

THE CAMBRIDGE COMPANION TO  
LITERATURE AND SCIENCE

In 1959, C. P. Snow lamented the presence of what he called the “two cultures”: the apparently unbridgeable chasm of understanding and knowledge between modern literature and modern science. In recent decades, scholars have worked diligently and often with great ingenuity to interrogate claims like Snow’s that represent twentieth and twenty-first-century literature and science as radically alienated from each other. *The Cambridge Companion to Literature and Science* offers a roadmap to developments that have contributed to the demonstration and emergence of reciprocal connections between the two domains of inquiry. Weaving together theory and empiricism, individual chapters explore major figures – Shakespeare, Bacon, Emerson, Darwin, Henry James, William James, Whitehead, Einstein, Empson, McClintock; major genres and modes of writing – fiction, science fiction, non-fiction prose, poetry, dramatic works; and major theories and movements – pragmatism, critical theory, science studies, cognitive science, ecocriticism, cultural studies, affect theory, digital humanities, expanded empiricisms. This book will be a key resource for scholars, graduate students, and undergraduate students alike.

**Steven Meyer** is Associate Professor of English at Washington University in St. Louis. He is the author of *Irresistible Dictation: Gertrude Stein and the Correlations of Writing and Science* (2001). He has co-edited a special issue of *Configurations* on the surge of interest in Whitehead’s “process philosophy” among practitioners of science studies and Literature and Science. He recently served on the Executive Committee of the MLA Division on Literature and Science (2011–16; chair, 2014–15). He has also been awarded fellowships by Yale’s Whitney Humanities Center, the Stanford Humanities Center, and Rutgers’s Center for Cultural Analysis.

*A complete list of books in the series is at the back of this book.*

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THE CAMBRIDGE  
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LITERATURE AND SCIENCE

EDITED BY  
STEVEN MEYER  
*Washington University in St. Louis*



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*And the triumph of empiricism is jeopardized by the surprising truth that our sense data are primarily symbols.*

Susanne K. Langer, *Philosophy in a New Key*  
[as cited in *Elaine's Book* by Jay Wright]

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## CONTRIBUTORS

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JAMES J. BONO is Associate Professor of History and Medicine at the University at Buffalo; past president of the Society for Literature, Science, and the Arts; and founding editor of *Configurations*. He is author of *The Word of God and the Languages of Man: Interpreting Nature in Early Modern Science and Medicine*, vol. 1 (1995), *Ficino to Descartes* (vol. 2, *England, 1640–1670*, forthcoming) and co-editor of *Ethical Issues in Health Care on the Frontiers of the Twenty-First Century* and *A Time for the Humanities: Futurity and the Limits of Autonomy* (2008). He has been a member of the Institute for Advanced Study, an Eccles Fellow at the Tanner Humanities Center, a recipient of several National Science Foundation grants, and a National Endowment for the Humanities Senior Fellow at the Folger Shakespeare Library. *Figuring Science: Metaphor, Narrative, and Scientific Practices* and *Imagining Nature: Technologies of the Literal, the Scientific Revolution, and Visual Cultures of Early Modern Science* are in progress.

MARY BAIN CAMPBELL is Professor Emerita of English, Comparative Literature, and Women's, Gender, and Sexuality Studies at Brandeis University. Scholarly books concerned with the junction of knowledge and imagination include *The Witness and the Other World: Exotic European Travel Writing, 400–1600* (1988 and 1992) and *Wonder and Science: Imagining Worlds in Early Modern Europe* (1999 and 2004, winner of the Modern Language Association's James Russell Lowell Prize). She has also published two volumes of poetry: *The World, the Flesh and Angels* (1988, winner of the Barnard New Women Poets Prize) and *Trouble* (2003). More recently she has been writing on the dream culture of the early modern Atlantic, especially in Old and New England and France.

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T. HUGH CRAWFORD is Associate Professor of Science, Technology, and Culture Studies at the Georgia Institute of Technology. Former editor of *Configurations* and past president of the Society for Literature, Science and the Arts, he is author of *Modernism, Medicine, and William Carlos Williams* (1993) and is currently writing on philosophy, literature, and walking.

WAI CHEE DIMOCK has written on American literature of every period, from Anne Bradstreet to Star Trek. She argues for a broad conception of literature that embraces a variety of timeframes and brings together materials both high and low, and scales both local and global. Editor of *PMLA* and a film critic for the *Los Angeles Review of Books*, her essays have also appeared in *Critical Inquiry*, the *Chronicle of Higher Education*, the *New York Times*, and the *New Yorker*. She is now working on two book projects, *Weak Theory: Low-Bar Networks*, *Fuzzy Genres*, *Minimal Criticism* and *Low Epic: Recycled Forms and Nonhuman Life*.

ADAM FRANK'S essays on affect, media, and American literature have appeared in *ELH*, *Criticism*, *Critical Inquiry*, *Science in Context* and elsewhere. He is the author of *Transferential Poetics, from Poe to Warhol* (2015), the co-editor (with Eve Kosofsky Sedgwick) of *Shame and Its Sisters: A Silvan Tomkins Reader* (1995), and co-author (with Elizabeth Wilson) of *A Silvan Tomkins Handbook* (forthcoming). He has produced two full-length recorded audio-dramas, *Overpass! A Melodrama* (2007) and *Some Mad Scientists* (2010). Current research includes the *Radio Free Stein* project ([www.radiofreestein.com](http://www.radiofreestein.com)). He is Professor in the Department of English and Co-chair of the Graduate Program in Science and Technology Studies at the University of British Columbia.

DEVIN GRIFFITHS is Assistant Professor in the English Department at the University of Southern California. His research examines the intersection of intellectual history, scientific literature, and the digital humanities, with emphasis on nineteenth-century British literature and science. Central to his work is the question of how literary form shapes our experience of time and natural systems. His book, *The Age of Analogy: Science and Literature between the Darwins* (2016), rethinks analogy in order to examine how historical novels furnished a relational understanding of history and helped to shape the disciplinary formations of both the life sciences and the humanities. He is working on two additional studies, *The Ecology of Form*, which adapts Darwinian theory to the study of literary forms, and *The Radical Catalogue*, which explores the science of order that organized nineteenth-century print and natural history collections and laid the foundation for modern information technologies.

TIM LENOIR is Distinguished Professor of Science and Technology Studies and of Cinema and Digital Media at University of California, Davis. He has published several books and articles on the history of biomedical science from the nineteenth century to the present and on the roles of federal programs and university-industry

## LIST OF CONTRIBUTORS

collaborations in stimulating innovation in several areas of science, technology, and medicine. Lenoir has also published a number of recent studies on computational media and human technogenesis, including an extended essay, “Contemplating Singularity,” an edited e-book, *Neurofutures* (2011), and essays in the area of game studies. With Luke Caldwell, Lenoir is co-author of *The Military Entertainment Complex* (2016).

STEVEN MEYER teaches intellectual history and modern and contemporary literature at Washington University in St. Louis. He is the author of *Irresistible Dictation: Gertrude Stein and the Correlations of Writing and Science* (2001) and co-editor with Elizabeth Wilson of the special issue of *Configurations* on “Whitehead Now” (2005). Currently he is completing *Robust Empiricisms: Jamesian Modernism between the Disciplines, 1878 to the Present*, a cross-disciplinary account of investigations in literature, literary criticism, philosophy, science studies, and the sciences – all within the robust empiricist lineage initiated by William James and Alfred North Whitehead and involving the development of techniques for eliciting something where, from the perspective of more traditional empiricisms, there appears to be nothing. He has published a half-dozen essays from this project, including “Of ‘Experiential Togetherness’: Toward a More Robust Empiricism” in *The Lure of Whitehead* (2014) and “Systematizing Emerson, Supplementing Whitehead: Reading Whitehead with Stengers” in *Process Studies* (2008).

REVIEL NETZ is Patrick Suppes Professor in Greek Mathematics and Astronomy and Professor of Classics at Stanford. He has published widely in Greek and premodern mathematics, and *The Shaping of Deduction in Greek Mathematics: A Study in Cognitive History* (1999) won the Runciman Prize for 2000. He is also the author of a projected three-volume translation and commentary of the works of Archimedes; the first, *The Two Books on the Sphere and the Cylinder*, appeared in 2004. With Nigel Wilson he is preparing an edition of the recently discovered Archimedes Palimpsest, and his popular account of the Archimedes Palimpsest Project, *The Archimedes Codex* (2007, co-authored with William Noel) was awarded the Neumann Prize. An interest in ecological history resulted in *Barbed Wire: An Ecology of Modernity* (2004), and together with his wife, the Israeli author Maya Arad, he has published a collection of essays on Israeli literature, *Positions of Stress* (2008).

KITT PRICE teaches modern and contemporary literature at Queen Mary University, London. kitt has published essays on William Empson’s early metaphysical poetry, and a book inspired by Empson’s reading of modern physics: *Loving Faster than Light: Romance and Readers in Einstein’s Universe* (2012). Note to reviewers: kitt prefers to be referred to with gender-neutral pronouns (they / their / them).

## LIST OF CONTRIBUTORS

ALAN RICHARDSON is Professor of English at Boston College. His books include *British Romanticism and the Science of the Mind* (2001) and *The Neural Sublime: Cognitive Theories and Romantic Texts* (2011). He is co-editor, with Francis Steen, of a special issue of *Poetics Today* on “Literature and the Cognitive Revolution” (2002) and, with Ellen Spolsky, of *The Work of Fiction: Cognition, Culture, and Complexity* (2004). His current research concerns literary and scientific conceptions of imagination from Romanticism to the present.

JOAN RICHARDSON is Distinguished Professor at The Graduate Center, City University of New York. Author of a two-volume critical biography of Wallace Stevens, she also co-edited *Wallace Stevens: Collected Poetry and Prose* (1997). Essays on Stevens, Emerson, Edwards, William James, Whitehead, and Cavell have appeared widely in journals and collections. *A Natural History of Pragmatism: The Fact of Feeling from Jonathan Edwards to Gertrude Stein*, published by Cambridge in 2007, was followed by *Pragmatism and American Experience* in 2014. In 2017 her *How to Live. What to Do: Thirteen Ways of Looking at Wallace Stevens* will be published. She has received several awards including a Woodrow Wilson Fellowship, a Senior Fellowship from the National Endowment for the Humanities, and a Guggenheim Fellowship for her current project, *Images, Shadows of Divine Things*, an experiment in secular spiritual autobiography. Her work examines the ways philosophy, natural history, and science intersect with literature.

HAUN SAUSSY is University Professor at the University of Chicago. His books include *The Problem of a Chinese Aesthetic* (1993), *Great Walls of Discourse and Other Adventures in Cultural China* (2001), *The Ethnography of Rhythm: Orality and its Technologies* (2016), *Translation as Citation: Zhuangzi Inside Out* (2017), and, as editor or co-editor, *Comparative Literature in an Age of Globalization* (2006), *Sinographies: Writing China* (2007), *Fenollosa/Pound, The Chinese Written Character as a Medium for Poetry: A Critical Edition* (2009), *Partner to the Poor: A Paul Farmer Reader* (2010), and *A Book to Burn and a Book to Keep Hidden: Selected Writings of Li Zhi* (2016).

ISABELLE STENGERS is Professor at the Free University of Brussels, and author and co-author of more than two dozen books. Single-author works (in translation) include *Power and Invention: Situating Science* (1997), *The Invention of Modern Science* (2000), *Cosmopolitics I and II* (2010/11), *Thinking with Whitehead* (2011), and *In Catastrophic Times: Resisting the Coming Barbarism* (2015). Jointly authored works include *Order Out of Chaos: Man's New Dialogue with Nature* (1984, with Nobel-Prize winner Ilya Prigogine), *A Critique of Psychoanalytic Reason: Hypnosis as a Scientific Problem from Lavoisier to Lacan* (1992, with Leon Chertok), and *Capitalist Sorcery: Breaking the Spell* (2011, with Philippe Pignarre).

## LIST OF CONTRIBUTORS

Among other honors, she has received the 1993 Grand Prize in Philosophy from the Académie Française, the 2010 FNRS Ernest-John Solvay Scientific Prize in Human and Social Sciences, and, for *Cosmopolitics*, the 2013 Ludwick Fleck Prize from the Society for Social Studies of Science for the best book in science and technology studies.

## CHRONOLOGY OF PUBLICATIONS AND EVENTS

### Premodern

Fourth century BCE	first collection recorded of the Fables of Aesop (sixth century BCE)
c. third century BCE	assemblage of Sanskrit animal tales in the <i>Panchatantra</i>
c. 225 BCE	Archimedes, <i>On the Sphere and the Cylinder</i>
First century BCE	Lucretius, <i>De Rerum Natura</i> [ <i>On the Nature of Things</i> ]
Fourth century CE	Oribasius canonizes Galen's (first century CE) medical writings
Twelfth century CE	translation into Latin of al-Khwārizmī's ninth-century CE account of Hindu arithmetic with its positional decimal numeral system ("algorism" is a corruption of the Persian author's name, just as "algebra" is derived from the name of a key procedure in another influential treatise by al-Khwārizmī)

### Early Modern

c. 1594	William Shakespeare, <i>A Midsummer Night's Dream</i>
1610–11	William Shakespeare, <i>The Tempest</i>
1620	Francis Bacon, <i>Novum Organon</i>
1627	Francis Bacon, <i>The New Atlantis</i>
1632–3	Galileo, <i>Dialogue on the Two Chief World Systems, Ptolemaic and Copernican</i> ; trial and condemnation by the Catholic Inquisition
1665	founding of the Royal Society in London Robert Hooke, <i>Micrographia</i>

CHRONOLOGY OF PUBLICATIONS AND EVENTS

- 1667 Thomas Sprat, *History of the Royal Society*  
 1687 Isaac Newton, *Philosophiae Naturalis Principia Mathematica*  
 1690 John Locke, *An Essay Concerning Human Understanding*

**Eighteenth and Nineteenth Centuries**

- 1775 Sanskrit *Fables of Pilpay* translated into English  
 1778 Lavoisier isolates and names oxygen  
 1791–3/4 Wordsworth lives in revolutionary France; Lavoisier guillotined  
 1800–2 Wordsworth writes “Preface” to *Lyrical Ballads*  
 1810 Johann Wolfgang von Goethe, *Theory of Colors*  
 1836 Ralph Waldo Emerson, “Nature”  
 1840 William Whewell, *The Philosophy of the Inductive Sciences*  
 1841–4 Ralph Waldo Emerson, “The Method of Nature”; “Circles”; “Experience”  
 1854 Henry D. Thoreau, *Walden*  
 1859 Charles Darwin, *On the Origin of Species*  
 1862 Max Müller, *Lectures on the Science of Language*  
 1865–6 William James accompanies naturalist and creationist Louis Agassiz on expedition to Brazil  
 1869 Henry James Sr., *The Secret of Swedenborg: Being an Elucidation of His Doctrine of the Divine Natural Humanity*  
 1871 Charles Darwin, *The Descent of Man*  
 1881 Thomas Henry Huxley, *Science and Culture*  
 1882 Matthew Arnold, “Literature and Science”  
 1883 Wilhelm Dilthey, *Introduction to the Human Sciences*  
 1884 Henry James, “The Art of Fiction”  
 1890 William James, *The Principles of Psychology*  
 1894 Charles S. Peirce, “What Is a Sign?”  
 1895 Wilhelm Röntgen detects and names X-rays; H. G. Wells, *The Time Machine*

**Twentieth Century**

- 1904 William James, “The Experience of Activity”; “Does ‘Consciousness’ Exist?”; “A World of Pure Experience”  
 1905 Albert Einstein, “On the Electrodynamics of Moving Bodies” (on the special theory of relativity)

CHRONOLOGY OF PUBLICATIONS AND EVENTS

- 1907 William James, *Pragmatism: A New Name for Some Old Ways of Thinking*
- 1910 H. G. Wells, *The Sleeper Awakes*
- 1915 Albert Einstein, “The Field Equation of Gravitation” (on the general theory of relativity)
- 1916 Ferdinand de Saussure, *Course in General Linguistics*
- 1917–26 A separate School of English is established at Cambridge University
- 1919 Eddington leads expedition to Africa to witness solar eclipse and test Einstein’s predictions for the bending of light around the Sun
- 1923–31 *Today & Tomorrow* book series at Kegan Paul
- 1923 J. B. S. Haldane, *Daedalus, or Science and the Future*
- 1924 I. A. Richards, *Principles of Literary Criticism*
- 1925 Alfred North Whitehead, *Science and the Modern World*
- 1926 I. A. Richards, *Science and Poetry*
- 1927 J. B. S. Haldane, *Possible Worlds and Other Essays*
- 1928 Arthur Eddington, *The Nature of the Physical World*
- 1928–9 William Empson, “Relativity” [“The World’s End”]; “Letter I”; “The Ants”; “Camping Out”
- 1929 I. A. Richards, *Practical Criticism*; Alfred North Whitehead, *Process and Reality*
- 1929–30 H. G. Wells, Julian Huxley, and G. P. Wells, *The Science of Life: A Summary of Contemporary Knowledge about Life and Its Possibilities*
- c. 1929–35 William Empson, “Doctrinal Point”
- 1931 John Hargrave, *The Imitation Man*
- 1936 Wallace Stevens, “The Irrational Element in Poetry”
- 1939 Establishment of the Division for Literature and Science, MLA
- 1942 Julian Huxley, *Evolution: The Modern Synthesis*
- 1946 Marjorie Hope Nicolson, *Newton Demands the Muse: Newton’s Opticks and the 18th Century Poets*
- 1953 Watson and Crick establish structure of DNA
- 1956 Marjorie Hope Nicolson, *Science and Imagination*
- 1957 William Empson, “Donne the Space Man”
- 1959 C. P. Snow, *The Two Cultures and the Scientific Revolution*
- 1962 Thomas Kuhn, *The Structure of Scientific Revolutions*; Silvan S. Tomkins, *Affect Imagery Consciousness*, vol. 1, *The Positive Affects*; Wilfred Bion, *Learning from Experience*
- 1963 Aldous Huxley, *Literature and Science*



CHRONOLOGY OF PUBLICATIONS AND EVENTS

- 1964 Establishment of Science Studies Unit at University of Edinburgh; Marshall McLuhan, *Understanding Media: The Extensions of Man*
- 1967 Jacques Derrida, *Of Grammatology*
- 1971 Michel Foucault, *The Order of Things: An Archaeology of the Human Sciences* [1966, in French]
- 1972 Ann McCaffrey, *To Ride Pegasus*
- 1973 Michel Foucault, *The Birth of the Clinic: An Archaeology of Medical Perception* [1963, in French]; Robert K. Merton, *The Sociology of Science*
- 1974 Barry Barnes, *Scientific Knowledge and Sociological Theory*
- 1975 Ursula Le Guin, *The Earthsea Trilogy*
- 1976 Donna J. Haraway, *Crystals, Fabrics, and Fields: Metaphors of Organicism in Twentieth-Century Developmental Biology*
- 1976–84 Michel Foucault, *The History of Sexuality*
- 1978 George Rousseau, “Literature and Science: the State of the Field”
- 1979 Bruno Latour and Steve Woolgar, *Laboratory Life*
- 1980 Humberto R. Maturana and Francisco J. Varela, *Autopoiesis and Cognition: The Realization of the Living*
- 1981 Karin Knorr-Cetina, *The Manufacture of Knowledge: An Essay on the Constructivist and Contextual Nature of Science*
- 1983 Marion Zimmer Bradley, *The Mists of Avalon*
- 1983 Gillian Beer, *Darwin’s Plots: Evolutionary Narrative in Darwin, George Eliot, and Nineteenth-Century Fiction*; Evelyn Fox Keller, *A Feeling for the Organism: The Life and Work of Barbara McClintock*
- 1984 Ilya Prigogine and Isabelle Stengers, *Order out of Chaos: Man’s New Dialogue with Nature* [*La nouvelle alliance*, 1979]; Gaston Bachelard, *The New Scientific Spirit* [1934, in French]; N. Katherine Hayles, *The Cosmic Web: Scientific Field Models and Literary Strategies in the 20th Century*; Wilfred Bion, *Learning from Experience*
- 1985 Steven Shapin and Simon Schaffer, *Leviathan and the Airpump: Hobbes, Boyle, and the Experimental Life*; Evelyn Fox Keller, *Reflections on Gender and Science*; Donna J. Haraway, “Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s”
- 1986 Ludmilla Jordanova, ed., *Languages of Nature: Critical Essays on Science and Literature*

CHRONOLOGY OF PUBLICATIONS AND EVENTS

- 1987–2000 *Science and Literature* book series at University of Wisconsin Press
- 1987 Inaugural conference of the Society for Literature and Science; George Levine, “One Culture: Science and Literature”; Bruno Latour, *Science in Action*; Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia* [1980, in French]
- 1988 George Levine, *Darwin and the Novelists: Patterns of Science in Victorian Fiction*; Donna J. Haraway, “Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective”
- 1989 Donna J. Haraway, *Primate Visions: Gender, Race, and Nature in the World of Modern Science*
- 1990 Establishment of Center for Interdisciplinary Studies in Science and Cultural Theory at Duke University; Friedrich Kittler, *Discourse Networks 1800/1900*; Mary Jacobus, Evelyn Fox Keller, and Sally Shuttleworth, eds., *Body/Politics: Women and the Discourses of Science*
- 1991–2011 *Studies in Literature and Science* book series at University of Michigan Press
- 1991 Franciso J. Varela, Evan T. Thompson, and Eleanor Rosch, *The Embodied Mind: Cognitive Science and Human Experience*
- 1992 Léon Chertok and Isabelle Stengers, *A Critique of Psychoanalytic Reason: Hypnosis as a Scientific Problem from Lavoisier to Lacan* [1989, in French]; Andrew Pickering, ed., *Science as Practice and Culture*; Evelyn Fox Keller, *Secrets of Life, Secrets of Death: Essays on Language, Gender and Science*
- 1993 Joseph Rouse, “What Are Cultural Studies of Scientific Knowledge?”; George Levine, ed., *Realism and Representation: Essays on the Problem of Realism in Science, Literature and Culture* (including “Constrained Constructivism: Locating Scientific Inquiry in the Theater of Representation” by N. Katherine Hayles); Bruno Latour, *We Have Never Been Modern* [1991, in French]; Brian Rotman, *Signifying Nothing: The Semiotics of Zero*; Ellen Spolsky, *Gaps in Nature: Literary Interpretation and the Modular Mind*
- 1994–2008 *Writing Science* book series at Stanford University Press
- 1994– C. J. Cherryh, *The Foreigner Universe*
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CHRONOLOGY OF PUBLICATIONS AND EVENTS

- 1994 Hans Ulrich Gumbrecht and Karl Ludwig Pfeiffer, eds., *Materialities of Communication*; Susan Merrill Squier, *Babies in Bottles: Twentieth-Century Visions of Reproductive Technology*
- 1995 S. L. Pimm, G. J. Russell, J. L. Gittleman, and T. M. Brooks, “The Future of Biodiversity”; Edwin Hutchins, *Cognition in the Wild*; Ian Hacking, *Rewriting the Soul: Multiple Personality and the Sciences of Memory*; Andrew Pickering, *The Mangle of Practice: Time, Agency, and Science*; Eve Kosofsky Sedgwick and Adam Frank, “Shame in the Cybernetic Fold: Reading Silvan Tomkins”; Brian Massumi’s “The Autonomy of Affect”; James J. Bono, “Locating Narratives: Science, Metaphor, Communities, and Epistemic Styles”
- 1996 *Social Text* publishes Alan Sokal’s “Transgressing the Boundaries”; Gillian Beer, *Open Fields: Science in Cultural Encounter*; Peter Galison and David J. Stump, *The Disunity of Science: Boundaries, Contexts, and Power*; Niklas Luhmann, *Social Systems* [1984, in German]
- 1997 David Abram, *The Spell of the Sensuous: Perception and Language in a More-Than-Human World*; Hans-Jörg Rheinberger, *Toward a History of Epistemic Things: Synthesizing Proteins in the Test Tube*; Peter Galison, *Image and Logic: The Material Culture of Twentieth-Century Physics*
- 1998 Jan Golinski, *Making Natural Knowledge: Constructivism and the History of Science*; Timothy Lenoir, ed., *Inscribing Science: Scientific Texts and the Materiality of Communication*; Andy Clark and David J. Chalmers, “The Extended Mind”; Tim Armstrong, *Modernism, Technology and the Body*
- 1999 Mario Biagioli, ed., *The Science Studies Reader*; Bruno Latour, *Pandora’s Hope: Essays on the Reality of Science Studies*; Geoffrey C. Bowker and Susan Leigh Star, *Sorting Things Out: Classification and Its Consequences*; Katharine Park, “Natural Particulars: Epistemology, Practice, and the Literature of Healing Springs”; Mary Campbell Baine, *Wonder and Science: Imagining Worlds in Early Modern Europe*; Reviel Netz, *The Shaping of Deduction in Greek Mathematics: A Study in Cognitive History*; N. Katherine Hayles, *How We Became Posthuman: Virtual Bodies in*

CHRONOLOGY OF PUBLICATIONS AND EVENTS

*Cybernetics, Literature, and Informatics*; Friedrich Kittler, *Gramophone Film Typewriter*; Jean Petitot, Francisco J. Varela, Bernard Pachoud, and Jean- Michel Roy, eds., *Naturalizing Phenomenology: Issues in Contemporary Phenomenology and Cognitive Science*

Twenty-First Century

- 2000–10 *Science and Cultural Theory* book series at Duke University Press
- 2000 Isabelle Stengers, *The Invention of Modern Science* [*Invention des sciences modernes*, 1993]; Brian Rotman, *Mathematics as Sign: Writing, Imagining, Counting*; Franco Moretti, “Conjectures on World Literature”; Mark Hansen, *Embodying Technesis: Technology Beyond Writing*
- 2001 James J. Bono, “Why Metaphor? Toward a Metaphorics of Scientific Practice”; Steven Meyer, *Irresistible Dictation: Gertrude Stein and the Correlations of Writing and Science*; Michael Whitworth, *Einstein’s Wake: Relativity, Metaphor, and Modernist Literature*; Mary Thomas Crane, *Shakespeare’s Brain: Reading with Cognitive Theory*; Alan Richardson, *British Romanticism and the Science of the Mind*
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