinz von Foerster, and George Spencer-Brown, even as it makes demands on its readers to rethink some of their assumptions about the last forty years of ‘theory’ in the humanities and the interdisciplinary social sciences.”—**Robert Markley**, author of *Dying Planet: Mars in Science and the Imagination*

From the Publisher

“Emergence and Embodiment is an outstanding collection of sharp, well-crafted essays by prominent authors in the field of science and literature studies, all of whom have made major contributions to discussions of cybernetics, poststructuralism, and posthumanism. Here they demonstrate the viability of neocybernetics as a resource for resolving the dilemmas of the posthuman raised by newer fields of artificial life, complexity theory, and cellular automata.”--**Tim Lenoir**, Kimberly J. Jenkins Chair of New Technologies and Society, Duke University

From the Back Cover

““Emergence and Embodiment” provides a useful overview and detailed analyses of the complex field of neocybernetics and its major thinkers. It indicates the significance and breadth of interdisciplinary work being done in the wake of Humberto Maturana, Francisco Varela, Heinz von Foerster, and George Spencer-Brown, even as it makes demands on its readers to rethink some of their assumptions about the last forty years of ‘theory’ in the humanities and the interdisciplinary social sciences.”--Robert Markley, author of *“Dying Planet: Mars in Science and the Imagination”*

Users Review

From reader reviews:

Anna Brooks:

Book is definitely written, printed, or descriptive for everything. You can realize everything you want by a book. Book has a different type. To be sure that book is important thing to bring us around the world. Beside that you can your reading expertise was fluently. A publication Emergence and Embodiment: New Essays on Second-Order Systems Theory (Science and Cultural Theory) will make you to possibly be smarter. You can feel a lot more confidence if you can know about almost everything. But some of you think this open or reading a new book make you bored. It's not make you fun. Why they could be thought like that? Have you

searching for best book or appropriate book with you?

Chris Barrentine:

Reading a book tends to be new life style in this particular era globalization. With studying you can get a lot of information that could give you benefit in your life. Having book everyone in this world can share their idea. Textbooks can also inspire a lot of people. A lot of author can inspire their very own reader with their story or perhaps their experience. Not only situation that share in the publications. But also they write about the information about something that you need instance. How to get the good score toefl, or how to teach children, there are many kinds of book which exist now. The authors on this planet always try to improve their proficiency in writing, they also doing some research before they write on their book. One of them is this Emergence and Embodiment: New Essays on Second-Order Systems Theory (Science and Cultural Theory).

Joseph Vest:

The guide with title Emergence and Embodiment: New Essays on Second-Order Systems Theory (Science and Cultural Theory) possesses a lot of information that you can study it. You can get a lot of advantage after read this book. This book exist new expertise the information that exist in this publication represented the condition of the world today. That is important to yo7u to learn how the improvement of the world. This book will bring you with new era of the the positive effect. You can read the e-book on your own smart phone, so you can read that anywhere you want.

John Gravatt:

Do you like reading a publication? Confuse to looking for your favorite book? Or your book ended up being rare? Why so many query for the book? But any kind of people feel that they enjoy with regard to reading. Some people likes looking at, not only science book but additionally novel and Emergence and Embodiment: New Essays on Second-Order Systems Theory (Science and Cultural Theory) or even others sources were given understanding for you. After you know how the good a book, you feel desire to read more and more. Science book was created for teacher or maybe students especially. Those textbooks are helping them to add their knowledge. In some other case, beside science guide, any other book likes Emergence and Embodiment: New Essays on Second-Order Systems Theory (Science and Cultural Theory) to make your spare time a lot more colorful. Many types of book like this one.

Download and Read Online Emergence and Embodiment: New Essays on Second-Order Systems Theory (Science and Cultural Theory) From Duke University Press Books #2L9DGRNTU48

Read Emergence and Embodiment: New Essays on Second-Order Systems Theory (Science and Cultural Theory) From Duke University Press Books for online ebook

Emergence and Embodiment: New Essays on Second-Order Systems Theory (Science and Cultural Theory) From Duke University Press Books 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 Emergence and Embodiment: New Essays on Second-Order Systems Theory (Science and Cultural Theory) From Duke University Press Books books to read online.

Online Emergence and Embodiment: New Essays on Second-Order Systems Theory (Science and Cultural Theory) From Duke University Press Books ebook PDF download

Emergence and Embodiment: New Essays on Second-Order Systems Theory (Science and Cultural Theory) From Duke University Press Books Doc

Emergence and Embodiment: New Essays on Second-Order Systems Theory (Science and Cultural Theory) From Duke University Press Books Mobipocket

Emergence and Embodiment: New Essays on Second-Order Systems Theory (Science and Cultural Theory) From Duke University Press Books EPub