

# Personal reading list

Guillaume Paumier

September 11, 2016

- Anderson 2013
- Arrow et al. 2000
- Axelrod 1997
- Axelrod and Dawkins 2006
- Benkler 2006
- Benkler 2011
- Bossel 1994
- Moscovici 2003
- Conte and Castelfranchi 1995
- Crossley-Holland 1981
- Epstein 1997
- Gilbert and Troitzsch 2005
- Gitelson and Lisovsky 2002
- Goffman 1959
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- Kraut et al. 2012
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- Linton 1936

- Linton 1955
- Marchi 2005
- McGrath 1984
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- Miller and Page 2007
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- Tufte 1990
- Tufte 1997
- Tufte 2006

## References

**Anderson: Tending the Wild**

**Anderson2013a**

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M. Kat Anderson. *Tending the Wild: Native American Knowledge and the Management of California's Natural Resources*. Reprint edition. University of California Press, Oct. 10, 2013. 558 pp. ISBN: 978-0-520-28043-4.

Abstract: John Muir was an early proponent of a view we still hold today—that much of California was pristine, untouched wilderness before the arrival of Europeans. But as this groundbreaking book demonstrates, what Muir was really seeing when he admired the grand vistas of Yosemite and the gold and purple flowers carpeting the Central Valley were the fertile gardens of the Sierra Miwok and Valley Yokuts Indians, modified and made productive by centuries of harvesting, tilling, sowing, pruning, and burning. Marvelously detailed and beautifully written, *Tending the Wild* is an unparalleled examination of Native American knowledge and uses of California’s natural resources that reshapes our understanding of native cultures and shows how we might begin to use their knowledge in our own conservation efforts. M. Kat Anderson presents a wealth of information on native land management practices gleaned in part from interviews and correspondence with Native Americans who recall what their grandparents told them about how and when areas were burned, which plants were eaten and which were used for basketry, and how plants were tended. The complex picture that emerges from this and other historical source material dispels the hunter-gatherer stereotype long perpetuated in anthropological and historical literature. We come to see California’s indigenous people as active agents of environmental change and stewardship. *Tending the Wild* persuasively argues that this traditional ecological knowledge is essential if we are to successfully meet the challenge of living sustainably.

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**Arrow et al.: Small Groups as Complex Systems**

**Arrow2000**

Holly Arrow, Joseph Edward McGrath, and Jennifer L. Berdahl. *Small Groups as Complex Systems: Formation, Coordination, Development, and Adaptation*. 1 edition. Thousand Oaks, Calif: SAGE Publications, Inc, Mar. 21, 2000. 344 pp. ISBN: 978-0-8039-7230-8.

Abstract: What are groups? How do they behave? Arrow, McGrath, and Berdahl answer these questions by developing a general theory of small groups as complex systems. Basing their theory on concepts distilled from general systems theory, dynamical systems theory, and complexity and chaos theory, they explore groups as adaptive, dynamic systems that are driven by interactions among group members as well as between the group and its embedding contexts. In addition, they consider not only the group’s members and their distribution of attributes, but also the group’s tasks and technology in order to understand how those members, tasks, and tools are intertwined, coordinated, and adjusted. Throughout the book, the authors focus our attention on relationships among people, tools, and tasks that are activated by a combination of individual and collective purposes and goals that change and evolve as the group interacts over time.

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**Axelrod: The Complexity of Cooperation**

**Axelrod1997**

Robert Axelrod. *The Complexity of Cooperation: Agent-Based Models of Com-*

*petition and Collaboration*. Princeton, N.J: Princeton University Press, Aug. 18, 1997. 248 pp. ISBN: 978-0-691-01567-5.

Abstract: Robert Axelrod is widely known for his groundbreaking work in game theory and complexity theory. He is a leader in applying computer modeling to social science problems. His book *The Evolution of Cooperation* has been hailed as a seminal contribution and has been translated into eight languages since its initial publication. *The Complexity of Cooperation* is a sequel to that landmark book. It collects seven essays, originally published in a broad range of journals, and adds an extensive new introduction to the collection, along with new prefaces to each essay and a useful new appendix of additional resources. Written in Axelrod's acclaimed, accessible style, this collection serves as an introductory text on complexity theory and computer modeling in the social sciences and as an overview of the current state of the art in the field. The articles move beyond the basic paradigm of the Prisoner's Dilemma to study a rich set of issues, including how to cope with errors in perception or implementation, how norms emerge, and how new political actors and regions of shared culture can develop. They use the shared methodology of agent-based modeling, a powerful technique that specifies the rules of interaction between individuals and uses computer simulation to discover emergent properties of the social system. *The Complexity of Cooperation* is essential reading for all social scientists who are interested in issues of cooperation and complexity.

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**Axelrod et al.: The Evolution of Cooperation****Axelrod2006**

Robert Axelrod and Richard Dawkins. *The Evolution of Cooperation: Revised Edition*. Revised edition. New York: Basic Books, Dec. 5, 2006. 264 pp. ISBN: 978-0-465-00564-2.

Abstract: *The Evolution of Cooperation* provides valuable insights into the age-old question of whether unforced cooperation is ever possible. Widely praised and much-discussed, this classic book explores how cooperation can emerge in a world of self-seeking egoists-whether superpowers, businesses, or individuals-when there is no central authority to police their actions. The problem of cooperation is central to many different fields. Robert Axelrod recounts the famous computer tournaments in which the "cooperative" program Tit for Tat recorded its stunning victories, explains its application to a broad spectrum of subjects, and suggests how readers can both apply cooperative principles to their own lives and teach cooperative principles to others.

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**Benkler: The Wealth of Networks****Benkler2006**

Yochai Benkler. *The Wealth of Networks: How Social Production Transforms Markets and Freedom*. First Edition edition. New Haven Conn.: Yale University Press, May 16, 2006. 528 pp. ISBN: 978-0-300-11056-2.

Abstract: With the radical changes in information production that the Internet has introduced, we stand at an important moment of transition, says Yochai

Benkler in this thought-provoking book. The phenomenon he describes as social production is reshaping markets, while at the same time offering new opportunities to enhance individual freedom, cultural diversity, political discourse, and justice. But these results are by no means inevitable: a systematic campaign to protect the entrenched industrial information economy of the last century threatens the promise of today's emerging networked information environment. In this comprehensive social theory of the Internet and the networked information economy, Benkler describes how patterns of information, knowledge, and cultural production are changing—and shows that the way information and knowledge are made available can either limit or enlarge the ways people can create and express themselves. He describes the range of legal and policy choices that confront us and maintains that there is much to be gained—or lost—by the decisions we make today.

**Benkler: The Penguin and the Leviathan**

**Benkler 2011**

Yochai Benkler. *The Penguin and the Leviathan: How Cooperation Triumphs over Self-Interest*. 1 edition. New York: Crown Business, Aug. 9, 2011. 272 pp. ISBN: 978-0-385-52576-3.

Abstract: What do Wikipedia, Zip Car's business model, Barack Obama's presidential campaign, and a small group of lobster fishermen have in common? They all show the power and promise of human cooperation in transforming our businesses, our government, and our society at large. Because today, when the costs of collaborating are lower than ever before, there are no limits to what we can achieve by working together. For centuries, we as a society have operated according to a very unflattering view of human nature: that, humans are universally and inherently selfish creatures. As a result, our most deeply entrenched social structures – our top-down business models, our punitive legal systems, our market-based approaches to everything from education reform to environmental regulation - have been built on the premise that humans are driven only by self interest, programmed to respond only to the invisible hand of the free markets or the iron fist of a controlling government. In the last decade, however, this fallacy has finally begun to unravel, as hundreds of studies conducted across dozens of cultures have found that most people will act far more cooperatively than previously believed. Here, Harvard University Professor Yochai Benkler draws on cutting-edge findings from neuroscience, economics, sociology, evolutionary biology, political science, and a wealth of real world examples to debunk this long-held myth and reveal how we can harness the power of human cooperation to improve business processes, design smarter technology, reform our economic systems, maximize volunteer contributions to science, reduce crime, improve the efficacy of civic movements, and more. For example, he describes how:

- By building on countless voluntary contributions, open-source software communities have developed some of the most important infrastructure on which the World Wide Web runs
- Experiments with pay-as-you-wish pricing in the music industry reveal that fans will voluntarily pay far

more for their favorite music than economic models would ever predict • Many self-regulating communities, from the lobster fishermen of Maine to farmers in Spain, live within self-regulating system for sharing and allocating communal resources • Despite recent setbacks, Toyota's collaborative shop-floor, supply chain, and management structure contributed to its meteoric rise above its American counterparts for over a quarter century. • Police precincts across the nation have managed to reduce crime in tough neighborhoods through collaborative, trust-based, community partnerships. A must-read for anyone who wants to understand the dynamics of cooperation in 21st century life, *The Penguin and the Leviathan* not only challenges so many of the ways in which we live and work, it forces us to rethink our entire view of human nature.

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**Bossel: Modeling and Simulation**

**Bossel1994**

Hartmut Bossel. *Modeling and Simulation*. 1 edition. Wellesley, MA : Wiesbaden, Germany: A K Peters/CRC Press, June 15, 1994. 504 pp. ISBN: 978-1-56881-033-1.

Abstract: Models and simulations of all kinds are tools for dealing with reality. Humans have always used mental models to better understand the world around them: to make plans, to consider different possibilities, to share ideas with others, to test changes, and to determine whether or not the development of an idea is feasible. The book *Modeling and Simulation* uses exactly the same approach except that the traditional mental model is translated into a computer model, and the simulations of alternative outcomes under varying conditions are programmed on the computer. The advantage of this method is that the computer can track the multitude of implications and consequences in complex relationships much more quickly and reliably than the human mind. This unique interdisciplinary text not only provides a self contained and complete guide to the methods and mathematical background of modeling and simulation software (SIMPAS) and a collection of 50 systems models on an accompanying diskette. Students from fields as diverse as ecology and economics will find this clear interactive package an instructive and engaging guide.

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**Moscovici: Psychologie sociale**

**Moscovici2003**

Serge Moscovici. *Psychologie sociale*. Paris: Presses Universitaires de France - PUF, Oct. 10, 2003. 640 pp. ISBN: 978-2-13-053917-9.

Abstract: • " La psychologie sociale se trouve à la base d'un grand nombre de pratiques (sondages, groupes de formation et de créativité, publicité) et de phénomènes allant de l'innovation aux communications de masse, du racisme aux représentations sociales. • Publié pour la première fois en poche, cet ouvrage s'adresse aux étudiants en psychologie, sociologie et sciences de l'éducation, ainsi qu'à ceux qui suivent un enseignement en sciences politiques, en économie, philosophie, ou une formation de travailleur social. Il intéressera également un plus large public soucieux de comprendre les implications de la psychologie à

l'échelle de la société• Destiné à servir de cours introductif à la psychologie sociale, ce manuel explore les thèmes majeurs de cette discipline, en dresse une brève histoire et établit un bilan des conclusions auxquelles ont abouti les recherches contemporaines.

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**Conte et al.: Cognitive And Social Action**

**Conte1995**

Rosaria Conte and Christiano Castelfranchi. *Cognitive And Social Action*. London: Garland Science, July 1, 1995. 224 pp. ISBN: 978-1-85728-186-6.

Abstract: This monograph addresses the worlds of social science theory and artificial intelligence AI. The book examines the interaction of individual cognitive factors and social influence on human action and discusses the implications for developments in artificial intelligence.; This book is intended for graduate and research level artificial intelligence and social science theory including sociology, economics, psychology.

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**Crossley-Holland: The Norse Myths**

**Crossley-Holland1981**

Kevin Crossley-Holland. *The Norse Myths*. Pantheon Fairy Tale and Folklore Library edition. New York: Pantheon, July 12, 1981. 320 pp. ISBN: 978-0-394-74846-7.

Abstract: Here are thirty-two classic myths that bring the Viking world vividly to life. The mythic legacy of the Scandinavians includes a cycle of stories filled with magnificent images from pre-Christian Europe. Gods, humans, and monstrous beasts engage in prodigious drinking bouts, contests of strength, greedy schemes for gold, and lusty encounters. The Norse pantheon includes Odin, the wisest and most fearsome of the gods; Thor, the thundering powerhouse; and the exquisite, magic-wielding Freyja. Their loves, wars, and adventures take us through worlds both mortal and divine, culminating in a blazing doomsday for gods and humans alike. These stories bear witness to the courage, passion, and boundless spirit that were hallmarks of the Norse world.Part of the Pantheon Fairy Tale and Folklore Library.

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**Epstein: Nonlinear Dynamics, Mathematical Biology, And Social Science**

**Epstein1997**

Joshua M. Epstein. *Nonlinear Dynamics, Mathematical Biology, And Social Science: Wise Use Of Alternative Therapies*. Reading, Mass: Westview Press, May 5, 1997. 176 pp. ISBN: 978-0-201-41988-7.

Abstract: These lectures develop simple models of complex social processes using nonlinear dynamics and mathematical biology. Dynamical analogies between seemingly disparate social and biological phenomena—revolutions and epidemics, arms races, and ecosystem dynamics—are revealed and exploited. Nonlinear Dynamics, Mathematical Biology, and Social Science invites social scientists to relax—in some cases abandon—the predominant assumption of

perfectly informed utility maximization and explore social dynamics from such perspectives as epidemiology and predator-prey theory. The volume includes a concentrated course on nonlinear dynamical systems.

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**Gilbert et al.: Simulation for the Social Scientist** **Gilbert2005**

Nigel Gilbert and Klaus Troitzsch. *Simulation for the Social Scientist*. 2 edition. Maidenhead, England ; New York, NY: Open University Press, Feb. 1, 2005. 312 pp. ISBN: 978-0-335-21600-0.

Abstract: An invaluable guide to the complex and increasingly vital study of social simulation This is a revised, completely updated edition of the practical textbook that examines the techniques of building computer simulations to assist understanding of social and economic issues and problems. Interest in social simulation has been growing rapidly worldwide as a result of increasingly powerful hardware capabilities and software programs. The focus on this area of expertise is also influenced by a rising interest in the application of ideas of complexity, evolution, adaptation, and chaos in the social sciences. This authoritative book details all of the common approaches to social simulation, to provide social scientists with an appreciation of the literature and allow those with some programming skills to create their own simulations. New for this edition are a chapter on how to use simulation as a tool, as well as a chapter on multi-agent systems to explain why and how multi-agent modeling has become the preferred approach to simulation.

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**Gitelson et al.: Man-Made Closed Ecological Systems** **Gitelson2002**

J. I. Gitelson and G. M. Lisovsky. *Man-Made Closed Ecological Systems*. London ; New York: CRC Press, Dec. 26, 2002. 416 pp. ISBN: 978-0-415-29998-5.

Abstract: Man-Made Closed Ecological Systems explores the interactions between humans, microorganisms, and plants in a closed habitat, and the life support systems necessary to maintain habitability over long periods of time. Problems and approaches involved in creating closed man-made ecological systems (CMESs) from a theoretical and experimental viewpoint are given. Topics include the cultivation of bacteria, microalgae and higher plants; the use of biotechnology to support life outside the Earth's biosphere; methods for recycling air, water and food for human consumption; interactions between humans and other organisms in CMESs; and methods for intensifying the level of photosynthesis. In addition to space the authors investigate problems associated with living conditions in dangerous or difficult environmental areas on Earth such as the Arctic and Antarctica, deserts and mountains.

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**Goffman: The Presentation of Self in Everyday Life** **Goffman1959**

Erving Goffman. *The Presentation of Self in Everyday Life*. 1 edition. Garden City, N.Y.: Anchor, June 1, 1959. 259 pp. ISBN: 978-0-385-09402-3.



Abstract: A study of human behavior in social situations and the way we appear to others. Dr. Goffman has employed as a framework the metaphor of theatrical performance. Discussions of social techniques are based upon detailed research and observation of social customs in many regions.

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**Hadfield: An Astronaut's Guide to Life on Earth** **Hadfield2015**

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Chris Hadfield. *An Astronaut's Guide to Life on Earth: What Going to Space Taught Me About Ingenuity, Determination, and Being Prepared for Anything*. Back Bay Books, Apr. 14, 2015. 320 pp. ISBN: 978-0-316-25303-1.

Abstract: "Hadfield is a genius, a man of science and technology and no first-timer to the universe."-New York Post Chris Hadfield has spent decades training as an astronaut and has logged nearly 4000 hours in space. During this time he has broken into a Space Station with a Swiss army knife, disposed of a live snake while piloting a plane, and been temporarily blinded while clinging to the exterior of an orbiting spacecraft. In his bestselling *An Astronaut's Guide to Life on Earth*, Hadfield takes readers deep into his years of training and space exploration to show how to make the impossible possible. Through eye-opening, entertaining stories, his vivid and refreshing insights will teach you how to think like an astronaut, and will change, completely, the way you view life on Earth-especially your own.

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**Hall: Beyond Culture** **Hall1990**

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Edward T. Hall. *Beyond Culture*. New York: Anchor Books, 1990. 298 pp. ISBN: 978-0-385-12474-4.

Abstract: *Beyond Culture* by Edward Twitchell Hall. Anchor Books, 1990.

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**Holland: Emergence** **Holland1999**

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John H. Holland. *Emergence: From Chaos To Order*. Reading, Mass.: Basic Books, Apr. 23, 1999. 272 pp. ISBN: 978-0-7382-0142-9.

Abstract: In this important book, John H. Holland dramatically shows us that the "emergence" of order from disorder has much to teach us about life, mind and organizations. Creative activities in both the arts and the sciences depend upon an ability to model the world. The most creative of those models exhibits emergent properties, so that "what comes out is more than what goes in." From the ingenious checkers-playing computer that started beating its creator in game after game, to the emotive creations of the poet, *Emergence* shows that Holland's theory successfully predicts many complex behaviors in art and science.

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**Hymes: Foundations in Sociolinguistics** **Hymes1974**

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Dell Hymes. *Foundations in Sociolinguistics: An Ethnographic Approach*. Philadelphia: University of Pennsylvania Press, May 1, 1974. 260 pp. ISBN: 978-0-8122-1065-1.

Abstract: Sociolinguistics is conceived here as a fundamental critical perspective on the whole of the study of language. The scientific problems within present linguistics, the book contends, combine with social problems of the society in which linguists participate to press linguistics to discover ethnographic foundations. The work of providing such foundations largely remains to be done. Working out the implications of these three principles requires a new mode of description of linguistic features and relationships, a mode which can treat the verbal means of a community as a part of its organization of communicative means. In Part One, Dell Hymes indicates the place of linguistic inquiry as part of an inquiry into communicable conduct in general. Part Two demonstrates the mutual relation between linguistics and other disciplines that contribute to the common larger field—sociology, social anthropology, education, folklore, and poetics are discussed. In Part Three the author argues that problems within linguistic inquiry suggest social foundations of linguistics deeper than presently assumed, such that social meaning and stylistic function must be taken into account systematically, and social life seen as a source of the organization of linguistic means.

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**Kraut et al.: Building Successful Online Communities      Kraut2012**

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Robert E. Kraut, Paul Resnick, Sara Kiesler, Moira Burke, Yan Chen, Niki Kit-tur, Joseph Konstan, Yuqing Ren, and John Riedl. *Building Successful Online Communities: Evidence-Based Social Design*. en. MIT Press, Mar. 2012. 323 pp. ISBN: 978-0-262-29739-4.

Abstract: Online communities are among the most popular destinations on the Internet, but not all online communities are equally successful. For every flourishing Facebook, there is a moribund Friendster – not to mention the scores of smaller social networking sites that never attracted enough members to be viable. This book offers lessons from theory and empirical research in the social sciences that can help improve the design of online communities. The authors draw on the literature in psychology, economics, and other social sciences, as well as their own research, translating general findings into useful design claims. They explain, for example, how to encourage information contributions based on the theory of public goods, and how to build members' commitment based on theories of interpersonal bond formation. For each design claim, they offer supporting evidence from theory, experiments, or observational studies.

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**Levenson: The Hunt for Vulcan      Levenson2016**

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Thomas Levenson. *The Hunt for Vulcan... And How Albert Einstein Destroyed a Planet, Discovered Relativity, and Deciphered the Universe*. Reprint. New York: Random House Trade Paperbacks, Aug. 2, 2016. 256 pp. ISBN: 978-0-8129-8830-7.

Abstract: The captivating, all-but-forgotten story of Isaac Newton, Albert Einstein, and the search for a planet that never existed For more than fifty years, the

world's top scientists searched for the "missing" planet Vulcan, whose existence was mandated by Isaac Newton's theories of gravity. Countless hours were spent on the hunt for the elusive orb, and some of the era's most skilled astronomers even claimed to have found it. There was just one problem: It was never there. In *The Hunt for Vulcan*, Thomas Levenson follows the visionary scientists who inhabit the story of the phantom planet, starting with Isaac Newton, who in 1687 provided an explanation for all matter in motion throughout the universe, leading to Urbain-Jean-Joseph Le Verrier, who almost two centuries later built on Newton's theories and discovered Neptune, becoming the most famous scientist in the world. Le Verrier attempted to surpass that triumph by predicting the existence of yet another planet in our solar system, Vulcan. It took Albert Einstein to discern that the mystery of the missing planet was a problem not of measurements or math but of Newton's theory of gravity itself. Einstein's general theory of relativity proved that Vulcan did not and could not exist, and that the search for it had merely been a quirk of operating under the wrong set of assumptions about the universe. Levenson tells the previously untold tale of how the "discovery" of Vulcan in the nineteenth century set the stage for Einstein's monumental breakthrough, the greatest individual intellectual achievement of the twentieth century. A dramatic human story of an epic quest, *The Hunt for Vulcan* offers insight into how science really advances (as opposed to the way we're taught about it in school) and how the best work of the greatest scientists reveals an artist's sensibility. Opening a new window onto our world, Levenson illuminates some of our most iconic ideas as he recounts one of the strangest episodes in the history of science. Praise for *The Hunt for Vulcan* "Delightful . . . a charming tale about an all-but-forgotten episode in science history."—*The Wall Street Journal* "Engaging . . . At heart, this is a story about how science advances, one insight at a time. But the immediacy, almost romance, of Levenson's writing makes it almost novelistic."—*The Washington Post* "Captures the drama of the tireless search for this celestial object."—*Science* "A well-structured, fast-paced example of exemplary science writing."—*Kirkus Reviews* (starred review) "A short, beautifully produced book that tells a cautionary tale . . . Levenson is a breezy writer who renders complex ideas in down-to-earth language."—*The Boston Globe* "An inspiring tale about the quest for discovery."—Walter Isaacson "Equal to the best science writing I've read anywhere, by any author. Beautifully composed, rich in historical context, deeply researched, it is, above all, great storytelling."—Alan Lightman, author of *The Accidental Universe* "Levenson tells us where Vulcan came from, how it vanished, and why its spirit lurks today. Along the way, we learn more than a bit of just how science works—when it succeeds as well as when it fails."—Neil deGrasse Tyson "Science writing at its best. This book is not just learned, passionate, and witty—it is profoundly wise."—Junot Díaz

From the Hardcover edition.

**Linton: The study of man**

**Linton1936**

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Ralph Linton. *The Study of Man. An introduction*. New York; London: D. Appleton-Century, 1936. 503 pp.

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**Linton: The Tree of Culture****Linton1955**

Ralph Linton. *The Tree of Culture*. New York: Alfred A. Knopf, 1955. 692 pp.

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**Marchi: Computational and Mathematical Modeling in the Social Sciences****Marchi2005**

Scott de Marchi. *Computational and Mathematical Modeling in the Social Sciences*. Cambridge ; New York: Cambridge University Press, Aug. 22, 2005. 220 pp. ISBN: 978-0-521-61913-4.

Abstract: Mathematical models in the social sciences have become increasingly sophisticated and widespread in the last decade. This period has also seen many critiques, most lamenting the sacrifices incurred in pursuit of mathematical perfection. If, as critics argue, our ability to understand the world has not improved during the mathematization of the social sciences, we might want to adopt a different paradigm. This book examines the three main fields of mathematical modeling—game theory, statistics, and computational methods—and proposes a new framework for modeling.

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**McGrath: Groups****McGrath1984**

Joseph Edward McGrath. *Groups: Interaction and Performance*. 1st edition. Englewood Cliffs, N.J: Prentice-Hall, Inc., Jan. 1984. 320 pp. ISBN: 978-0-13-365700-5.

Abstract: This is a book about the study of groups. Over the past 100 years, we have gathered much evidence about groups through application of scientific methods of study. These include the empirical methods that involve laboratory experimentation, field studies, surveys and the like. We have become much better at gathering evidence about groups than at building good theory to help us understand it.

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**Merton: Social Theory and Social Structure****Merton1968**

Robert King Merton. *Social Theory and Social Structure*. Simon and Schuster, 1968. ISBN: 978-0-02-921130-4.

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**Miller et al.: Complex Adaptive Systems****Miller2007**

John H. Miller and Scott E. Page. *Complex Adaptive Systems: An Introduction to Computational Models of Social Life*. Princeton, N.J: Princeton University Press, Mar. 25, 2007. 272 pp. ISBN: 978-0-691-13096-5.

Abstract: This book provides the first clear, comprehensive, and accessible account of complex adaptive social systems, by two of the field's leading authorities. Such systems—whether political parties, stock markets, or ant colonies—present some of the most intriguing theoretical and practical challenges confronting the social sciences. Engagingly written, and balancing technical detail

with intuitive explanations, *Complex Adaptive Systems* focuses on the key tools and ideas that have emerged in the field since the mid-1990s, as well as the techniques needed to investigate such systems. It provides a detailed introduction to concepts such as emergence, self-organized criticality, automata, networks, diversity, adaptation, and feedback. It also demonstrates how complex adaptive systems can be explored using methods ranging from mathematics to computational models of adaptive agents. John Miller and Scott Page show how to combine ideas from economics, political science, biology, physics, and computer science to illuminate topics in organization, adaptation, decentralization, and robustness. They also demonstrate how the usual extremes used in modeling can be fruitfully transcended.

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**Poynter: The Human Experiment****Poynter2006**

Jane Poynter. *The Human Experiment: Two Years and Twenty Minutes Inside Biosphere 2*. F First Edition edition. New York : Berkeley, Calif.?: Basic Books, Aug. 18, 2006. 384 pp. ISBN: 978-1-56025-775-2.

Abstract: It's a story that has never been told ... until now. Imagine being sealed into a closed environment for two years — cut off from the outside world with only seven other people — enduring never-ending hunger, severely low levels of oxygen, and extremely difficult relationships. Crew members struggled to survive in Biosphere 2, where they swore nothing would go in or out — no food or water, not even air — all in the name of science. For the first time, biospherian Jane Poynter — who lived and loved in the Biosphere — is ready to share what really happened in there. She takes readers on a riveting, fast-paced trip through shattered lives, scientific discovery, cults, love, fears of insanity, and inspiring human endurance. The eight biospherians who closed themselves into the Biosphere emerged 730 days later... much wiser, thinner, and having done what many had said was impossible.

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**Reagle et al.: Good Faith Collaboration****Reagle2012**

Joseph M. Reagle Reagle and Lawrence Lessig. *Good Faith Collaboration: The Culture of Wikipedia*. Reprint edition. Cambridge, Mass.: The MIT Press, Sept. 14, 2012. 264 pp. ISBN: 978-0-262-51820-8.

Abstract: Wikipedia, the online encyclopedia, is built by a community — a community of Wikipedians who are expected to "assume good faith" when interacting with one another. In *Good Faith Collaboration*, Joseph Reagle examines this unique collaborative culture. Wikipedia, says Reagle, is not the first effort to create a freely shared, universal encyclopedia; its early twentieth-century ancestors include Paul Otlet's Universal Repository and H. G. Wells's proposal for a World Brain. Both these projects, like Wikipedia, were fuelled by new technology — which at the time included index cards and microfilm. What distinguishes Wikipedia from these and other more recent ventures is Wikipedia's good-faith collaborative culture, as seen not only in the writing and editing of

articles but also in their discussion pages and edit histories. Keeping an open perspective on both knowledge claims and other contributors, Reagle argues, creates an extraordinary collaborative potential. Wikipedia's style of collaborative production has been imitated, analyzed, and satirized. Despite the social unease over its implications for individual autonomy, institutional authority, and the character (and quality) of cultural products, Wikipedia's good-faith collaborative culture has brought us closer than ever to a realization of the century-old pursuit of a universal encyclopedia.

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**Roach: Stiff****Roach2004**

Mary Roach. *Stiff: The Curious Lives of Human Cadavers*. 1st edition. Princeton, NJ: W. W. Norton & Company, May 17, 2004. 303 pp. ISBN: 978-0-393-32482-2.

Abstract: "One of the funniest and most unusual books of the year....Gross, educational, and unexpectedly sidesplitting."—Entertainment Weekly Stiff is an oddly compelling, often hilarious exploration of the strange lives of our bodies postmortem. For two thousand years, cadavers—some willingly, some unwittingly—have been involved in science's boldest strides and weirdest undertakings. In this fascinating account, Mary Roach visits the good deeds of cadavers over the centuries and tells the engrossing story of our bodies when we are no longer with them.

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**Roach: Packing for Mars****Roach2011**

Mary Roach. *Packing for Mars: The Curious Science of Life in the Void*. New York: W. W. Norton & Company, Apr. 4, 2011. 336 pp. ISBN: 978-0-393-33991-8.

Abstract: "America's funniest science writer" (Washington Post) returns to explore the irresistibly strange universe of life without gravity in this New York Times bestseller. Space is a world devoid of the things we need to live and thrive: air, gravity, hot showers, fresh produce, privacy, beer. Space exploration is in some ways an exploration of what it means to be human. How much can a person give up? How much weirdness can they take? What happens to you when you can't walk for a year? have sex? smell flowers? What happens if you vomit in your helmet during a space walk? Is it possible for the human body to survive a bailout at 17,000 miles per hour? To answer these questions, space agencies set up all manner of quizzical and startlingly bizarre space simulations. As Mary Roach discovers, it's possible to preview space without ever leaving Earth. From the space shuttle training toilet to a crash test of NASA's new space capsule (cadaver filling in for astronaut), Roach takes us on a surreally entertaining trip into the science of life in space and space on Earth.

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**Schwartz: The Art of the Long View****Schwartz1996**

Peter Schwartz. *The Art of the Long View: Planning for the Future in an Un-*

*certain World*. Reprint edition. New York: Currency Doubleday, Apr. 15, 1996. 272 pp. ISBN: 978-0-385-26732-8.

Abstract: What increasingly affects all of us, whether professional planners or individuals preparing for a better future, is not the tangibles of life—bottom-line numbers, for instance—but the intangibles: our hopes and fears, our beliefs and dreams. Only stories—scenarios—and our ability to visualize different kinds of futures adequately capture these intangibles. In *The Art of the Long View*, now for the first time in paperback and with the addition of an all-new User's Guide, Peter Schwartz outlines the "scenaric" approach, giving you the tools for developing a strategic vision within your business. Schwartz describes the new techniques, originally developed within Royal/Dutch Shell, based on many of his firsthand scenario exercises with the world's leading institutions and companies, including the White House, EPA, BellSouth, PG&E, and the International Stock Exchange.

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**Silberman: NeuroTribes****Silberman2015**

Steve Silberman. *NeuroTribes: The Legacy of Autism and the Future of Neurodiversity*. 1 edition. New York: Avery, Aug. 25, 2015. 544 pp. ISBN: 978-1-58333-467-6.

Abstract: A New York Times bestseller Winner of the 2015 Samuel Johnson Prize for non-fiction A groundbreaking book that upends conventional thinking about autism and suggests a broader model for acceptance, understanding, and full participation in society for people who think differently. What is autism? A lifelong disability, or a naturally occurring form of cognitive difference akin to certain forms of genius? In truth, it is all of these things and more—and the future of our society depends on our understanding it. WIRED reporter Steve Silberman unearths the secret history of autism, long suppressed by the same clinicians who became famous for discovering it, and finds surprising answers to the crucial question of why the number of diagnoses has soared in recent years. Going back to the earliest days of autism research and chronicling the brave and lonely journey of autistic people and their families through the decades, Silberman provides long-sought solutions to the autism puzzle, while mapping out a path for our society toward a more humane world in which people with learning differences and those who love them have access to the resources they need to live happier, healthier, more secure, and more meaningful lives. Along the way, he reveals the untold story of Hans Asperger, the father of Asperger's syndrome, whose "little professors" were targeted by the darkest social-engineering experiment in human history; exposes the covert campaign by child psychiatrist Leo Kanner to suppress knowledge of the autism spectrum for fifty years; and casts light on the growing movement of "neurodiversity" activists seeking respect, support, technological innovation, accommodations in the workplace and in education, and the right to self-determination for those with cognitive differences.

**Sterman: Business Dynamics****Sterman1910**

John D. Sterman John Sterman. *Business Dynamics. Systems thinking and modeling for a complex world.* 1st edition. New York: McGraw-Hill, 1910. 1008 pp. ISBN: 978-0-07-106812-3.

Abstract: Today's leading authority on the subject of this text is the author, MIT Standish Professor of Management and Director of the System Dynamics Group, John D. Sterman. Sterman's objective is to explain, in a true textbook format, what system dynamics is, and how it can be successfully applied to solve business and organizational problems. System dynamics is both a currently utilized approach to organizational problem solving at the professional level, and a field of study in business, engineering, and social and physical sciences.

**Tufte: Envisioning Information****Tufte1990**

Edward R. Tufte. *Envisioning Information.* Graphics Press, Jan. 1990. 126 pp. ISBN: 978-0-9613921-1-6.

Abstract: This book celebrates escapes from the flatlands of both paper and computer screen, showing superb displays of high-dimensional complex data. The most design-oriented of Edward Tufte's books, *Envisioning Information* shows maps, charts, scientific presentations, diagrams, computer interfaces, statistical graphics and tables, stereo photographs, guidebooks, courtroom exhibits, timetables, use of color, a pop-up, and many other wonderful displays of information. The book provides practical advice about how to explain complex material by visual means, with extraordinary examples to illustrate the fundamental principles of information displays. Topics include escaping flatland, color and information, micro/macro designs, layering and separation, small multiples, and narratives. Winner of 17 awards for design and content. 400 illustrations with exquisite 6- to 12-color printing throughout. Highest quality design and production.

**Tufte: Visual Explanations****Tufte1997**

Edward R. Tufte. *Visual Explanations: Images and Quantities, Evidence and Narrative.* Cheshire, Conn: Graphics Press, Feb. 1997. 156 pp. ISBN: 978-0-9613921-2-3.

Abstract: Describes design strategies - the proper arrangement in space and time of images, words, and numbers - for presenting information about motion, process, mechanism, cause, and effect. Examines the logic of depicting quantitative evidence.

**Tufte: Beautiful Evidence****Tufte2006**

Edward R. Tufte. *Beautiful Evidence.* 1st ed. Cheshire, Conn: Graphics Pr, July 2006. 213 pp. ISBN: 978-0-9613921-7-8.



Abstract: Science and art have in common intense seeing, the wide-eyed observing that generates visual information. Beautiful Evidence is about how seeing turns into showing, how data and evidence turn into explanation. The book identifies excellent and effective methods for showing nearly every kind of information, suggests many new designs (including sparklines), and provides analytical tools for assessing the credibility of evidence presentations (which are seen from both sides: how to produce and how to consume presentations). For alert consumers of presentations, there are chapters on diagnosing evidence corruption and PowerPoint pitches. Beautiful Evidence concludes with 2 chapters that leave the world of pixel and paper flatland representations - and move onto seeing and thinking in space land, the real-land of three-space and time.