

# SKB Research Library - Books

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# 1600

**Isaac Newton:** *Regulae Philosophandi or Philosophiæ Naturalis Principia Mathematica*, 1687

- Author: Isaac Newton
- Reasons to read: scientific principles only work within a given set of bounds, nature is essentially simple, similar effects must be assigned to the same cause
- Links: [Wikipedia](#), [Project Gutenberg: Latin](#), [English by Ian Bruce: online](#)    skb: [yaml src](#)

# 1700

**Gottfried Leibniz:** *Monadology* or *Lehrsätze über die Monadologie*, 1714

- Author: Gottfried Leibniz
- Published: 1714 (French), 1720 (German)
- Reasons to read: the first (that we know of) and grandest attempt to conceive of the world as a system, in particular as a system of "reflections" in which the state of every element recursively mirrors the state of the whole
- Links: [Wikipedia](#), [Goodreads](#), [English: by Robert Latta](#), [German: Gutenberg Projekt](#)    skb: [yaml src](#)

# 1800

**Edwin A. Abbott:** *Flatland: A Romance of Many Dimensions*, 1884

- Author: Edwin A. Abbott
- Reasons to read: the world limited by dimensions, also a social critic
- Publisher: Seeley & Co. of London
- Links: [Wikipedia](#), [Goodreads](#), [LaTeX by Ivesvdf](#), [Internet Archive](#), [Gutenberg](#), [a movie](#), [The Film: youtube](#)    skb: [yaml src](#)

**Gottlieb Frege:** *Grundgesetze der Arithmetik* or *Basic Laws of Arithmetic*, 1893

- Author: Gottlieb Frege
- Reasons to read: the world limited by dimensions, also a social critic
- Publisher: Seeley & Co. of London, 1893 (Volume I), 1903 (Volume II)
- Links: [Goodreads: en](#), [Goodreads: de](#), [PDF: de](#)    skb: [yaml src](#)

# 1910

**Bertrand Russell:** *Introduction to Mathematical Philosophy*, 1919

- Author: Bertrand Russell
- Reasons to read: introduction to mathematics and the more fundamental "Principia Mathematica"
- Publisher: George Allen & Unwin, Ltd, London
- Links: [Wikipedia](#), [Goodreads](#), [PDF: old typeset](#), [Online at UMass](#)    skb: [yaml src](#)

# 1920

**Ludwig Wittgenstein:** *Tractatus Logico-Philosophicus*, 1922

- Author: Ludwig Wittgenstein
- Published: 1921 (German, *Logisch-Philosophische Abhandlung*), 1922 (English)
- Reasons to read: picture theory, logical atomism, distinction between saying and showing, Wittgenstein's ladder, proposition 7
- Publisher: Kegan Paul, Trench, Trubner & CO
- Links: [Wikipedia](#), [Goodreads](#), [eBooks at Gutenberg Project](#), [eBooks at UMass](#)    skb: [yaml src](#)

# 1930

**Ludwig Fleck:** *Genesis and Development of a Scientific Fact*, 1935

- Author: Ludwig Fleck
- Published: 1935 (German, *Entstehung und Entwicklung einer wissenschaftlichen Tatsache*), 1979 (English)
- Reasons to read: philosophy of science, social process of science
- Links: [Wikipedia](#), [Goodreads](#)    skb: [yaml src](#)

# 1950

**W. Ross Ashby:** *An Introduction to Cybernetics*, 1956

- Author: W. Ross Ashby
- Reasons to read: cybernetics intro, Law of Requisite Variety
- Publisher: John Wiley & Sons
- Links: [Goodreads](#), [pdf: original typeset](#), [pdf: new typeset](#), [discussion on requisite variety](#), [WikiQoutes](#)    skb: [yaml src](#)

**Theodor Seuss Geisel:** *The Sneetches and Other Stories*, 1953

- Author: Theodor Seuss Geisel
- also known as Dr. Seuss
- Publisher: Redbook (magazines), Random House (book)
- Reasons to read: Ms McCave "too many Daves" as metaphor for too many things with the same name
- Links: [Wikipedia](#), [Goodreads](#), [Wikipedia: Too Many Dave's](#), [Poem](#), [Animation: youtube](#)    skb: [yaml src](#)

**Joseph Needham:** *Science and Civilisation in China*, 1954

- Author: Joseph Needham
- Reasons to read: the West was only one to make the leap from artisan to science
- Publisher: Cambridge University Press
- Links: [Wikipedia](#)    skb: [yaml src](#)

**Marie Neurath:** *How Machines Work*, 1954

- Author: Marie Neurath
- Reasons to read: the most simple, yet expressive, introduction on machines :)
- Publisher: Max Parrslih, London
- Links: [gallery with 3 pages](#), [all pages](#)    skb: [yaml src](#)

**Karl Popper:** *The Logic of Scientific Discovery*, 1959

- Author: Karl Popper
- Published: 1934 (German, *Logik der Forschung*), 1959 (English)
- Publisher: Hutchinson & Co
- Reasons to read: "The first step is to state a hypothesis. To state a hypothesis, one must start with a theory to be invalidated", shows: you can never prove a theory correct; you can only invalidate it
- Links: [Wikipedia](#), [Goodreads](#), [Online: English](#), [PDF: English](#)    skb: [yaml src](#)

# 1960

**Thomas Kuhn:** *Structure of Scientific Revolutions*, 1962

- Author: Thomas Kuhn
- Reasons to read: philosophy of science
- Publisher: University of Chicago Press
- Links: [Wikipedia](#), [Goodreads](#)    skb: [yaml src](#)

**Norbert Wiener:** *Cybernetic OR Control and Communication in the Animal and the Machine*, 1965

- Author: Norbert Wiener
- Reasons to read: the standard work on cybernetics (with definition) and control
- Publisher: MIT Press, Cambridge, Massachusetts
- Links: [Wikipedia](#), [Goodreads](#), [PDF: original typeset](#)    skb: [yaml src](#)

# 1970

**Christopher Alexander:** *A Pattern Language*, 1977

- Author: Christopher Alexander
- Reasons to read: (most) influential book on patterns, laid foundation for software patterns
- Publisher: Oxford University Press
- Links: [Wikipedia](#), [Goodreads](#)    skb: [yaml src](#)

**Christopher Alexander:** *The Timeless Way of Building*, 1979

- Author: Christopher Alexander
- Reasons to read: "how to think about X", a new theory of architecture (and design in general) that relies on the understanding and configuration of design patterns
- Is actually the introduction to *A Pattern Language* by the same author, though published later
- Publisher: Oxford University Press
- Links: [Wikipedia](#), [Goodreads](#)    skb: [yaml src](#)

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**Samuel C. Florman:** *The Existential Pleasures of Engineering*, 1976

- Author: Samuel C. Florman
- Reasons to read: to understand engineering, how engineers think and feel about their profession
- Links: [Goodreads](#)    skb: [yaml src](#)

**Imre Lakatos:** *Proofs and Refutations*, 1976

- Author: Imre Lakatos
- Reasons to read: the way of thinking, “listen to the problem”
- Publisher: Cambridge University Press
- Links: [Wikipedia](#), [Goodreads](#)    skb: [yaml src](#)

**Robert MacArthur:** *Geographical Ecology: Patterns in the Distribution of Species*, 1972

- Author: Robert MacArthur
- Reasons to read: island of biogeography, "A field cannot consider itself a science until it can progress beyond natural history"
- Publisher: Vintage
- Links: [Goodreads](#)    skb: [yaml src](#)

## 1980

**Humberto R. Maturana et al.:** *The Tree of Knowledge*, 1987

- Authors: Humberto R. Maturana, Francisco J. Valera
- Reasons to read: tbd
- Publisher: Shambhala, Boston & London
- Links: [Goodreads](#), [PDF](#)    skb: [yaml src](#)

## 1990

**Gerald Edelman:** *Bright Air Brilliant Fire*, 1992

- Author: Gerald Edelman
- Reasons to read: theory of Neural Darwinism feeds into Maturana quite nicely, the application of Edelman in Sacks' Seeing Voices
- Publisher: Basic Books
- Links: [Goodreads](#)    skb: [yaml src](#)

**Stuart Kaufmann:** *The Origins of Order*, 1993

- Author: Stuart Kaufmann \* Reasons to read: works out the math and science in detail and shows that life is virtually inevitable, scientific version of "At home in the universe"
- Publisher: Oxford University Press, USA
- Links: [Goodreads](#)    skb: [yaml src](#)

**Stuart Kaufmann:** *At Home in the Universe*, 1996

- Author: Stuart Kaufmann
- Reasons to read: works out the math and science in detail and shows that life is virtually inevitable, Scientific American (popular science magazine) version of "The origins of order"
- Publisher: Oxford University Press, USA
- Links: [Goodreads](#)    skb: [yaml src](#)

**Oliver Sacks:** *The Man Who Mistook His Wife for a Hat*, 1998

- Author: Oliver Sacks
- Reasons to read: aberrations of the human mind, contribute to Maturana's view
- Publisher: Touchstone
- Links: [Goodreads](#)    skb: [yaml src](#)

## 2000

**John Day:** *Patterns in Network Architecture: A Return to Fundamentals*, 2007

- Author: John Day
- Reasons to read: fundamental patterns for network architecture, historic context, anecdotal context
- Publisher: Pearson Edition
- Links: [Goodreads](#)    skb: [yaml src](#)



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**Stephen Jay Gould:** *The Richness of Life: The Essential Stephen Jay Gould*, 2006

- Author: Stephen Jay Gould
- Reasons to read: wrote a monthly article for Natural History on evolution, the collections of his articles are a good primer in how stochastic processes work in the large
- Publisher: Vintage
- Links: [Goodreads](#)    skb: [yaml src](#)

**Oliver Sacks:** *Seeing Voices*, 2000

- Author: Oliver Sacks
- Reasons to read: aberrations of the human mind, contribute to Maturana's view
- Publisher: Vintage
- Links: [Goodreads](#)    skb: [yaml src](#)

**Lee Smolin:** *The Trouble with Physics*, 2006

- Author: Lee Smolin
- Reasons to read: "groupthink" anti pattern, role of controversy and disagreement in the progress of science, professionalization has lead to selecting for "master craftsmen" to the almost complete exclusion of "seers."
- Publisher: Reed Business Information
- Links: [Wikipedia](#), [online](#)    skb: [yaml src](#)

**John C. Strassner:** *Policy-based Network Management: Solutions for the Next Generation*, 2004

- Author: John C. Strassner
- Publisher: Morgan Kaufman
- Links: [ScienceDirect](#)    skb: [yaml src](#)

## 2010

**David Deutsch:** *The Beginning of Infinity*, 2011

- Author: David Deutsch
- Reasons to read: error is the normal state of our knowledge, good and bad philosophy
- Publisher: Viking
- Links: [Wikipedia](#), [Goodreads](#)    skb: [yaml src](#)

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**Andrew L. Russell:** *Open Standards and the Digital Age: History, Ideology, and Networks*, 2014

- Author: Andrew L. Russell
- Reasons to read: history of networks and network standards
- Publisher: Cambridge University Press
- Links: [Goodread](#), [Google Books](#)    skb: [yaml src](#)

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**Jason McC. Smith:** *Elemental Design Patterns*, 2012

- Author: Jason McC. Smith
- Reasons to read: scientific approach to software pattern (not OO-software-patterns), comprehensive graphical language
- Publisher: Addison-Wesley Professional
- Links: [Goodreads](#), [PDF: technical report](#), [PDF: paper](#), [PPTX](#)    skb: [yaml src](#)