

READINGS. "Canonical texts" and research literature from the perspective of the technology-oriented "Berlin School" of Media Science (predominantly in English; partly other non-German languages)

Thematic sections:

Well-defined Media Science (Classics and contemporary)
Source-Critical Studies
Philosophy of Technology
Archaeology of Knowledge, Media Epistemology, Media Terms
Time Phenomenology
Media Phenomenology
Digital Humanities
Media Law / Media Economy / Media Ecology / Media Infrastructures
Cultural Techniques as Method and as Practice
Technology and Techno*lógos*
Alphabets, (cultural-)Technical Writing, Codes
Language, Speech Machines
Media Philology
(Media-)Physics
Current, Electricity, Electro Technics, the "Field", "Ether"
Materiality of Media
Quantum Physics, -Informatics and -Computer
Printing Press, Typography, Typewriter
Technological *Reenactment*
Media Museology and Media Theater
Photography
Graphical Method, Chronophotography
Cinematography
Technical Images
Media (Research) Art and -Aesthetics
Generative Aesthetics / Computer Art
"Audiovisual" Media
Auditive Media
Optical Media
Phonograph, Grammophone, Sound Carrier
Chronometrics
Time-Critical Media
Oscillations, Frequencies
"Live" vs. "Real-Time"
Technically induced "Ghost" Media
Search Engines, Image Sorting, Audio Matching, Motion Tracking
Thermionic Tubes
Measuring Media
Electronics
Communication Theory and Definitions of Information
Information Aesthetics

Technical Disbances, Noise
Broadcasting Technique / Radar (Electromagnetic Waves)
Broadcasting Media a) Radio
Broadcasting Media b) Television
Memory and Storage Technologies
Electro-Magnetic Storage Media I: Tape Recorder
Electro-Magnetic Storage Media II: Video
Digital Storage and Storage Theory
Logical Machines
Algorithms / Algorithmization
Symbolical Machines / *Computing*
(Techno-)Mathematics for Media Science
Modelling and Simulation
Analog Computing
Digitalization
Programming, Informatics, Software
Hypertext, Hypermedia
World Wide Web, Internet, Cyberspace
"Social Media"
Communication Studies
History of Technology and Science
Media History
Media Archaeology
Media-Induced Time Processes
Postal System, (Image-)Telegraphy, Telephone
Optical Media
Interfaces
Time-Based and -Critical Media Processes
Sonic Sense of Time
Critical Theory / Cultural Studies / Diskourse Analysis / Systems Theory
Media Semiotics / Signal Processing
Apparatus and French Media Theory
Automata, Androids
Artificial Intelligence, "Machine Learning"
Logics, Combinatorics
Acoustic Archaeology, Sound and Vibrations, Sonification
Electronic and Algorithmic Music, Synthesizer, Sonicity
Cybernetics
Mechanics, Machines, Mechanization
Analog / digital
Computer Games, "Physics" in Engines
Media Archives

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This listing of published literature in Media Science focuses on definitions of operative Media, from the technology-oriented point of view of *Media Theories* at Humboldt University, Berlin (with its orientation at media

knowledge as epistemic form). Media archaeology is understood here has the recurrence (not reduction) of all media-theoretical argumentation to its technological ground (*arché*). But in order to create sparks of insight from such a *close reading* of technical writings, it is necessary to practice the critical questioning of the "essence of technology" (Heidegger); therefore media-philosophical readings are included as well, and such theories that explicitly link technological knowledge with media-scientific insights in productive ways.

The thematic sections are roughly chronologically arranged (publication dates) and divided into "canonical" base texts ("classics") and relevant secondary literature (demarcated by "- - -"). This bibliography primarily encompasses printed works (which will therefore endure); occasionally volatile *online* knowledge is included as well.

Well-defined Media Science (Classics and contemporary)

Fritz Heider, Thing and Medium, in: idem, On Perception, Event Structure, and Psychological Environment. Selected Papers = Psychological Issues, vol. 1, no. 3 (Monograph), New York (International Universities Press) 1959, 1-35

Walter Benjamin, The Work of Art in the Age of Mechanical Reproduction [1936], in: idem, Illuminations, ed. Hannah Arendt, transl. Harry Zohn, New York (Shocken) 1969, 217-251

J. D. North, The rational behavior of mechanically extended man, Wolverhampton (Boulton Paul Aircraft Ltd.), 1954

idem, Application of Communication Theory to the Human Operator, in: Colin Cherry (Hg.), Information Theory. Papers read at a Symposium on 'Information Theory' held at the Royal Institution, London, September 12th to 16th 1955, London (Butterworths Scientific Publications) 1956, 372-389

Edward T. Hall, The Silent Language, Garden City, N. Y. (Doubleday) 1959

Marshall McLuhan, Understanding Media. The Extensions of Men, New York (McGraw Hill) 1964

idem / Eric McLuhan, Laws of Media. The New Science, Toronto / Buffalo / London (Univ. of Toronto Press) 1988

idem / Bruce R. Powers, The Global Village. Transformations in World Life and Media in the 21st Century, Oxford et al. (Oxford University Press) 1989

idem / Quentin Fiore, *The Medium is Massage* [AO 1967]

idem, *Counterblast*. 1954 Edition, published by transmediale.11 Berlin (in cooperation with Gingko Press) 2011

Letters of Marshall McLuhan, selected and edited by Matie Molinaro / Corinne McLuhan / William Toye, Toronto / Oxford / New York (Oxford University Press) 1987

- - -

Samuel M. Weber, *Mass Mediauras: Essays on Art, Technics and Media*, Stanford, Cal. (Stanford UP) 1996 (Publications of the Power Institute, Sydney)

- - -

Joshua Meyrowitz, *No Sense of Place. The impact of electronic media on social behavior*, New York (Oxford University Press) 1985

Gregory Ulmer, *Teletheory. Grammatology in the Age of Video*, New York (Routledge) 1989

Régis Debray, *Pour une médiologie. Définitions premières*, in: *Manifestes médiologiques*, Paris 1994, 21-33

Vilém Flusser, *Introduction à la médiologie*, Paris (PUF) 2000

Lev Manovich, *The Language of New Media*, Cambridge, Mass. (The MIT Press) 2001

Mark B. N. Hansen, *New Philosophy of New Media*, Cambridge, Mass. (MIT Press) 2004

Neue Methode: Toward an Integral Theory of Media (<http://www.wmg-seminar.de>)

Emmanuel Alloa, *Metaxu. Figures de la médialité chez Aristote*, in: *Revue de Métaphysique et de Morale*, Bd. 106, Heft 2 (2009), 247-262

Matthew Fuller / Andrew Goffey, *Evil Media*, Cambridge, Mass. / London (MIT Press) 2012

Mark B. Hansen, *Feed-Forward. On the Future of the Twenty-First Century Media*, Chicago / London (University of Chicago Press) 2015

Source-Critical Studies

Mark C. Marino (ed.), *Critical Code Studies*, Cambridge, Mass. (MIT Press) 2020

Philosophy of Technology

Samuel Butler, *Erewhon*, 1872

Martin Heidegger, *The Age of the World Picture*, in: idem, *The Question Concerning Technology and Other Essays*, New York, NY (Garland) 1977, 115-154

Gilbert Simondon, *Du Mode d'Existence des Objets Techniques*, Paris (Aubier) 1958 (new edition 2005); in English: *On the Mode of Existence of Technical Objects*, transl. Cecile Malaspina / John Rogove, Minneapolis, MN (Univocal Press) 2017; partial transl. into English (Ninian Mellamphy): *On the Mode of Existence of Technical Objects*, London (University of Western Ontario Press) 1980, *online*
<http://accursedshare.blogspot.com/2007/11/gilbert-simondon-on-mode-of-existence.html>

Bruno Latour, *Drawing things together*, in: Michael Lynch / Stevel Woolgar (eds.), *Representation in Scientific Practice*, Cambridge, Mass. (MIT Press) 1990, 19-68

Jean-François Lyotard, *Logos and Techne*, or *Telegraphy*, in: idem, *The Inhuman. Reflections on Time* [*L'Inhuman: Causeries sur le temps, Paris 1988], Stanford, Cal. (Stanford University Press) 1991, 47-57

- - -

Otto Mayr (ed.), *Philosophers and Machines*, New York (Science History Publications) 1976, 147-157

Bernard Stiegler, *Technics and Time*, Bd. 1: *The Fault of Epimetheus*, Stanford (Stanford University Press) 1998

N. Katherine Hayles, *How We Think. Digital media and contemporary technogenesis*, Chicago / London (Univ. of Chicago Pr.) 2012

Ian Bogost, *Alien Phenomenology, or What It's Like to Be a Thing*, Minneapolis / London (Univ. of Minnesota Press) 2012

Levi R. Bryant, *Onto-Catography. An Ontology of Machines and Media*, Edinburgh (Edinburgh University Press) 2014

Yuk Hui, *The Question Concerning Technology in China. An Essay in*

Cosmotechnics, Falmouth (Urbanomic) 2016

Archaeology of Knowledge, Media Epistemology, Media Terms

M. Polanyi, *The Tacit Dimension*, Garden City, N.Y. (Doubleday) 1966

Michel Foucault, *The Archaeology of Knowledge and the Discourse on Language* [FO 1969], transl. from French by A. M. Sheridan Smith, New York (Pantheon Books) 1972

Karl R. Popper, *Objective Knowledge. An Evolutionary Approach*, Oxford, 2nd. ed. (Clarendon Press) 1979, 108

Bruno Latour, *Pandora's Hope. Essays on the Reality of Science Studies*, Cambridge, Mass. (Harvard UP) 1999

- - -

Martin Kusch, *Discursive formations and possible worlds. A reconstruction of Foucault's archeology*, in: *Science Studies* 1/1989, 17-25

Davis Baird, *Thing Knowledge. A Philosophy of Scientific Instruments*, Berkeley / Los Angeles / London (University of California Press) 2004

Time Phenomenology

Edmund Husserl, *On the phenomenology of the consciousness of internal time (1893-1917)* [1928], transl. John Barnett Brough, Dordrecht (Kluwer Academic Publishers) 1991

John Ellis McTaggart, *The Unreality of Time*, in: *Mind*, vol. 17 (1908), 457-473; reprinted in J. M. E. McTaggart, *The Nature of Existence*, vol. 2, Cambridge (Cambridge University Press) 1927, book 5, chap. 33

Media Phenomenology

Laura U. marks, *Touch. Sensuous Theory and Multisensory Media*, Minneapolis / London (University of Minnesota Press), 2002

Ian Bogost, *Alien Phenomenology, or What It's Like to Be a Thing*, Minneapolis / London (Univ. of Minnesota Press) 2012

Digital Humanities

Friedrich Kittler, Universities: Wet, Hard, Soft, and Harder, in: Critical Inquiry, vol. 31, no 1 (Autumn 2004), 244-255;
https://monoskop.org/images/d/dc/Kittler_Friedrich_2004_Universities_Wet_Hard_Soft_and_Harder.pdf

- - -

Susan Schreibman / Ray Siemens / John Unsworth (Hg.), A Companion to Digital Humanities, Malden, MA et al. (Blackwell) 2004

George Tzanetakis et al., Computational Ethnomusicology, in: Journal of Interdisciplinary Music Studies, Fall 2007, vol. 1, issue 2, 1-24

Anne Burdick / Johanna Drucker / Peter Lunenfeld / Todd Presner / Jeffrey Schnapp, Digital Humanities, Cambridge, MA (MIT Press) 2012

David M. Berry (Hg.), Understanding digital humanities, Houndmills (Pelgrave Macmillan) 2012

Lev Manovich, Instagram and Contemporary Image, Software Studies Initiative, 2017 (<http://manovich.net/index.php/projects/instagram-and-contemporary-image>); darin bes. "Introduction: Instagram Platform as a Medium", 9-23

idem, Cultural Analytics, M.I.T. Press (Digital Humanities & New Media series)

Media Law / Media Economy / Media Ecology / Media Infrastructures

Pierre Teilhard de Chardin, Le Phénomène humain, 1955; engl.: The Phenomenon of Man, 1961

- - -

Lawrence Lessig, Code and other Laws of Cyberspace, New York (Basic Books) 1999

Cornelia Vismann, Akten. Medientechnik und Recht, Frankfurt / M. (Fischer) 2002

Gerfried Stocker / Christine Schöpf (Hg.), Code: The Language of Our Time, Ostfildern (Hatje Cantz) 2003

Alexander Galloway, Protocol. How Control Exists after Decentralization, Cambridge, Mass. / London (MIT) 2004

Matthew Fuller, *Media Ecologies. Materialist Energies in Art and Technoculture*, Cambridge, Mass. / London (MIT Press) 2005

John Durham Peters, *The Marvellous Clouds. Towards a Philosophy of Elementary Media*, Chicago / London (University of Chicago Press) 2015

Jussi Parikka, *So-called Nature: Friedrich Kittler and Ecological Media Materialism*, in: Nicole Starosielski / Janet Walker (eds), *Sustainable Media. Critical Approaches to Media and Environment*, New York / London (Routledge) 2016, 196-211

Andrew Lison, *Toward a Theory of 100% Utilization*, in: *Configurations*, vol. 28, no. 4 (Fall 2020), 491-519

Matthew Hockenberry / Nicole Starosielski / Susan Ziegler (eds.), *Assembly Codes. The Logistics of Media*, Durham (Duke University Press), 2021

Cultural Techniques as Method and as Practice

Ernst Kapp, *Elements of a Philosophy of Technology. On the Evolutionary History of Culture [GO 1877]*, University of Minnesota Press, 2018

- - -

Wolfgang Schäffner, *Architecture of the Openings: Windows, Doors and Switches*, in: Joachim Krausse / Stephan Pinkau (eds.), *Architecture of the Medial Spaces*, Dessau (Stiftung Bauhaus) 2006, 74-79

Theory, Culture & Society, Bd. 30, Heft 6 (November 2013), thematic issue *Cultural Techniques*, eds. Jussi Parikka / Geoffrey Winthrop-Young

Bernhard Siegert, *Cultural Techniques: Grids, Filters, Doors, and Other Articulations of the Real*, transl. Geoffrey Winthrop-Young, New York (Fordham University Press) 2014

Entry "Cultural Techniques", https://monoskop.org/Cultural_techniques

Technology and Technológos

Lewis Mumford, *Technics and Civilization* (*1934), New York / Burlingame (Harcourt) 1963

Jacques Ellul, *The Technological Society*, New York (Vintage Books) 1964; orig.: *La Technologie ou l'Enjeu du Siècle*, Paris (Colin) 1954

- - -

Recovering Mechanology, web site of research project Ghislain Thibault / Mark Hayward, <http://mecanologie.ca>

Mark B. Hansen, Symbolizing Time: Kittler and Twenty-First-Century Media, in: Stephen Sale / Laura Salisbury (eds.), *Kittler Now. Current Perspectives in Kittler Studies*, Cambridge UK (Polity Press), 2015, 210-237

Richard Grusin, Radical Mediation, in: *Critical Inquiry*, vol. 42, no. 1 (Autumn 2015), 124-148; <https://uwm.edu/english/wp-content/uploads/sites/109/2015/09/Grusin-Radical-Mediation.pdf>

Alphabets, (Culture-)Technical Writing, Codes

Walter Ong, *Orality and Literacy. The Technologizing of the Word*, London (Methuen) 1982

- - -

Jack Goody, *The Logic of Writing and the Organization of Society*, Cambridge et al. (Cambridge UP) 1986

Denise Schmandt-Besserat, *Before Writing*, vol. I: From Counting to Cuneiform, Austin (University of Texas Press) 1992

Barry Powell, *Homer and the Origin of the Greek Alphabet*, Cambridge (Cambridge UP) 1991; ders.: *Writing and the Origins of Greek Literature*, Cambridge, (Cambridge UP) 2002

Language, Speech Machines

Cecil H. Coker / Peter B. Denes / Elliot N. Pinson, "Manual" to: Bell Labs Speech Synthesis kit *Speech Synthesis: an Experiment in Electronic Speech Production*, designed by Homer Dudley (Bell Telephone Laboratories), Waverly Press, Baltimore, Md., 1963; *online* http://www.beatriceco.com/bti/porticus/bell/belllabs_kits_ss.html; accessed 9 March, 2015

Media Philology

(Media-)Physics

Bernd Herzogenrath (ed.), *Media / Matter. The Materiality of Media / Matter as Medium*, New York / London (Bloomsbury Academic) 2015

Current, Electricity, Electro Technics, "Field", "Ether"

Edmund Whittaker, *A History of the Theories of Aether & Electricity*, New York (Dover) 1989 [zusammengefügte Ausgabe aus *London 1951 (Bd. 1) und 1953 (Bd. 2)]

Milec Capek (Hg.), *The Concepts of Time and Space. Their Structure and Their Development*, Dordrecht / Boston, Mass. (Reidel) 1976

Rupert Sheldrake, *The Presence of the Past*, New York (Time Book) 1988

Materiality of Media

Friedrich Kittler, *There is No Software*, in: *Stanford Literary Review* vol. 9, no. 1 (Spring 1992), 81-90; as well in: idem, *Literature, Media, Information Systems: Essays*, edited by John Johnston, Amsterdam (G+B Arts International) 1997, 147-155

Karen Barad, *Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter*, in: Corinna Bath (ed.), *Materialität Denken*, Bielefeld (transcript) 2005, 187-216

Quantum Physics, -Informatics and -Computer

Karen Barad, *Meeting the Universe Halfway. Quantum Physics and the Entanglement of Matter and Meaning*, Durham / London (Duke University Press) 2007

- - -

David Fredkin, *Digital mechanics. An informational process based on reversible universal automata*, in: *Physica D: Nonlinear Phenomena*, 45 (1-3) 1990, 254-270

Mark B. N. Hansen, *Media Entangled Phenomenology*, in: Rosi Braidotti / Rick Dolphijn, *Philosophy After Nature*, London / New York (Rowman & Littlefield) 2017, 73-98

Printing Press, Typography, Typewriter

Claude Shannon, Prediction and Entropy of Printed English, in: Bell System Technical Journal, vol. 30 (1951), 50-64

William M. Ivins, Prints and Visual Communication, London (Routledge & Kegan Paul) 1953

Marshall McLuhan, The Gutenberg Galaxy. The Making of Typographic Man, Toronto (University of Toronto Press) 1962

Friedrich Kittler, The Mechanized Philosopher, in: Looking After Nietzsche, ed. Laurence A. Rickels, Albany, N.Y. 1990, 195-207

Elizabeth L. Eisenstein, The Printing Press as an Agent of Change, Cambridge / London 1979], Vienna (Springer) 1997

Darren Wershler-Henry, The Iron Whim. A Fragmented History of Typewriting, Toronto (McClelland & Stewart) 2005

Technological *Reenactment*

Doron Swade, Collecting Software: Preserving Information in an Object-Centred Culture, in: History and Computing Vol. 4 No 3 (1992), 206-210; published again in: U. Hashagen / R. Keil-Slawik / A. L. Norberg (eds), History of Computing: Software Issues, Berlin / Heidelberg (Springer) 2002, 227-235

Jeff Rothenberg, Ensuring the Longevity of Digital Documents, in: Scientific American, Vol. 272, No. 1 (January 1995), 42-47

Simon Emmerson, Living Electronic Music, new ed. Aldershot (Ashgate) 2007

Alain Bonardi / Jerome Barthélemy, The Preservation, Emulation, Migration, and Virtualization of Live Electronics for Performing Arts. An Overview of Musical and Technical Issues, in: Journal on Computing and Cultural Heritage, vol. 1, no. 1 (2008)

Media Museology and Media Theater

Marcel Stanislas Ducout, La danse sonore. Synthèses de la danse et de la musique, Paris (Presses universitaires de France) 1940

Brenda Laurel, *Computer as Theatre*, Reading, Mass. 1991

Photography

William Henry Fox Talbot, *The Pencil of Nature*, 1844

Roland Barthes, *La chambre claire. Notes sur la photographie*, Paris (Seuil) 1980

Vilém Flusser, *Into the Universe of Technical Images*, Minneapolis (University of Minnesota Press) 2011

- - -

Beaumont Newhall (Hg.), *Photography. Essays and Images*, London (Secker & Warburg) 1980

David Green / Joanna Lowry (Hg.), *Stillness and Time. Photography and the moving image*, Brighton (Photoforum / Photoworks) 2006

David Green / Joanna Lowry (Hg.), *Stillness and Time. Photography and the Moving Image*, Manchester (Cornerhouse) 2006

Trond Lundemo, *Digital Returns: The Archives of the Planet and the 'Rhythm of Life'*, in: Trond Erik Bjorli / Kjetil Ansgar Jakobsen (eds.), *Cosmopolitics of the Camera. Albert Kahn's Archives of the Planet*, Bristol (Intellect) 2020, Chapter twelve, 292-312

Graphical Method, Chronophotography

Eadweard Muybridge, *Animals in Motion* [1899], hg. v. Lewis S. Brown, New York (Dover) 1957

Étienne-Jules Marey, *La Méthode Graphique dans les Sciences Expérimentales*, Paris (Masson) 1894

ders., *Du Mouvement dans les Fonctions de la Vie*, Paris (Germer Baillière) 1868

ders., *Le Mouvement*, Paris (Masson) 1894

- - -

Marta Braun, *Picturing Time. The Work of Étienne-Jules Marey*, Chicago / London (University of Chicago Press) 1992

Lorraine Daston / Peter Galison, The image of objectivity, in: Representations 37 (1992), 67-106

Daniel Rosenberg / Anthony Grafton, Cartographies of Time, New York (Princeton Architectural Press) 2010

Laura Mulvey, Death 24x a Second. Stillness and the Moving Image, London (Reaktion Books) 2006

David Green / Joanna Lowry (eds.), Stillness and Time. Photography and the Moving Image, Manchester (Cornerhouse) 2006

Mara Mills, Deaf Jam. From Inscription to Reproduction to Information, in: Social Text 102, vol. 28, No. 1 (Spring 2010), 35-58

Eivind Røssaak (ed.), Between Stillness and Motion: Film, Photography, Algorithms, Amsterdam (Amsterdam University Press) 2011

Cinematography

Hugo Münsterberg, The Photoplay. A Psychological Study, New York / London (Appleton) 1916

- - -

C. W. Ceram, Archaeology of Cinema, translated by Richard Winston, London (Thames & Hudson) 1965

Gene Youngblood, Expanded Cinema, 1970; *online*
http://www.vasulka.org/Kitchen/PDF_ExpandedCinema/ExpandedCinema.html

Michel Chion, La voix au cinéma, Paris (Cahiers du Cinéma / Ed. de l'Etoile) 1982. Engl.: The Voice in Cinema. New York: Columbia University Press 1998

James Monaco, How to read a film, Oxford 1977

Gilles Deleuze, Cinema 2: The Time-Image, transl. Hugh Tomlinson / Robert Galeta, Minneapolis (Univ. of Minnesota Press) 1989

Michel Chion, Audio-vision. Sound on screen, New York (Columbia University Press) 1990

Scott Curtis, Still/Moving. Digital Imaging and Medical Hermeneutics, in: Lauren Rabinovitz / Abraham Geil (eds.), Memory Bytes. History, Technology, and Digital Culture, Durham / London (Duke University Press) 2004, 218-253

David Norman Rodowick, Gilles Deleuze's Time Machine, Durham 1997

ders., The Virtual Life of Film, Cambridge, MA / London (Harvard UP) 2007

Mary Ann Doane, The Emergence of Cinematic Time. Modernity, Contingency, the Archive, Cambridge, Mass. (Harvard Univ. Press) 2002

Giovanna Fossati, From Grain to Pixel. The Archival Life of Film in Transition, Amsterdam (Amsterdam University Press) 2009

Erkki Huhtamo, Illusions in Motion. Media Archaeology of the Moving Panorama and Related Spectacles, Cambridge, Mass. / London (MIT Press) 2013

Markos Hadjioannou, From Light to Byte. Toward an Ethics of Digital Cinema, Minneapolis (Univ. of Minnesota Press) 2012

Thomas Elsaesser, Film History as Media Archaeology: Tracking Digital Cinema, Amsterdam (Amsterdam University Press) 2016

Benoît Turquety, Inventing Cinema: Machines, Gestures and Media History [FO 2014], Amsterdam (UP) 2019

Technical Images

Laura U. Marks, How Electrons Remember, How Electrons Remember, in: Millennium Film Journal No. 34 (Fall 1999), thematic issue "The Digital", <http://www.mfj-online.org/journalPages/MFJ34/LMarks.html>

Mary Ann Doane, The Emergence of Cinematic Time, Cambridge, Mass. / London: Harvard UP 2002

Enrico Natale / Christiane Sibille / Nicolas Chachereau et al. (ed.), La Visualisation des Données en Histoire, Zürich (Chronos) 2015

Francesco Striano, Log.icona. La co-originarietà di lógos e eikón riemerge nel digitale, in: Nicola Russo / Joaquin Mutchinick (eds.), Immagine e Memoria nell'Era Digitale [Quaderni di Mechane, no. 1], Milano / Udine (Mimesis) 2020, 77-95

Media (Research)Art and -Aesthetics

Dieter Daniels, *Artists as Inventors / Inventors as Artists*, Ostfildern (Hatje Cantz) 2008

Liv Hausken (Hg.), *Thinking Media Aesthetics. Media Studies, Film Studies and the Arts*, Frankfurt / M. et al. (Peter Lang) 2013

Joasia Krysa / Jussi Parikka (Hg.), *Writing and Unwriting (Media) Art History*. Erkki Kurenniemi in 2048, Cambridge, Mass. (MIT Press) 2015

Generative Aesthetics / Computer Art

A. Michael Noll, *Human or Machine: A Subjective Comparison of Piet Mondrian's "Composition with Lines" (1917) and a Computer-Generated Picture*", in: *The Psychological Record*, Bd. 16 (1966), 1-10

- - -

Pamela McCorduck, *Aaron's Code. Meta-Art, Artificial Intelligence, and the Work of Harold Cohen*, New York (Freeman) 1991

Oliver Grau, *Virtual Art. From Illusion to Immersion*, Cambridge, Mass. (MIT Press) 2003

"Audiovisual" Media

Dieter Daniels / Sandra Naumann (Hg.), *See this Sound. Audiovisuology. Essays. Histories and Theories of Audiovisual Media and Arts*, Köln (Walther König) 2011

Derek Holzer, *Vector Synthesis. A Media Archaeological Investigation into Sound-Modulated Light*, 2019 (private book edition of M. A. thesis in *Sound in New Media*, Aalto University, Helsinki, 2019)

Auditive Media

Jan Thoben, *Technical Sound-Image Transformations*, in: Dieter Daniels / Sandra Naumann with Jan Thoben (ed.), *See this sound. Audiovisuology. Compendium. An Interdisciplinary Survey of Audiovisual Culture*, Köln (Walther König) 2010, 425-431

Phonograph, Grammophone, Sound Carrier

Gregory Benford, Time Shards, in: Universe 9, hg. v. Terry Carr, New York (Fawcett) 1979, 88-98

Thomas Y. Levin, For the Record: Adorno on Music in the Age of its Technological Reproducibility, in: October 55 (Winter 1990), 23-47

Eric Rothenbuhler / John Durham Peters, Defining Phonography. An Experiment in Theory, in: The Musical Quarterly, Bd. 81, Heft 2 (1997), 242-264

Lisa Gitelman, Scripts, grooves, and writing machines: Representing technology in the Edison era, Stanford, CA (Stanford University Press) 1999

Jonathan Sterne, The Audible Past. Cultural Origins of Sound Reproduction, Durham / London (Duke University Press) 2003

John Durham Peters, Helmholtz, Edison, and Sound History, in: Lauren Rabinovitz / Abraham Geil (eds.), Memory Bytes. History, Technology, and Digital Culture, Durham / London (Duke University Press) 2004, 177-198
Nikolaus Wegmann / Harun Maye / Cornelius Reiber (Hg.), Origianl / Ton. Zur Mediengeschichte des O-Tons, Konstanz (Universitätsverlag) 2006

Jody Berland, North of Empire. Essays on the Cultural Technologies of Space, Durham / London (Duke University Press) 2009, Kapitel "The Musicking Machine", 155-184

Jonathan Sterne, Mp3. The Meaning of a Format, Durham, North Carolina (Duke University Press) 2012

Patrick Feaster, Pictures of Sound. One thousand years of educes audio: 980-1980, Atlante, GA (Dust-to-Digital) 2012

Alain Benninger, 2D and 3D Scanning of Metallic Records and Masters, Bachelor Thesis, École d'ingénieurs et d'architectes de Fribourg, 10 August 2012, online: http://irene.cornell7.net/Parry%20Discs/B3DM_documentation.pdf

Elodie A. Roy, Media, Materiality and Memory. Grounding the Groove, Farnham (Ashgate) 2015

Chronometrics

J. D. North, Monasticism and the First Mechanical Clocks, in: J. T. Fraser / N. Lawrence (Hg.), The Study of Time II. Proceedings of the Second Conference of the International Society for the Study of Time, Berlin / Heidelberg / New York (Springer) 1975, 381-398

Gerhard Dohrn-van Rossum, *History of the Hour*, Chicago (University of Chicago Press) 1996

Adrian Mackenzie, *The Technicity of Time. From 1.00 oscillations/sec. to 9,192,631,770 Hz*, in: *Time and Society*, Bd. 10, Heft 2/3 (2001), 235-257

Reid Oda / Rebecca Fiebrink, *The Global Metronome: Absolute Tempo Sync For Networked Musical Performance*, in: *Proceedings of the International Conference on New Interfaces for Musical Expression* (2016), 26-31; <http://doi.org/10.5281/zenodo.1176096>

Jan Claas van Treeck, *The Double-Sonic Foundation of Techno-mathematic Media. An untimely entry* [November 2018], *online* https://www.academia.edu/41841860/The_Double-Sonic_Foundation_of_Techno-Mathematic_Media._An_untimely_entry

Stamatia Portanova, *Whose Time Is It? Asocial Robots, Syncolonialism, and Artificial Chronological Intelligence*, London (Sternberg Press) 2021

Time-Critical Media

Jimena Canales, *A Tenth of a Second. A History*, Chicago / London (Univ. of Chicago Pr.) 2009

Oscillations, Frequencies

Julian Blanchard, *The History of Electrical Resonance*, in: *Bell System Technical Journal*, Bd. 20, Heft 4 (1941), 415-433

Ralph H. Abraham / Christopher D. Shaw, *Dynamics. The Geometry of Behavior*, 2. Ausg. Redwood City et al. (Addison-Wesley) 1992

"Live" vs. "Real-Time"

Daniel Dayan / Elihu Katz, *Media Events. The Live Broadcasting of History*, Cambridge, MA 1992

Philip Auslander, *Liveness. Performance in a mediatized culture*, London / New York (Routledge) 1999

Thomas Y. Levin, *Rhetoric of the Temporal Index: Surveillant Narration and the Cinema of "Real Time"*, in: idem / Ursula Frohne / Peter Weibel (eds.), *CTRL[SPACE]. Rhetorics of Surveillance from Bentham to Big Brother*, Cambridge, Mass. (MIT) / Karlsruhe (ZKM) 2002, 578-593

Nick Collins, Alex McLean, Julian Rohrer, Adrian Ward, Live Coding in Laptop Performance, in: Organised Sound, Bd. 8, Heft 3 (Dezember 2003), 321-330

Douglas Rushkoff, Present Shock. When Everything Happens Now, New York (Penguin) 2013

Hartmut Winkler, Geometry of Time. Media, Spatialization, and Reversibility, presentation at conference *Media Theory on the Move*, University of Potsdam, May 21-24th, 2009. Preprint: www.uni-paderborn.de/~winkler/hase_e.pdf

Technically Induced "Ghost" Media

Jeffrey Sconce, Haunted Media. Electronic Presence from Telegraphy to Television, Durham / London (Duke UP) 2000

Joe Banks, Rorschach Audio: Ghost Voices and Perceptual Creativity, in: Leonardo Music Journal, Vol. 11 (2001), 77-83; ders., Rorschach Audio. Art & Illusion, London (Strange Attractor Press) 2012

Search Engines, Image Sorting, Audio Matching, Motion Tracking

Brian Whitman / Tristan Jehan, Determining The Similarity Of Music Using Cultural And Acoustic Information, U.S. Patent, Nr. US 8073854 B2, December 2011;
<https://patentimages.storage.googleapis.com/1d/8f/72/7c27515a59ed9a/US8073854.pdf>

- - -

Erwin M. Bakker et al. (Hg.), Image and Video Retrieval, Berlin / Heidelberg (Springer) 2003

Hyoung-Gook Kim / Nicolas Moreau / Thomas Sikora, MPEG-7 Audio and Beyond. Audio Content Indexing and Retrieval, Chichester (John Wiley) 2005

Meinard Müller, Information Retrieval for Music and Motion, Berlin / Heidelberg / New York (Springer) 2007

Lev Manovich, How to Compare One Million Images?, in: Understanding Digital Humanities, edited by David M. Berry, Basingstoke (Palgrave Macmillan) 2012, 249-278

Thermionic Tubes

Measuring Media

Peter Galison, *Image and Logic. The Material Culture of Microphysics*, Chicago (University of Chicago Press) 1997

Cornelius Borck, *Electricity as a medium of psychic life. Electrotechnical adventures into psychodiagnosis in Weimar Germany*, in: *Science in Context* vol. 14 (2001), 565-590

Electronics

Communication Theory and Definitions of Information

R. V. L. Hartley, *Transmission of Information*, in: *Bell System Technical Journal*, Bd. 7 (1928), 535-563

Leon Brillouin, *Maxwell's Demon Cannot Operate: Information and Entropy*, in: *Journal of Applied Physics* vol. 22 (1951), 334-337

Claude E. Shannon, *A Mathematical Theory of Communication*, in: *Bell System Technical Journal*, vol. 27, July 1948 / October 1948, 379-423 / 623-656; under title "The Mathematical Theory of Communication" in: idem / Warren Weaver, *The Mathematical Theory of Communication*, Urbana, Illinois (Univ. of Illinois Press) 1949

John R. Pierce, *Symbols, Signals and Noise*, New York (Harper & Brothers) 1961

- - -

Michel Serres, *Le Parasite*, Paris (Grasset) 1980

Harvey S. Leff / Andrew F. Rex (eds.), *Maxwell's Demon. Entropy, Information, Computing*, Bristol (Adam Hilger) 1990

Neil Gershenfeld, *The Physics of Informatic Technology*, Cambridge (UP) 2000

Cecile Malaspina, *An epistemology of noise*, New York / London (Bloomsbury Academic) 2018; e-book: <https://huberlin.hosted.exlibrisgroup.com/primo-explore/fulldisplay?>

vid=hub_ub&docid=HUB_UB_ALMA_DS51662453610002882&context=L
&search_scope=default_scope&lang=de_DE

Information Aesthetics

Cybernetic-Serendipity. the computer and the arts, ed. Jasia Reichardt, London / New York (Studio International special issue) 1968

Y. Bar-Hillel, Language and Information, Jerusalem 1964

Friedrich A. Kittler / Sara Ogger, Computer Graphics: A Semi-Technical Introduction, in: Grey Room, no. 2 (Winter 2001), 30-45

- - -

Paul Brown / Charlie Gere / Nicholas Lambert / Catherine Mason (eds.), White Heat Cold Logic: British Computer Art 1960 - 1980, Cambridge, MA (MIT Press) 2008

Peter Krapp, Noise Channels. Glitch and Error in Digital Culture, Minneapolis / London (University of Minnesota Press) 2011

Margit Rosen (Hg.), A Little-Known Story about a Movement, a Magazine, and the Computer's Arrival in Arts. New Tendencies and Bit International, 1961-1973, Karlsruhe (ZKM) / Cambridge, Mass. (MIT) 2011

Technical Disturbance, Noise

Claude E. Shannon / Warren Weaver, The mathematical theory of communication [*1949], Urbana, Ill. (University of Illinois Press), 1963 Lillo, Berlin 2001

Jeffrey Sconce, The voice from the void. Wireless, modernity and the distant dead, in: International Journal of Cultural Studies Vol. 1, no. 2 (1998), 211-232

Mary Ann Doane, Information, Crisis, Catastrophe, in: Patricia Mellencamp (Hg.), Logics of Television. Essays in cultural criticism, Bloomington / Indianapolis (Indiana UP) 1990, 222-239

Roland Barthes, Le bruissement de la langue, Paris (Sueil) 1984, 29-34

Broadcasting Technique / Radar (Electromagnetic Waves)

James Clark Maxwell, A Dynamical Theory of the Electromagnetic Field (1865)

Broadcasting Media a) Radio

Theodor W. Adorno, Current of Music. Elements of a Radio Theory [1940], hg. v. Robert Hullot-Kentor, Frankfurt / M. (Suhrkamp) 2006

- - -

Hugh G. J. Aitken, Syntony and Spark. The Origins of Radio, New York / London / Sydney 1976

Heidi Grundmann et al. (Hg.), Re-inventing Radio. Aspects of Radio as Art, Frankfurt / M. (Revolver) 2008

Adrian Mackenzie, Wirelessness. Radical Empiricism in Network Cultures, Cambridge, Mass. / London (MIT Press) 2010

Broadcasting Media b) Television

E. E. Fournier d'Albe, The Moon-Element. An Introduction to the Wonders of Selenium, London 1924

A. Frederick Collins, Experimental Television, Boston (Lothrop, Lee & Shepard) 1932; Reprint Bradley, IL (Lindsay) 1991

Television and Me. The Memoirs of John Logie Baird [1945], hrsg. v. Malcolm Baird, Edinburgh (mercatpress) 2004

- - -

Tony Schwartz, The responsive chord, Garden City, New York (Anchor books) 1974

Jane Feuer, The Concept of Live Television: Ontology as Ideology, in: E. Ann Kaplan (Hg.), Regarding Television. Critical Approaches - an Anthology, Los Angeles, Cal. (University Publications of America / American Film Institute) 1983

Richard Dienst, Still Life in Real Time. Theory after Television, Durham / London (Duke UP) 1994

Graham Walker / Phil Sheppard (Hg.), Telepresence, Boston et al. (Springer Science+Business Media) 1999

Donald F. McLean, Restoring Baird's Image, London (The Institution of Electrical Engineers) 2000

Lisa Parks, Cultures in Orbit: Satellites and the Televisual (Duke University Press) 2003

William Uricchio, Storage, simultaneity, and the media technologies of modernity, in: John Fullerton / Jan Olsson (ed.), Allegories of Communication. Intermedial concern from cinema to the digital, Rome (John Libbey) 2004, 123-138 [for a draft version under the title "Technologies of time", see <http://www.let.uu.nl/~william.uricchio/personal/OLSSON2.html>]

Bruce M. Owen, The Internet Challenge to Television, Cambridge, Mass. et al. (Harvard University Press) 2000

Richard F. Lyon, A Brief History of 'Pixel' [2006], <http://www.foveon.com/files/ABriefHistoryofPixel2.pdf>

Paddy Scannell, Television and the Meaning of Life, Cambridge (Polity) 2014

Doron Galili, Seeing by Electrify. The Emergence of Television, 1878-1939, Durham / London (Duke UP) 2020, Kapitel 2 "Severed Eyeballs and Prolonged Optic Nerves: Television as Modern Prosthetic Vision", 50-73

Memory and Storage Technologies

Henri Bergson, Matière et Mémoire, Paris 1896 / Matter and Memory, trans. N. M. Paul and W. S. Palmer, New York (Zone Books) 1991

- - -

Klaus Krippendorff, Principles of information storage and retrieval in society, in: General Systems, vol. 20 (1975), 15-34

Teuvo Kohonen, Self-Organization and Associative Memory, Berlin / Heidelberg / New York / Tokyo (Springer) 1984

Douwe Draaisma, Metaphors of Memory. A history of ideas about the mind (1995), Cambridge, U.K. / New York (Cambridge UP) 2000 / De Metaforenmachine. Een geschiedenis van het geheugen, Groningen (Historische Uitgeverij) 1995

Susan Blackmore, The Meme Machine, Oxford 1999

David Link, There Must Be an Angel. On the Beginnings of the Arithmetics of Rays, in: Siegfried Zielinski / idem (eds.), Variantology 2. On Deep Time Relations of Arts, Sciences and Technologies, Köln (Walther König) 2006, 15-42

Electro-Magnetic Storage Media I: Tape Recorder

Oberlin Smith, Some Possible Forms of Phonograph, in: The Electrical World (September 1888), 161-163

- - -

Friedrich Karl Engel, A Hundred Years of Magnetic Sound Recording, in: Journal of the Audio Engineering Society, Vol. 36, No. 3 (März 1986), 170-178

Electro-Magnetic Storage Media II: Video

Bill Viola, The Sound of One Line Scanning, in: Dan Lander / Micah Lexier (eds.), Sound by Artists, Toronto / Banff (Art Metropole & Walter Phillips Gallery), 1990, 39-54

- - -

Sherry Miller Hocking / Richard Brewster, Image Processing [Manual], in: David Dunn (Hg.), Eigenwelt der Apparatewelt. Pioneers of Electronic Art, Ausstellungskatalog Linz (Ars Electronica) 1992, 169-181

Siegfried Zielinski (Hg.), Video - Apparat / Medium, Kunst, Kultur. Ein internationaler Reader, Frankfurt a. M. u. a. (Lang) 1992; darin u. a. ders., Audiovisuelle Zeitmaschine. Thesen zur Kulturtechnik des Videorecorders, 91-114

Ina Blom, The Autobiography of Video. The Life and Times of a Memory Technology, Berlin (Sternberg Press) 2016

Ricardo Cedeno Montana, Portable Moving Images. A Media History of Storage Formats, Berlin / Boston (de Gruyter) 2017

Digital Storage and Storage Theory

T. Kite Sharpless, Mercury delay lines as a memory unit, in: Proceedings of a Symposium on Large-Scale Calculating Machinery, Cambridge, Mass. (Harvard University Press) 1948, 103-109

Frederic C. Williams / Tom Kilburn, A storage system for use with binary-digital computing machines, in: Proceedings of the Institution of Electrical Engineers, Part II: Power Engineering, vol. 96 (1949), 183-202

Ira M. Sage, Making Machines Remember, in: Product Engineering, Bd. XXIV (April 1953), 141-149

magnetic core memories. what they are and how they function, London (Mullard Educational Service), <http://www.vt100.net/docs/misc/core>

- - -

Wendy Chun, The Enduring Ephemeral, or The Future Is a Memory, in: Huhtamo / Parikka (Hg.) 2011: 184-203

idem., Programmed Vision. Software and Memory, Cambridge, Mass. / London (MIT Press) 2011, Kapitel 4: "Always Already There, or Software as Memory", 138-173

Ronald Tetzlaff (ed.), Memristors and Memristive Systems, New York (Springer) 2014

Logical Machines / *Computation*

Semen Karsakof, Aperçu d'un Procède nouveau d'investigation au moyen de machines à comparer les idées, St. Petersburg 1832

W. Stanley Jevons, On the mechanical Performance of Logical Inference, in: Philosophical Transactions of the Royal Society of London, Bd. 160 / II, 1870, 497-518

- - -

Gellius N. Povarov: The first Russian Logic Machines, in: Georg Trogemann / Wolfgang Ernst / Alexander Y. Nitussov: Computing in Russia, Wiesbaden (Vieweg) 2001, 51-59

Francis Hunger, SETUN. An inquiry into the Soviet Ternary Computer, Leipzig (Inst. f. Buchkunst) 2008

Algorithms / Algorithmization

Gregory J. Chaitin, Undecidability & Randomness in Pure Mathematics, in: idem, Information, Randomness and Incompleteness. Papers on Algorithmic Information Theory [1987], 2nd ed. Singapore (World Scientific Publishing) 1990

- - -
Louisa Amoore / Volha Piotukh (Hg.), *Algorithmic Life. Calculative devices in the age of big data*, New York (Routledge) 2016

Symbolical Machines / *Computing*

Charles Babbage, *The Ninth Bridgewater Treatise. A Fragment* [2. Aufl. 1838], in: *The Works of Charles Babbage*, hg. v. Martin Campbell-Kelly, Bd. 9, London (Pickering) 1989

L. F. Menabrea, *Sketch of the Analytical Engine invented by Charles Babbage*, orig. in: *Bibliothèque Universelle de Genève* No. 82, Oktober 1842, transl. and footnotes Ada Lovelace, in: *Taylor's Scientific Memoirs* Bd. III, 666-731. Reprint in: Bowden (ed.) 1953/1971, Appendix I, 341-362

Charles Babbage, *Passages from the Life of a Philosopher*, 1864

W. H. Eccles / F. W. Jordan, *A Trigger Relay Utilising Three-Electrode Thermionic Vacuum Tubes*, in: *Radio Review* Bd. 1 (Dezember 1919), 143-146; Reprint in: Swartzlander (ed.) 1976, 298-300

Alan Turing, *On Computable Numbers, with an Application to the Entscheidungsproblem*, in: *Proceedings of the London Mathematical Society* (2), vol. 42 (1937), 230-265

Alan M. Turing, *Systems of Logic Based on Ordinals*, in: *Proceedings of the London Mathematical Society*, vol. 2, no. 1 (1939), 161-228

Alan Turing, *The State of the Art. Lecture to the London Mathematical Society on 20th February 1947*, in: B. E. Carpenter / R. W. Doran (eds.), *A. M. Turing's ACE Report of 1946 and Other Papers*, Cambridge, Mass., et al. (The Massachusetts Institute of Technology) 1986 [Vol. 10 in the *Charles Babbage Institute Reprint Series for the History of Computing*], 106-124

Claude E. Shannon, *A Symbolic Analysis of Relay and Switching Circuits*, Master Thesis MIT, August 1937; publication (reedited and abridged) in: *Transactions of the American Institute of Electrical Engineers* 57 (1938) 713-23

Arthur W. Burks / Herman H. Goldstine / John von Neumann, *Preliminary Discussion of the Logical Design of an Electronic Computing Instrument* [*1946], reprint in: Earl E. Swartzlander, *Computer Design Development. Principal Papers*, Rochelle Park, N. J. (Hayden Book) 1976, 221-259;

originally published in: Papers of John von Neumann on Computing and Computer Theory, 97-142, Cambridge, Mass. (The MIT Press) 1987

Arthur W. Burks, Electronic Computing Circuits of the ENIAC, in: Proceedings of the I.R.E. (Institute of Radio Engineers), August 1947, 756-767

John von Neumann et al., First Draft of a Report on the EDVAC, University of Pennsylvania (Moore School of Electrical Engineering), June 30, 1945; reprint in: IEEE Annals of the History of Computing vol. 15, no. 4 (1993), 27-75

ders., Theory of Self-Reproducing Automata, ed. and supplemented by Arthur W. Burks, Urbana, Ill. / London (University of Illinois Press) 1966

Proceedings of a Symposium on Large-Scale Digital Calculating Machinery [1947], Cambridge, Mass. (Harvard University Press) 1948. Photographischer Reprint (with foreword William Aspray) 1985

Martin Gardner, Logic Machines and Diagrams, New York / Toronto / London (McGraw-Hill) 1958

Marvin L. Minsky, Computation. Finite and infinite machines, Englewood Cliffs, New Jersey (Prentice-Hall) 1967

Nelson Goodman, Languages of Art. An Approach to a Theory of Symbols, Indianapolis (Hackett) 2nd ed. 1976

Friedrich A. Kittler, Protected Mode, in: idem, The Truth of the Technological World, Redwood City (Stanford University Press) 2020, 209-218

- - -

Martin Davis, The Undecidable. Basic Papers On Undecidable Propositions, Unsolvability Problems and Computable Functions . New York (Raven Press) 1965

Brian Randall (ed.), The Origins of Digital Computers: Selected Papers, vol. 1, Berlin (Springer) 1975, ch. 3 "Tabulating Machines"

Kent C. Redmond / Thomas M. Smith, Project Whirlwind. The History of a Pioneer Computer, Bedford, Mass. (Digital Press) 1980

M. Metropolis et al. (eds.), A History of Computing in the Twentieth Century, New York 1980; int. al.: Andrei P. Ershov / Mikhail R. Shura-Bura, The Early Development of Programming in the USSR, 137-196

Elementary Basic. As chronicled by John H. Watson, edited with commentaries by Henry Ledgard and Andrew Singer, at first sight looks like another steampunk novel. Vintage Books 1982; paper back edition Fontana / Collins, 1983

A Computer Perspective. Background to the Computer Age, catalogue (The office of Charles & Ray Eames) 1973, on occasion of exhibition at IBM Exhibit Center New York [New edition Cambridge, Mass. / London (Harvard University Press) 1990]

Andrew Hodges, Alan Turing. Enigma, New York 1983

Rolf Herken (ed.), The Universal Turing Machine. A Half-Century Survey [*1988], 2nd ed. Wien / New York (Springer) 1994

William Aspray, John von Neumann and the Origins of Modern Computing, Cambridge, Mass. / London (MIT Press) 1990

William Gibson / Bruce Sterling, The Difference Engine, London (Gollancz) 1990 [paperback edition 2011]

B. V. Bowden (ed.), Faster Than Thought. A Symposium on Digital Computing Machines, London (Pitman Publishing) 1953; paperback edition 1971

Steve J. Heims, John von Neumann and Norbert Wiener. From Mathematics to the Technologies of Life and Death, Cambridge, Mass. / London (MIT Press) 1980

Jeff Frates / Bill Moldrup, Introduction to the Computer. An Integrated Approach, Englewood Cliffs, N.J. (Prentice-Hall) 1980

Allen Newell, Physical Symbol Systems, in: D. A. Norman (ed.), Perspectives on Cognitive Science, Norwood, NJ (Ablex) 1981, 37-86

Brian Randell (ed.), The Origins of Digital Computers. Selected Papers, Berlin / Heidelberg / New York 1982

David Bolter, Turing's Man. Western Culture in the Computer Age, Chapel Hill (The University of North Carolina Press) 1984

Michael Roy Williams, A history of computing technology, 2. Aufl. Los Alamitos, CA (IEEE Computer Society Press) 1997

Raúl Rojas / Ulf Hashagen (Hg.), The First Computers. History and Architecture, Cambridge, Mass./ London (MIT Press) 2000

Neil Rhodes / Jonathan Sawday (eds.), *The Renaissance computer: knowledge technology in the first age of print*, London / New York (Routledge) 2000, 170-183

Jon Agar, *The Government Machine. A Revolutionary History of the Computer*, Cambridge, Mass. / London (M.I.T. Press) 2003

Andrea Laue, *How the Computer Works*, in: Susan Schreibman et al. (eds.), *A Companion to Digital Humanities*, Malden, MA et al. (Blackwell) 2004, 145-160

Dennis Shasha / Cathy Lazere, *Natural Computing. DNA, Quantum Bits, and the Future of Smart Machines*, New York / London (Norton) 2010

Luciana Parisi / Stamatia Portanova, *Soft thought (in architecture and choreography)*, in: *Computational Culture*, 1 (November 2011). Available online: <http://computationalculture.net/article/soft-thought> (accessed 5 February 2020)

George Dyson, *Turing's Cathedral. The Origins of the Digital Universe*, New York / Toronto (Random House) 2012

David Link, *Archaeology of Algorithmic Artefacts*, Minneapolis, MN (Univocal Publishing) 2016

Yuk Hui, *On The Existence of Digital Objects* (University of Minnesota Press) 2016

Chris Bernhardt, *Turing's Vision. the Birth of Computer Science*, Cambridge, Mass. / London (The MIT Press) 2016

Ed Finn, *What Algorithms Want. Imagination in the Age of Computing*, Cambridge, Mass. / London (The MIT Press) 2017

M. Beatrice Fazi, *Contingent Computation: Abstraction, Experience, and Indeterminacy in Computational Aesthetics*, London (Rowman & Littlefield) 2018

Nikola Marincic, *Computational Models in Architecture. Towards Communication in CAAD. Spectral Characterisation and Modelling with Conjugate Symbolic Domains*, Basel (Birkhäuser) 2019

Peter J. Denning / Matti Tedre, *Computational Thinking*, Cambridge, Mass. / London (The MIT Press) 2019

Conor McKeown, *Autobiographing our computing organs. Rereading past uses of Intel CPU as xenotransplantation*, in: Natasha Lushetich / Iain

Campbell (eds.), Distributed Perception: Resonances and Axiologies, London / New York (Routledge) 2021, 261-274

(Techno-)Mathematics for Media Science

- Brian Rotman, Signifying Nothing, Basingstoke 1989

Modelling and Simulation

J. C. R. Licklider, Interactive Dynamic Modeling, in: Prospects for Simulation and Simulators of Dynamic Systems, hg. v. George Shapiro / Milron Rogers, New York / London 1967, 281-289

Analog Computing

Granino A. Korn / Theresa M. Korn, Electronic Analog Computers (D-c Analog Computers), New York (McGraw-Hill) 1956

- - -

Hava T. Siegelmann, Neural Networks and Analog Computation. Beyond the Turing Limit, New York (Springer Science + Business Media) 1999

Andrew Adamatzky / Louis-Jose Lestocart (eds.), Thoughts on unconventional computing, Paperback edition 2021

Digitalization

H. [Harry] Nyquist, Certain Topics in Telegraph Transmission Theory, in: Transactions of the American Institute of Electrical Engineers, Bd. 47, Heft 2, April 1928, 617-644; *online* doi: 10.1109/T-AIEE.1928.5055024.

- - -

Bernard Loriferne, Analog-Digital and Digital-Analog Conversion [FO La Conversion Analogique-Numérique, Numérique-Analogique, Paris 1976], London / Philadelphia / Rheine (Heyden) 1982

Programming, Informatics, Software

D. E. Knuth, The Art of Computer Programming. Fundamental Algorithms, Bd. 1, 2. Aufl. (Addison-Wesley) 1973

- - -

Ben Shneiderman, Direct Manipulation. A Step Beyond Programming Languages, in: IEEE Computer 16, Heft 8 (1983), 57-69

Jan Rune Holmevik, Educating the Machine. A Study in the History of Computing and the Construction of the SIMULA programming Language, Universit t Trondheim (Senter for Teknologi og Samfunn 1994 (rapport nr. 22)

Friedrich Kittler, Museums on the Digital Frontier, in: Thomas Keenan (ed.), The Ends of the Museum, Barcelona (Fondacion Tapi s) 1996, 67-80

Janet Carter / Tony Jenkins, Gender Differences in Programming?, conference paper (ITiCSE'02, June 24-26, 2002, Aarhus) in: ACM SIGCSE Bulletin (September 2002), 188-192

Matthew Fuller (Hg.), Software Studies. A Lexicon, Cambridge, Mass. / London (MIT Press) 2008

Nick Montfort et al., 10 PRINT CHR\$(205.5+RND(1));: GOTO 10, Cambridge, Mass. / London (The MIT Press) 2013

Yuk Hui, Preface: The Time of Execution, in: DATA browser 06: Executing Practices, ed. by Helen Pritchard / Eric Snodgrass / Magda Tyzlik-Carver, New York, NY (Automeia) 2017, 23-31

Hypertext, Hypermedia

Vannevar Bush, As we may think, in: Atlantic Monthly, no. 176 (July 1945), 101-109

Theodor Holm Nelson, Literary Machines, Sausalito, Calif. (Mindful Press) 1981

- - -

James N. Nyce / Paul Kahn (eds.), From Memex to hypertext: Vannevar Bush and the mind's machine, Boston 1991

Richard Bolter, Writing Space. Computers, Hypertext, and the Remediation of Print, London (2nd ed.) 2001

World Wide Web, Internet, Cyberspace

Paul Baran, On Distributed Communications: I. Introduction to Distributed Communications Networks, Santa Monica, Calif. (RAND Corporation, RM-3420-PR), August 1964;
https://www.rand.org/pubs/research_memoranda/RM3420.html

William Gibson, Neuromancer, 1984

Tim Berners-Lee, Weaving the Web

- - -

Tom Standage, The Victorian Internet. The Remarkable Story of the Telegraph and the Nineteenth Century's On-Line Pioneers, London (Walker & Company) 1998

Chris Sherman / Gary Price, The Invisible Web. Uncovering Information Sources Search Engines Can't See, Medford, New Jersey (Information Today) 2001

Wendy Hui Kyong Chun, Control and Freedom. Power and Paranoia in the Age of Fiber Optics, Cambridge, Mass. / London (M.I.T. Press) 2006

Jussi Parikka, Digital Contagions. A Media Archaeology of Computer Viruses, New York et al. (Peter Lang) 2007; 2nd enlarged edition 2016

Lisa Parks / Nicole Starosielski (eds.), Signal Traffic. Critical Studies of Media Infrastructures, Urbana / Chicago / Springfield (Univ. of Illinois Pr.) 2015

Don Tapscott / Alex Tapscott, Blockchain Revolution. How the Technology behind Bitcoin is changing Money, Business, and the World, New York, NY (Penguin Random House) 2016

Kristoffer Gansing / Inga Luchs (eds.), The Eternal Network: The Ends and Becomings of Network Culture, Amsterdam (Institute of Network Cultures) / Berlin (transmediale e. V.) 2020

"Social Media"

Ben Jacobsen / David Beer, Social Media and the Automatic Production of Memory. Classification, Ranking and the Sorting of the Past, Bristol (Bristol University Press) 2021

Communication Studies

Harold D. Lasswell, *The Structure and Function of Communication in Society*, in: Wilbur Schramm (ed.), *Mass Communication*, Urbana / Chicago / London 1960, 117-130

History of Technology and Science

Joseph Needham, *The Shorter Science and Civilisation in China*. An abridgement of Joseph Needham's original text, edited by Colin A. Ronan, vol. 1, Cambridge (UP) 1978

Media History

Harold A. Innis, *Empire and Communications*, Oxford (Oxford UP) 1950

idem, *The Idea File of Harold Adam Innis*, ed. William Christian, Toronto / Buffalo / London (University of Toronto) 1980

idem, *The Bias of Communication*, Toronto (University of Toronto Press) 1982

- - -

Friedrich Kittler, *The History of Communication Media*, in: catalogue to symposium ON LINE, ed. Helga Konrad (Steirische Kulturinitiative), Graz 1992, 66-81; online version in: CTheory (1996, July 30), <https://journals.uvic.ca/index.php/ctheory/article/view/14325/5101>

Jay David Bolter / Richard Grusin, *Remediation. Understanding New Media*, Cambridge, Mass. / London (MIT Press) 1999

Lisa Gitelman, *Always Already New. Media, History, and the Data of Culture*, Cambridge, MA (The MIT Press) 2006

Carolyn Marvin, *When Old Technologies were New. Thinking About Electric Communication in the Late Nineteenth Century*, New York / Oxford (Oxford UP) 1988

Media Archaeology

F. Roy Hodson / David G. Kendall / P. Tautu (eds.), *Mathematics in the Archaeological and Historical Sciences*, Edinburgh / Chicago (Edinburgh University Press / Aldine Atherton) 1971

J. D. Richards / N. S. Ryan, *Data Processing in Archaeology*, Cambridge / New York / Melbourne (Cambridge University Press) 1985

Erkki Huhtamo, From Kaleidoscopomaniac to Cyberned: Notes Toward an Archeology of Media, in: Electronic Culture. Technology and Visual Representation, ed. Timothy Druckrey, New York (Aperture) 1996, 296-303

Siegfried Zielinski, Deep Time of the Media: Toward an Archaeology of Hearing and Seeing by Technical Means, Cambridge, Mass. (M.I.T. Press) 2008

- - -

New Media, Old Media. A History and Theory Reader, eds. Wendy Hui Kyong Chun / Thomas Keenan, New York / London (Routledge) 2006

Matthew Kirschenbaum, Mechanisms. New Media and the Forensic Imagination, Cambridge, MA (The MIT Press) 2008

Erkki Huhtamo / Jussi Parikka (eds.), Media Archaeology. Approaches, Applications, and Implications, Berkeley / Los Angeles / London (University of California Press) 2011

Yves Citton, Archéologiser la médiarchie, chap. 8, in: Médiarchie, Paris (Éditions du Seuil) 2017, 193-208

Ben Roberts / Mark Goodall (eds.), New Media Archaeologies, Amsterdam (UP) 2018 (Reihe "Recursions")

Jussi Parikka, What is Media Archaeology?, Cambridge / Malden, MA (Polity Press) 2012

Kristoffer Gansing, Transveral Media Practices. Media Archaeology, Art and Technological Development, Malmö (Malmö University) 2013

Michael Goddard, Opening up the black boxes: Media archaeology, "anarchaeology" and media materiality, published 28 April 2014 in: New Media & Society, <http://nms.sagepub.com/content/early/2014/04/27/1461444814532193>

Jussi Parikka, A Geology of Media, Minneapolis / London (University of Minnesota Press) 2015

Morten Riis, Where are the Ears of the Machine? Towards a sounding micro-temporal object-oriented ontology, in: Journal of Sonic Studies, portal issue 10 [published October 2015], <https://www.researchcatalogue.net/view/219290/219291>

Jussi Parikka, Remain(s) Scattered, in: Ioana B. Jucan / ders. / Rebecca Schneider, Remain. In Search of Media, Minneapolis / London (University of Minnesota Press) and Lüneburg (meson press) 2019, 1-47

Moritz Hiller / Stefan Höltgen (eds.), Archäographien. Aspekte einer Radikalen Medienarchäologie, Berlin (Schwabe) 2019; partly English-language chapters: Anthony Enns, "Time-Critical Animation"; Lori Emerson, "Lab as Living Thing. Media Archaeological Fundus as Assemblage"; Samir Bhowmik / Jussi Parikka, "Infrascapes for Media Archaeographers"; Nikia Braguinski, "Activating the (An)Archive of Possible Communication"

Media-Induced Time Processes

Edgar Douglas Adrian, The Mechanism of Nervous Action. Electrical Studies of the Neurone, Philadelphia (University of Philadelphia Press) / London (Humphrey Milford) / Oxford (Oxford UP) 1932

- - -

Espen Aarseth, Aporia of Epiphany in *Doom* and *The Speaking Clock*. The Temporality of Ergodic Art, in: Marie-Laure Ryan (ed.), *Cyberspace Textuality. Computer Technology and Literary Theory*, Bloomington / Indianapolis 1999, 31-42

Mark B. N. Hansen, Living (with) Technical Time. From Media Surrogacy to Distributed Cognition Theory, *Culture & Society*, Bd. 26 (Heft 2-3) 2009, 294-315

Stamatia Portanova, *Whose Time Is It? Asocial Robots, Syncolonialism, and Artificial Chronological Intelligence*, London (Sternberg Press) 2021

Postal System, (Image-)Telegraphy, Telephone

Claude E. Shannon / John R. Pierce / B. M. Oliver, The Philosophy of PCM [*1948], in: N. Sloane / A. Wyner (eds.), *Claude Elwood Shannon. Collected Papers*, Piscataway (IEEE) 1993, 151-159

- - -

Bernhard Siegert, *Relays. Literature as an Epoch of the Postal System*, Stanford UP 1999

Mara Mills, The Audiovisual Telephone. A Brief History, in: Henry Keazor / Hans W. Giessen / Thorsten Wübbena (eds.), *Handheld? Music Video Aesthetics for Portable Devices*, Heidelberg (ART-Dok) 2012, 34-47

Optical Media

Galileo Galilei, Sidereus Nuncius, Venice 1610

Jonathan Crary, Techniques of the Observer: On Vision and Modernity in the Nineteenth Century, Cambridge, Mass. / London (MIT Press) 1990

Friedrich Kittler, Optical Media. Berlin Lectures 1999, transl. A. Enns, Cambridge (Polity Press) 2010

Interfaces

J. C. R. [Joseph Carl Robnett] Licklider, Man-Computer Symbiosis, in: IRE Transactions on Human Factors in Electronics, vol. HFE-1, no. 1 (March 1960), 4-10

Ivan E. Sutherland, Sketchpad. A Man-Machine Graphical Communication System, Diss. MIT, Cambridge, Mass. 1963; book publication: New York / London 1980

Brenda Laurel (ed.), The Art of Human-Computer Interface Design, New York 1990

Lev Manovich, Towards an Archaeology of the Computer Screen, in: Cinema Futures: Cain, Abel or Cable?, ed. Thomas Elsaesser / Kay Hoffmann, Amsterdam (Amsterdam University Press) 1998, 27-43

Erkki Huhtamo, Elements of Screenology: Toward an Archaeology of the Screen, in: Iconics. International Studies of the Modern Image, vol. 7 (2004), 31-82

David Gelernter, Machine Beauty. Elegance and the Heart of Technology, New York (Basic Books) 1997

Alexander Galloway, Interface Effect, Cambridge (Polity Press) 2012

David Parisi, Archaeologies of Touch. Interfacing with haptic from electricity to computing, Minneapolis (University of Minnesota Press) 2018

Time-Based and -Critical Media Processes

Edward B. Magrab / Donald S. Blomquist, *The Measurement of Time-Varying Phenomena*, New York et al. (Wiley) 1971

Ernst H. Gombrich, *Moment and Movement in Art*, in: *Journal of the Warburg and Courtauld Institutes* 27 (1964), 293-306

Adrian Mackenzie, *The Mortality of the Virtual. Real-time, Archive and Dead-time in Information Network*, in: *Convergence Bd. 3, Heft 2* (1997), 59-71

Francisco J. Varela, *The Specious Present. A Neurophenomenology of Time Consciousness*, in: Jean Petitot / idem / Bernhard Pachoud / Jean-Michel Roy (eds.), *Naturalizing Phenomenology. Issues in Contemporary Phenomenology and Cognitive Science*, Stanford (Stanford UP) 1999, 266-316

Friedrich Kittler, *Real Time Analysis, Time Axis Manipulation*, transl. and with an introduction by Geoffrey Winthrop-Young, in: *Cultural Politics*, vol. 13 (2017), no. 1, 1-17;
<https://pdfs.semanticscholar.org/9ae7/41f01e5b68f5d0f1b1cfe6e9e6bf8915b8a9.pdf>

Charlie Gere, *Art, time, and technology*, Oxford / New York (Berg) 2006

Alex Preda, *The Stock Ticker*, in: Bruno Latour / Peter Weibel (eds.), *Making Things Public. Atmospheres of Democracy*, Karlsruhe (Zentrum für Kunst und Medien) / Cambridge, Mass. / London (MIT Press) 2005, 622-627

Jonathan Crary, *Suspensions of Perception*, Cambridge, Mass. / London: MIT Press, 1999

Arkady Pikorsky et al., *Synchronization. A universal concept in non-linear sciences*, Cambridge (UP) 2003

Timothy Scott Barker, *Time and the Digital. Connecting Technology, Aesthetics, and a process Philosophy of Time*, Hannover, New Hampshire (Darmouth College Press) 2012

Konstantinos Vassiliou, *A synaptic common sense? McLuhan's tactility and electronic media rhythms*, in: *The Senses and Society*, vol. 13, no. 2 (2018), 179-189

Gary Genosko / Paul Hegarty, *Where Has Become of Time? Temporal Smearing and Media Theory*, in: *SemiotiX. A Global Information*

Magazine, March 2018, <https://semioticon.com/semiotix/2018/03/where-has-become-of-time-temporal-smearing-and-media-theory>

Sonic Sense of Time

Curtis Roads, *Microsound*, Cambridge, Mass. 2004

Geoffrey Winthrop-Young, *Siren Recursions*, in: Stephen Sale / Laura Salisbury (eds.), *Kittler Now. Current Perspectives in Kittler Studies*, Cambridge UK (Polity Press), 2015, 71-94

Viktoria Tkaczyk / Mara Mills / Alexandra Hui (eds.), *Testing Hearing. The Making of Modern Aurality*, Oxford 2020

Andrew Lison, *New Media, 1989: Cubase and the New Temporal Order*, in: *Computational Culture*, issue 8 (July 2021), *online*
<http://computationalculture.net/new-media-1989-cubase-and-the-new-temporal-order>

Critical Theory / Cultural Studies / Discourse Analyse / Systems Theory

Raymond Williams, *Television. Technology and Cultural Form*, London (Fontana) 1974

Media Semiotics / Signal Processing

Peter Bogh Andersen, *A Theory of Computer Semiotics*, New York (Cambridge UP) 1991

- - -

Boualem Boashash (ed.), *Time Frequency Signal Analysis and Processing. A Comprehensive Reference*, Amsterdam et al. (Elsevier) 2003

Apparatus and French Theory

Jean-Louis Baudry, *Cinéma. Effets idéologiques produits par l'appareil de base*, in: *Cinéthique*, no. 7/8 (1970), 1-8

- - -

Yves Citton, *Médiarchie*, Paris (Éditions du Seuil) 2017

Automata, Androids

J. O. La Mettrie, L'homme machine

Villiers d'Isle Adam, L'Éve future [*1880], edition Lausanne (L'Age d'Homme) 1979

Norbert Wiener, The Human Use of Human Beings, xxx

Philip K. Dick, Do Androids Dream of Electric Sheep? [*1968] ("The novel which became *Blade Runner*"), London (Gollancz) 2004

Artificial Intelligence, "Machine Learning"

Alan M. Turing, Computing Machinery and Intelligence, in: Mind. A Quarterly Review of Psychology and Philosophy 59, no. 236 (October 1950), 433-60

Joseph Weizenbaum, ELIZA. A Computer Program For The Study of Natural Language Communication Between Man And Machine, in: Communications of ACM, vol. 9, no. 1, January 1966, 36-45 (<http://www.cse.buffalo.edu/~rapaport/572/S02/weizenbaum.eliza.1966.pdf>)

Frank Rosenblatt, The Perceptron. A Perceiving and Recognizing Automaton, Cornell Aeronautical Laboratory Report No. 85-450-1, January 1957, Buffalo, N. Y.; idem, The perceptron. A probabilistic model for information storage and organization in the brain, in: Psychological Reviews 65 (1958), 386-408; idem, Principles of Neurodynamics. Perceptrons and the Theory of Brain Mechanisms [Report No. VG-1196-G-8, 15 March 1961, Cornell Aeronautical Laboratory], Washington, D. C. (Spartan Books) 1962

Oliver G. Selfridge, Pandemonium: A Paradigm for Learning, Session 3, Paper 6, in: D. V. Blake / A. M. Uttley (eds), Proceedings of the Symposium on Mechanisation of Thought Processes, London, 1959, 511-531 (dazu https://en.wikipedia.org/wiki/Pandemonium_architecture)

John R. Searle, Minds, brains, and programs, in: The Behavioral and Brain Sciences vol. 3 (1980), 417-457

J. J. Hopfield, Neuronal networks and physical systems with emergent collective computational abilities, in: Proceedings of the National Academy of Sciences of the United States of America, vol. 79 (April 1982), 2554-2558

Teuvo Kohonen, Self-Organizing Maps, 1995

- - -

James R. Slagle, Artificial Intelligence: The Heuristic Programming Approach, McGraw-Hill 1971

Ray Kurzweil, The Singularity is Near: When Humans Transcend Biology, New York (Viking) 2005

Louise Amoore / Volha Piotukh (eds.), Algorithmic Life. Calculative devices in the age of big data, New York / London (Routledge) 2016

Valery V. Shilov, Sergey A. Silantiev, "Machines à Comparer les Idées" of Semen Korsakov: First Step Towards AI, in: Arthur Tatnall, Christopher Leslie (Hg.), International Communities of Invention and Innovation, Springer International Publishing, 2016

Pedro Domingos, The Master Algorithm [2015], New York (Penguin Books) 2017

Adrian Mackenzie, Machine Learners. Archaeology of a data practice, Cambridge, MA (The MIT Press) 2017

A. Creswell et al., Generative Adversarial Networks: An Overview, in: IEEE Signal Processing Magazine, vol. 35, no. 1 (2018), 53-65

Arthur I. Miller, The Artist in the Machine: The World of AI-Powered Creativity, Cambridge, Mass. / London (MIT Press) 2019

W. Samek, G. Montavon, A. Vedaldi, L. Hansen, K.R. Müller (eds.), Explainable AI. Interpreting, Explaining and Visualizing Deep Learning, Cham (Springer) 2019

Ulrik Ekman, Conversational Agents, in: Uncertain Archives: Big Data Environments, edited by Kristin Veel, Nanna Bonde Thylstrup and Daniela Agostinho, Cambridge, Mass. (MIT Press), forthcoming

Logics, Combinatorics

George Boole, The Laws of Thought, on which are founded the mathematical theories of logic and probabilities [1854], Nachdruck New York (Dover) 1958

Acoustic Archaeology, Epistemology of Sound and Vibrations, Sonification

Leonard Euler, De sono et auditu, in: idem, Commentationes Physicae - Ad physicam generalem et ad theoriam soni pertinentes. Leipzig / Berlin (Teuber), 207-213

Jean Baptiste Joseph Fourier, Théorie de la Chaleur, Paris 1822

Sheridan Dauster Speeth, Seismometer Sounds, in: The Journal of the Acoustical Society of America, vol. 33, no. 7 (July 1961), 909-916

Hermann von Helmholtz, On the Sensations of Tone as a Physiological Basis for the Theory of Music, transl. Alexander J. Ellis, London (Longman's Green & Co.) 1895

J. C. R. Licklider, Auditory Frequency Analysis, in: Colin Cherry (Hg.), Information Theory. Papers read at a Symposium on "Information Theory" held at the Royal Institution, London, September 12th to 16th 1955, London (Butterworths Scientific Publications) 1956, 253-268

J. C. R. Licklider, The manner in which and extent to which speech can be distorted and remain intelligible, in: Cybernetics / Kybernetik. The Macy-Conferences 1946-1953, vol. 1: Transactions / Protokolle, hg. v. Claus Pias, Zurich / Berlin (diaphanes) 2003, 203-247

Ralph K. Potter / George A. Kopp / Harriet C. Green, Visible Speech, New York (Van Nostrand) 1947

Norbert Wiener, Spatio-temporal Continuity, Quantum Theory and Music, from: idem, I am a Mathematician, Cambridge, Mass. (MIT Press) 1964, 97-107, reprinted in: Capek (ed.) 1976: 539-546

idem, The Historical Background of Harmonic Analysis [*1938], in: ders., Collected Works with Commentaries, vol. II, Cambridge, Mass. / London (M.I.T. Press) 1979, 56-68

Denis Gabor, Acoustical Quanta and the Theory of Hearing, in: Nature Nr. 4044, 159 (May 1947), 591-594

Edmund Carpenter / Marshall McLuhan, Acoustic Space, in: dies. (Hg.), Explorations in Communication. An Anthology, Boston (Beacon Press) 1960, 67-69

James W. Cooley / John W. Tukey, An Algorithm for the Machine Calculation of Complex Fourier Series, in: Alan V. Oppenheim (Hg.), Reprint, Papers on Digital Signal Processing (orig. in: Mathematics of Computation, vol. 19, April 1965, 297-301), Cambridge, Massachusetts, 1969, 146-150

Barry Truax, *Acoustic Communication*, Norwood, N. J. (Ablex) 1984

Horacio Vaggione, *Articulating Microtime*, in: *Computer Music Journal*, vol. 20, no. 2 (1996), 33-38

William M. Hartmann, *Signals, sound, and sensation*, Woodbury, NY (American Institute of Physics Press) 1997

Gregory Kramer (ed.), *Auditory Display: Sonification, Audification, and Auditory Interfaces*, Reading, MA. (Addison Wesley) 1994

Murray R. Schafer, *The Soundscape. Our Sonic Environment and the Tuning of the World*, Rochester, Vt. (Destiny Books) 1994 [original publikation: *The Tuning of the World*, New York (Knopf) 1977]

Barbara Burke Hubbard, *The world according to wavelets. The story of a mathematical technique in the making*, Wellesley, MA (AK Peters) 1996

Karin Bijsterveld, *Mechanical Sound. Technology, culture, and Public Problems of Noise in the Twentieth Century*, Cambridge, Mass. / London (The MIT Press) 2008

Cornelius Borck, *Blindness, Seeing, and Envisioning Prosthesis: The Optophone between Science, Technology, and Art*, in: Dieter Daniels / Barbara U. Schmidt (eds.), *Artists as Inventors. Inventors as Artists*, Ostfildern (Hatje Cantz) 2008

Robert T. Dean (Hg.), *The Oxford Handbook of Computer Music*, Oxford et al. (Oxford University Press) 2009

Shintaro Miyazaki, *Algorhythmics. Understanding Micro-Temporality in Computational Cultures*, *online* in: *Computational Culture*, Issue 2 / 2012; <http://computationalculture.net/algorhythmics-understanding-micro-temporality-in-computational-cultures>

Veit Erlmann, *Reason and Resonance. A History of Modern Aurality*, New York (Zone Books) 2010

Wulf Herzogenrath, *Time - Duration of Sound - Eternity: John Cage in Halberstadt (2001-2640)*, in: Booklet to DVD edition of Sabine Groschup's film *(JC{639})* from 2006, eds. Sabine Groschup / Georg Weckwerth, 2013, 59-67

Hillel Schwartz, *Making Noise. From Babel to the Big Bang and Beyond*, New York (Zone Books) 2011

Sebastian Berweck, *It worked yesterday: On (re-)performing electroacoustic music*. Doctoral thesis 2012, University of Huddersfield, <http://eprints.hud.ac.uk/id/eprint/17540/1/sberweckfinalthesis.pdf>

The Sound Studies Reader, ed. Jonathan Sterne, London / New York (Routledge) 2012

Christopher Cox, *Sonic Thought*, in: Bernd Herzogenrath (Hg.), *Sonic Thinking. A mediaphilosophical approach*, London / New York (Bloomsbury Academic) 2017

Karin Bijsterveld, *Sonic Skills. Listening for Knowledge in Science, Medicine and Engineering (1920s–Present)*, London (Palgrave Macmillan) 2019

Viktoria Tkaczyk, *Testing Hearing. The Making of Modern Aurality*, Oxford (Oxford University Press) 2020.

idem, *Sonic Things: Knowledge Formation in Flux*, in: *Sound Studies*, vol 6, no. 2 (2021)

Elektronik and Algorithmic Musik, Synthesizer, Sonicity

Hal Chamberlin, *Musical Applications of Microprocessors*, Rochelle Parks, N. J. (Hayden) 1980

Andrew Goodwin, *Sample And Hold. Pop Music in the Digital Age of Reproduction*, in: Simon Frith / idem (eds.), *On Record. Rock, Pop and the Written Word*, London (Routledge) 1990, 258-274

Trevor Pinch / Frank Tocco, *Analog days. The invention and impact of the Moog synthesizer*, Cambridge, Mass. / London (Harvard UP) 2002

Seth Kim-Cohen, *In the blink of an ear. Toward a non-cochlear sonic art*, New York (Continuum) 2009

Steve Goodman, *Sonic Warfare. Sound, Affect, and the Ecology of Fear*, MIT Press 2009

Dmitri Zakharine / Nils Meise (eds.), *Electrified Voices*, Konstanz (V&R unipress) 2012

Andrey Smirnov, *Sound in Z. Experiments in Sound and Electronic Music in early 20th Century Russia*, London (Koenig Books) 2013

Frode Weium / Tim Boon (eds.), *Material Culture and Electronic Sound Artefacts: Studies in the History of Science and Technology*, vol. 9], Washington, D.C. (Smithsonian Institution Scholarly Press) 2013

Alex McLean / Roger T. Dean (eds.), *The Oxford Handbook of Algorithmic Music*, Oxford / New York (Oxford University Press) 2018

Thor Magnusson, *Sonic Writing. Technologies of Material, Symbolic & Signal Inscriptions*, New York / London / Oxford / New Delhi / Sydney (Bloomsbury Academic) 2019

Oswald Wiener, *The Bio-Adapter* [GO 1965 / 66]. With an introduction by Siegfried Zielinski, eds. Beate Geissler / Oliver Sann, transl. and biographical notes by Nils Röller, biological notes by Karen Kramer Wilson, Berlin (Kulturverlag Kadmos) 2019

Cybernetics

Warren McCulloch / Walter Pitts, *A Logical Calculus of the Ideas Immanent in Nervous Activity*, in: *Bulletin of Mathematical Biophysics* 5 (1943), 115-133

Norbert Wiener, *Cybernetics, or: control and communication in the animal and the machine*, Paris (Hermann) / Cambridge, Mass. (MIT Press) / New York (John Wiley) 1948

idem, *Computing Machines and the Nervous System*, in: ders., *Cybernetics or control and communication in the animal and the machine*, Cambridge, Mass. (M.I.T. Press), 2nd ed. 1962 [*1948], 116-132

idem, *The extrapolation, interpolation and smoothing of stationary time series, with engineering applications*, Division 7 Report to the Services No. 19. MIT Research Project No. DIC-6037; OSRD No. 370, Massachusetts Institute of Technology, 1st February 1942, typescript. Printed version 1949 (M.I.T. Press)

idem, *Time, Communication, and the Nervous Systems*, in: *Annals of the New York Academy of Sciences*, vol. 50 (1948), 197-220

W. Ross Ashby, *Design for a Brain*, London (Chapman and Hall) 3. Aufl. 1978 [*1952]

Manfred E. Clynes / Nathan S. Kline, *Cyborgs and Space*, in: *Astronautics*, September 1960; reprint: Chris Hables Gray (ed.), *The Cyborg Handbook*, New York / London (Routledge) 1995, 29-33

John von Neumann, *Computer and the Brain* (Silliman Memorial Lectures Series), New Haven / London (Yale University Press) 1958

Warren S. McCulloch, *Embodiments of the Mind*, Cambridge, Mass. / London (MIT Press) 1965

Jay W. Forrester, *World Dynamics* [*1971], Cambridge, Mass. (Wright-Allen) 2nd ed. 1973

Valentin Braitenberg, *Vehicles. Experiments in Synthetic Psychology*, Cambridge, Mass. (MIT Press) 1984

J. C. R. Licklider, *The Computer as Communication Device* (with R. W. Taylor), Digital Equipment Corporation, 1990
[<ftp://ftp.digital.com/pub/DEC/SRC/research-reports/SRC-061.pdf>]

Cybernetics / Kybernetik. The Macy-Conferences 1946-1953, vol. 1: Transactions / Protokolle, ed. Claus Pias, Zurich / Berlin (diaphanes) 2003; vol. II: Documents / Dokumente, 2004

- - -

H. H. Pattee, *Discrete and Continuous Processes in Computers and Brains*, in: *Physics and Mathematics of the Nervous System*, ed. M. Conrad et al., Berlin (Springer) 1974, 128-148

Otto Mayr, *Maxwell and the Origins of Cybernetics*, in: idem. (ed.), *Philosophers and Machines*, New York (Science History Publications) 1976, 168-189

Lily E. Kay, *Who Wrote the Book of Life? A History of the Genetic Code*, Stanford (Stanford University Press) 1999

David A. Mindell, *Between Human and Machine. Feedback, Control, and Computing before Cybernetics*, Baltimore / London (Johns Hopkins University Press) 2004 [1st ed. 2002]

P. R. Masani, *Norbert Wiener 1894-1964*, Basel / Boston / Berlin (Birkhäuser) 1990

N. Katherine Hayles, *How We Became Posthuman. Virtual Bodies in Cybernetics, Literature, And Informatics*, Chicago / London (University of Chicago Press) 1999

György Buzsáki, *Rhythms of the Brain*, New York (Oxford UP) 2006

Mechanics, Machines, Mechanization

Karl Marx, The Fragment on Machines [1859], translated from: Grundrisse der Kritik der politischen Ökonomie, 690-712, <https://thenewobjectivity.com/pdf/marx.pdf>

Franz Reuleaux, Kinematics of Machinery. Outlines of a Theory of Machines [GO 1875], transl. Alex B. W. Kennedy, London (Macmillan) 1876

Georges Canguilhem, Machine and Organism [1946 / 47], in: idem, Knowledge of Life, New York (Fordham University Press) 2008, 75-97

Sigfried Giedion, Mechanization takes Command. A Contribution to Anonymous History, New York (Oxford University Press) 1948

- - -

Friedrich Kittler, The world of the symbolic - a world of the machine, in: J. Johnston (ed.), Literature, Media, Information Systems, London / New York (Routledge) (1997), 130-146

Océane Fiant, Canguilhem and the Machine Metaphor in Life Sciences. History of Science and Philosophy of Biology at the Service of Science, in: Transversal. International Journal for the Historiography of Science, 4 (2018), 149-162

Analog / Digital

Nicholas Negroponte, Being Digital, New York 1995

Computer Games, "Physics" in Engines

Ian Bogost / Nick Montford, Racing the Beam. The Atari Video Computer System, Boston, Mass. (M.I.T. Press), 2009

Raiford Guins, Game After. A Cultural Study of Video Game Afterlife, Cambridge, Mass. / London (MIT Press) 2014

Media Archives

Duncan Davies / Diana Bathurst / Robin Bathurst, The Telling Image. The Changing Balance between Pictures and Words in a Technological Age, Oxford (Clarendon) 1990

Mark T. Maybury (ed.), Intelligent multimedia information retrieval, Cambridge, Mass. / London (MIT) 1997

Trond Lundemo, Digital Returns: The Archives of the Planet and the "Rhythm of Life", in: Trond Erik Bjorli / Kjetil Ansgar Jakobsen (eds.), The Cosmopolitics of the Camera. Albert Kahn's Archives of the Planet, Bristol / Chicago (Intellect Publishing) 2020, chap. 12