

DAFTAR PUSTAKA

- Achterhuis, Hans. 2001. *American Philosophy of Technology: The Empirical Turn*. Indiana University Press.
- Altwater, Elmar, Eileen C. Crist, Donna J. Haraway, Daniel Hartley, Christian Parenti, and Justin McBrien. 2016. *Anthropocene or Capitalocene?: Nature, History, and the Crisis of Capitalism*. Pm Press.
- Andrady, Anthony L. 2011. "Microplastics in the Marine Environment." *Marine Pollution Bulletin* 62(8):1596–1605.
- Angus, Ian. 2016. *Facing the Anthropocene: Fossil Capitalism and the Crisis of the Earth System*. NYU Press.
- Aubert, Maxime, Adam Brumm, Muhammad Ramli, Thomas Sutikna, E. Wahyu Saptomo, Budianto Hakim, Michael J. Morwood, Gerrit D. van den Bergh, Leslie Kinsley, and Anthony Dosseto. 2014. "Pleistocene Cave Art from Sulawesi, Indonesia." *Nature* 514(7521):223–27.
- Autin, Whitney J., and John M. Holbrook. 2012. "Is the Anthropocene an Issue of Stratigraphy or Pop Culture." *GSA Today* 22(7):60–61.
- Baird, Davis. 1988. "Five Theses on Instrumental Realism." Pp. 165–73 in *PSA: Proceedings of the Biennial Meeting of the Philosophy of Science Association*. Vol. 1988. Philosophy of Science Association.
- Baird, Davis. 2004. *Thing Knowledge: A Philosophy of Scientific Instruments*. Univ of California Press.
- Balter, Michael. 2013. "Archaeologists Say the 'Anthropocene' Is Here—but It Began Long Ago."
- Baskin, Jeremy. 2015. "Paradigm Dressed as Epoch: The Ideology of the Anthropocene." *Environmental Values* 24(1):9–29.
- Bell, Daniel. 1973. "Technology, Nature and Society: The Vicissitudes of Three World Views and the Confusion of Realms." *The American Scholar* 385–404.
- Besseling, Ellen, Bo Wang, Miquel Lüring, and Albert A. Koelmans. 2014. "Nanoplastic Affects Growth of *S. Obliquus* and Reproduction of *D. Magna*." *Environmental Science & Technology* 48(20):12336–43.
- Bhaskar, Roy. 2013. *A Realist Theory of Science*. Routledge.
- Bhaskar, Roy. 2016. *Enlightened Common Sense: The Philosophy of Critical Realism*. Routledge.
- Biber, Eric. 2017. "Law in the Anthropocene Epoch." *Geo. LJ* 106:1.
- Blok, Vincent. 2014. "Reconnecting with Nature in the Age of Technology: The Heidegger and Radical Environmentalism Debate Revisited." *Environmental Philosophy* 11(2):307–32.
- Bobrov, V. A., A. A. Bogush, G. A. Leonova, V. A. Krasnobaev, and G. N. Anoshin. 2011. "Anomalous Concentrations of Zinc and Copper in Highmoor Peat Bog, Southeast Coast of Lake Baikal." P. 1152 in *Doklady Earth Sciences*. Vol. 439. Springer.

- Bonneuil, Christophe, and Jean-Baptiste Fressoz. 2016. *The Shock of the Anthropocene: The Earth, History and Us*. Verso Books.
- Borgmann, Albert. 2006. "Broken Symmetries: The Romantic Search for a Moral Cosmology." Pp. 238–62 in *Philosophical Romanticism*. Routledge.
- Botin, Lars, Anette Forss, Michael Funk, Cathrine Hasse, Stacy O. Irwin, Roisin Lally, Srikanth Mallavarapu, Eduardo Mendieta, Junichi Murata, and Shoji Nagataki. 2015. *Technoscience and Postphenomenology: The Manhattan Papers*. Lexington Books.
- Boulton, Elizabeth. 2016. "Climate Change as a 'Hyperobject': A Critical Review of Timothy Morton's Reframing Narrative." *Wiley Interdisciplinary Reviews: Climate Change* 7(5):772–85.
- Brey, Philip. 2010. "Philosophy of Technology after the Empirical Turn." *Techné: Research in Philosophy and Technology* 14(1):36–48.
- Ceballos, Gerardo, Paul R. Ehrlich, Anthony D. Barnosky, Andrés García, Robert M. Pringle, and Todd M. Palmer. 2015. "Accelerated Modern Human–Induced Species Losses: Entering the Sixth Mass Extinction." *Science Advances* 1(5):e1400253.
- Cera, Agostino. 2017. "The Technocene or Technology as (Neo) Environment." *Techné: Research in Philosophy and Technology*.
- Certini, Giacomo, and Riccardo Scalenghe. 2011. "Anthropogenic Soils Are the Golden Spikes for the Anthropocene." *The Holocene* 21(8):1269–74.
- Chakrabarty, Dipesh. 2014. "Climate and Capital: On Conjoined Histories." *Critical Inquiry* 41(1):1–23.
- Chakravartty, Anjan. 2007. *A Metaphysics for Scientific Realism: Knowing the Unobservable*. Cambridge University Press.
- Clark, Nigel, and Kathryn Yusoff. 2017. "Geosocial Formations and the Anthropocene." *Theory, Culture & Society* 34(2–3):3–23.
- comte de Buffon, Georges Louis Leclerc. 2018. *The Epochs of Nature*. University of Chicago Press.
- Conard, Nicholas J. 2009. "A Female Figurine from the Basal Aurignacian of Hohle Fels Cave in Southwestern Germany." *Nature* 459(7244):248–52.
- Corcoran, Patricia L., Todd Norris, Trevor Ceccanese, Mary Jane Walzak, Paul A. Helm, and Chris H. Marvin. 2015. "Hidden Plastics of Lake Ontario, Canada and Their Potential Preservation in the Sediment Record." *Environmental Pollution* 204:17–25.
- Craig, Oliver E., Hayley Saul, Alexandre Lucquin, Yastami Nishida, Karine Taché, Leon Clarke, Anu Thompson, David T. Altoft, Junzo Uchiyama, and Mayumi Ajimoto. 2013. "Earliest Evidence for the Use of Pottery." *Nature* 496(7445):351–54.
- Crutzen, Paul J. 2016. "Geology of Mankind." Pp. 211–15 in *Paul J. Crutzen: A Pioneer on Atmospheric Chemistry and Climate Change in the Anthropocene*. Springer.
- Crutzen, Paul J., and Eugene F. Stoermer. 2000. "Global Change Newsletter." *The*

- Anthropocene* 41:17–18.
- d’Errico, Francesco, Christopher Henshilwood, Marian Vanhaeren, and Karen Van Niekerk. 2005. “Nassarius Kraussianus Shell Beads from Blombos Cave: Evidence for Symbolic Behaviour in the Middle Stone Age.” *Journal of Human Evolution* 48(1):3–24.
- Davies, Jeremy. 2016. *The Birth of the Anthropocene*. USA: Univ of California Press.
- Davis, Robert. 2011. “Inventing the Present: Historical Roots of the Anthropocene” edited by D. Oldroyd. *Earth Sciences History* 30(1):63–84.
- DeConto, Robert M., and David Pollard. 2016. “Contribution of Antarctica to Past and Future Sea-Level Rise.” *Nature* 531(7596):591–97.
- Dewi, Saras. 2015. *Ekofenomenologi: Mengurai Disekuilibrium Relasi Manusia Dengan Alam*. Marjin Kiri.
- Donges, Jonathan F., Wolfgang Lucht, Finn Müller-Hansen, and Will Steffen. 2017. “The Technosphere in Earth System Analysis: A Coevolutionary Perspective.” *The Anthropocene Review* 4(1):23–33.
- Dusek, Val. 2006. *Philosophy of Technology: An Introduction*. Vol. 90. Blackwell MaldenOxfordCarlston.
- Edgeworth, Matt. 2014. “The Relationship between Archaeological Stratigraphy and Artificial Ground and Its Significance in the Anthropocene.” *Geological Society, London, Special Publications* 395(1):91–108.
- Edgeworth, Matt, Dan deB Richter, Colin Waters, Peter Haff, Cath Neal, and Simon James Price. 2015. “Diachronous Beginnings of the Anthropocene: The Lower Bounding Surface of Anthropogenic Deposits.” *The Anthropocene Review* 2(1):33–58.
- Eerkes-Medrano, Dafne, Richard C. Thompson, and David C. Aldridge. 2015. “Microplastics in Freshwater Systems: A Review of the Emerging Threats, Identification of Knowledge Gaps and Prioritisation of Research Needs.” *Water Research* 75:63–82.
- Ellis, Erle Christopher. 2018. *Anthropocene: A Very Short Introduction*. Vol. 558. UK: Oxford University Press.
- Emmett, Robert, and Thomas Lekan. 2016. “Whose Anthropocene.” *Revisiting Dipesh Chakrabarty’s “Four Theses.” RCC Perspectives Transformations in Environment and Society*.
- Eriksen, Marcus, Sherri Mason, Stiv Wilson, Carolyn Box, Ann Zellers, William Edwards, Hannah Farley, and Stephen Amato. 2013. “Microplastic Pollution in the Surface Waters of the Laurentian Great Lakes.” *Marine Pollution Bulletin* 77(1–2):177–82.
- Erlandson, Jon M. 2013. “Shell Middens and Other Anthropogenic Soils as Global Stratigraphic Signatures of the Anthropocene.” *Anthropocene* 4:24–32.
- Farbstein, Rebecca, Dinko Radić, Dejana Brajković, and Preston T. Miracle. 2012. “First Epigravettian Ceramic Figurines from Europe (Vela Spila,

- Croatia)." *PloS One* 7(7):e41437.
- Finney, Stan C. 2014. "The 'Anthropocene' as a Ratified Unit in the ICS International Chronostratigraphic Chart: Fundamental Issues That Must Be Addressed by the Task Group." *Geological Society, London, Special Publications* 395(1):23–28.
- Finney, Stanley C., and Lucy E. Edwards. 2016. "The 'Anthropocene' Epoch: Scientific Decision or Political Statement." *Gsa Today* 26(3):4–10.
- Fischer-Kowalski, Marina, Fridolin Krausmann, and Irene Pallua. 2014. "A Sociometabolic Reading of the Anthropocene: Modes of Subsistence, Population Size and Human Impact on Earth." *The Anthropocene Review* 1(1):8–33.
- Foley, Stephen F., Detlef Gronenborn, Meinrat O. Andreae, Joachim W. Kadereit, Jan Esper, Denis Scholz, Ulrich Pöschl, Dorrit E. Jacob, Bernd R. Schöne, and Rainer Schreg. 2013. "The Palaeoanthropocene—The Beginnings of Anthropogenic Environmental Change." *Anthropocene* 3:83–88.
- Ford, Jon R., Simon J. Price, A. H. Cooper, and Colin N. Waters. 2014. "An Assessment of Lithostratigraphy for Anthropogenic Deposits." *Geological Society, London, Special Publications* 395(1):55–89.
- Franssen, Maarten, and Stefan Koller. 2016. "Philosophy of Technology as a Serious Branch of Philosophy: The Empirical Turn as a Starting Point." Pp. 31–61 in *Philosophy of technology after the empirical turn*. Springer.
- Free, Christopher M., Olaf P. Jensen, Sherri A. Mason, Marcus Eriksen, Nicholas J. Williamson, and Bazartseren Boldgiv. 2014. "High-Levels of Microplastic Pollution in a Large, Remote, Mountain Lake." *Marine Pollution Bulletin* 85(1):156–63.
- Gałuszka, Agnieszka, Zdzisław M. Migaszewski, and Jan Zalasiewicz. 2014. "Assessing the Anthropocene with Geochemical Methods." *Geological Society, London, Special Publications* 395(1):221–38.
- Garrett, Timothy J. 2014. "Long-run Evolution of the Global Economy: 1. Physical Basis." *Earth's Future* 2(3):127–51.
- Gasperi, Johnny, Rachid Dris, Cécile Mirande-Bret, Corinne Mandin, Valérie Langlois, and Bruno Tassin. 2015. "First Overview of Microplastics in Indoor and Outdoor Air."
- Geyer, Roland, Jenna R. Jambeck, and Kara Lavender Law. 2017. "Production, Use, and Fate of All Plastics Ever Made." *Science Advances* 3(7):e1700782–e1700782.
- Gibbard, Philip, and Martin J. Head. 2009. "The Definition of the Quaternary System/Era and the Pleistocene Series/Epoch." *Quaternaire* 20(2):125–33.
- Gibbard, Philip L., Martin J. Head, and Michael J. C. Walker. 2010. "Formal Ratification of the Quaternary System/Period and the Pleistocene Series/Epoch with a Base at 2.58 Ma." *Journal of Quaternary Science* 25(2):96–102.
- Gibbard, Philip L., and M. J. C. Walker. 2014. "The Term 'Anthropocene' in the

- Context of Formal Geological Classification.” *Geological Society, London, Special Publications* 395(1):29–37.
- Glacken, Clarence J. 1956. “Changing Ideas of the Habitable World.” Pp. 70–92 in *Man’s Role in Changing the Face of the Earth*. Vol. 1, edited by J. Thomas, W. L. The University of Chicago Press Chicago, IL.
- Glikson, Andrew. 2013. “Fire and Human Evolution: The Deep-Time Blueprints of the Anthropocene.” *Anthropocene* 3:89–92.
- Grinevald, Jacques, John McNeill, Naomi Oreskes, Will Steffen, Collin P. .. Summerhayes, and Jan Zalasiewicz. 2019. “History and Development of the Anthropocene as a Stratigraphic Concept.” Pp. 1–40 in *The Anthropocene as a Geological Time Unit: A Guide to the Scientific Evidence and Current Debate*, edited by C. N. Waters, C. P. Summerhayes, J. Zalasiewicz, and M. Williams. Cambridge: Cambridge University Press.
- Haff, Peter K. 2014a. “Humans and Technology in the Anthropocene: Six Rules.” *The Anthropocene Review* 1(2):126–36.
- Haff, Peter K. 2014b. “Technology as a Geological Phenomenon: Implications for Human Well-Being.” *Geological Society, London, Special Publications* 395(1):301–9.
- Hamilton, Clive. 2017. *Defiant Earth: The Fate of Humans in the Anthropocene*. John Wiley & Sons.
- Hamilton, Clive, and Jacques Grinevald. 2015. “Was the Anthropocene Anticipated?” *The Anthropocene Review* 2(1):59–72.
- Hansen, Peter H. 2013. *The Summits of Modern Man*. Harvard University Press.
- Hanvey, Joanne S., Phoebe J. Lewis, Jennifer L. Lavers, Nicholas D. Crosbie, Karla Pozo, and Bradley O. Clarke. 2017. “A Review of Analytical Techniques for Quantifying Microplastics in Sediments.” *Analytical Methods* 9(9):1369–83.
- Haraway, Donna. 2015. “Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin.” *Environmental Humanities* 6(1):159–65.
- Hartanto, Budi. 2014. “Membaca Materialitas Ilmu Berdasarkan Filsafat Teknologi Don Ihde.” *DISKURSUS-JURNAL FILSAFAT DAN TEOLOGI STF DRIYARKARA* 13(2):193–221.
- Heidegger, Martin. 1977. *The Question Concerning Technology*. Harper & Row New York.
- Henshilwood, Christopher S., Francesco d’Errico, and Ian Watts. 2009. “Engraved Ochres from the Middle Stone Age Levels at Blombos Cave, South Africa.” *Journal of Human Evolution* 57(1):27–47.
- Holland, Nancy J. 2017. “Nature (or Not) in Heidegger.” Pp. 135–57 in *Ontologies of Nature*. Springer.
- Hui, Yuk. 2017. “On Cosmotechnics: For a Renewed Relation between Technology and Nature in the Anthropocene.” *Techne: Research in Philosophy and Technology* 21(2/3):319–41.
- Hussain, Ikram, and Halim Hamid. 2003. “Plastics in Agriculture.” *Plastics and*

- the Environment*. Wiley, Hoboken 185–209.
- Ihde, Don. 1990. “Technology and the Lifeworld (the Indiana Series in the Philosophy of Technology).” *Bloomington/Minneapolis, Indiana UP*.
- Ihde, Don. 1991. *Instrumental Realism: The Interface between Philosophy of Science and Philosophy of Technology*. Vol. 626. Indiana University Press.
- Ihde, Don. 1993. *Postphenomenology: Essays in the Postmodern Context*. Northwestern University Press.
- Ihde, Don. 2009. *Postphenomenology and Technoscience: The Peking University Lectures*. Suny Press.
- Ihde, Don. 2010. “Heidegger’s Technologies: Postphenomenological Perspectives.”
- Ihde, Don. 2012. *Experimental Phenomenology: Multistabilities*. Suny Press.
- Imhof, Hannes K., Natalia P. Ivleva, Johannes Schmid, Reinhard Niessner, and Christian Laforsch. 2013. “Contamination of Beach Sediments of a Subalpine Lake with Microplastic Particles.” *Current Biology* 23(19):R867–68.
- Inkpen, Rob. 2008. “The Philosophy of Geology.” Pp. 318–29 in *A companion to the philosophy of history and historiography*, edited by A. Tucker. MA: Wiley Online Library.
- Jayanti, Ashwin. 2019. “Instrumental Realisms and Their Ontological Commitments.” *Techné: Research in Philosophy and Technology* 23(1):68–82.
- Karkanis, Panagiotis, Ruth Shahack-Gross, Avner Ayalon, Mira Bar-Matthews, Ran Barkai, Amos Frumkin, Avi Gopher, and Mary C. Stiner. 2007. “Evidence for Habitual Use of Fire at the End of the Lower Paleolithic: Site-Formation Processes at Qesem Cave, Israel.” *Journal of Human Evolution* 53(2):197–212.
- Kessler, Neil H. 2019. *Ontology and Closeness in Human-Nature Relationships*. Springer.
- Kiran, Asle H. 2015. “Four Dimensions of Technological Mediation.” *Postphenomenological Investigations* 123.
- Kiran, Asle H., and Peter-Paul Verbeek. 2010. “Trusting Our Selves to Technology.” *Knowledge, Technology & Policy* 23(3–4):409–27.
- Klein, George Devries. 2015. “The ANTHROPOCENE: What Is Its Geological Utility?(Answer: It Has None!).” P. 218 in *Episodes Forum*. Vol. 38.
- Kleinhans, Maarten G., Chris J. J. Buskes, and Henk W. de Regt. 2010. “Philosophy of Earth Science.” *Philosophies of the Sciences* 213–36.
- Krachler, Michael, Jiancheng Zheng, David Fisher, and William Shotyk. 2009. “Global Atmospheric As and Bi Contamination Preserved in 3000 Year Old Arctic Ice.” *Global Biogeochemical Cycles* 23(3).
- Kroes, Peter, and Anthonie Meijers. 2001. “The Empirical Turn in the Philosophy of Technology.”
- Landrigan, Philip J., Richard Fuller, Nereus J. R. Acosta, Olusoji Adeyi, Robert

- Arnold, Abdoulaye Bibi Baldé, Roberto Bertollini, Stephan Bose-O'Reilly, Jo Ivey Boufford, and Patrick N. Breyse. 2018. "The Lancet Commission on Pollution and Health." *The Lancet* 391(10119):462–512.
- Latour, Bruno. 2017. *Facing Gaia: Eight Lectures on the New Climatic Regime*. John Wiley & Sons.
- Lemmens, Pieter, Vincent Blok, and Jochem Zwier. 2017. "Toward a Terrestrial Turn in Philosophy of Technology." *Techné: Research in Philosophy and Technology* 21(2/3):114–26.
- Lewis, Simon L., and Mark A. Maslin. 2015. "Defining the Anthropocene." *Nature* 519(7542):171–80.
- Lewis, Simon L., and Mark A. Maslin. 2018. *Human Planet: How We Created the Anthropocene*. Yale University Press.
- Lim, Francis. 2008. *Filsafat Teknologi, Don Ihde Ttg Manusia & Alat*. Yogyakarta: Kanisius.
- Lithner, Delilah, Åke Larsson, and Göran Dave. 2011. "Environmental and Health Hazard Ranking and Assessment of Plastic Polymers Based on Chemical Composition." *Science of the Total Environment* 409(18):3309–24.
- Lovelock, James E., and Lynn Margulis. 1974. "Atmospheric Homeostasis by and for the Biosphere: The Gaia Hypothesis." *Tellus* 26(1–2):2–10.
- Mahaswa, Rangga Kala. 2018. "Terrestrial Turn: Diskursus Antroposen Dalam Filsafat Teknologi." Universitas Gadjah Mada.
- Malm, Andreas, and Alf Hornborg. 2014. "The Geology of Mankind? A Critique of the Anthropocene Narrative." *The Anthropocene Review* 1(1):62–69.
- Marx, Samuel K., Shaqer Rashid, and Nicola Stromsoe. 2016. "Global-Scale Patterns in Anthropogenic Pb Contamination Reconstructed from Natural Archives." *Environmental Pollution* 213:283–98.
- Massos, Angelo, and Andrew Turner. 2017. "Cadmium, Lead and Bromine in Beached Microplastics." *Environmental Pollution* 227:139–45.
- Mayer, Wolf. 2017. "Introduction: Enquiries into the History of Geology." *Geological Society, London, Special Publications* 442(1):1–8.
- McNeill, John Robert. 2001. *Something New under the Sun: An Environmental History of the Twentieth-Century World (the Global Century Series)*. WW Norton & Company.
- McNeill, John Robert, and Peter Engelke. 2016. *The Great Acceleration: An Environmental History of the Anthropocene since 1945*. Harvard University Press.
- Michael, Mike. 2000. *Reconnecting Culture, Technology and Nature: From Society to Heterogeneity*. Taylor & Francis.
- Miller, Glen, and Ashley Shew. 2020. *Reimagining Philosophy and Technology, Reinventing Ihde*. Springer.
- Moran, Dermot. 2002. *Introduction to Phenomenology*. Routledge.
- Morritt, David, Paris V Stefanoudis, Dave Pearce, Oliver A. Crimmen, and Paul F. Clark. 2014. "Plastic in the Thames: A River Runs through It." *Marine*

- Pollution Bulletin* 78(1–2):196–200.
- Morton, Timothy. 2013. *Hyperobjects: Philosophy and Ecology after the End of the World*. U of Minnesota Press.
- Murdoch, Jonathan. 1997. “Inhuman/Nonhuman/Human: Actor-Network Theory and the Prospects for a Nondualistic and Symmetrical Perspective on Nature and Society.” *Environment and Planning D: Society and Space* 15(6):731–56.
- Noor, Djauhari. 2014. *Pengantar Geologi*. Deepublish.
- Nuelle, Marie-Theres, Jens H. Dekiff, Dominique Remy, and Elke Fries. 2014. “A New Analytical Approach for Monitoring Microplastics in Marine Sediments.” *Environmental Pollution* 184:161–69.
- O’Hara, Kieran D. 2018. *A Brief History of Geology*. Cambridge University Press.
- Obbard, Rachel W., Saeed Sadri, Ying Qi Wong, Alexandra A. Khitun, Ian Baker, and Richard C. Thompson. 2014. “Global Warming Releases Microplastic Legacy Frozen in Arctic Sea Ice.” *Earth’s Future* 2(6):315–20.
- Pauly, Daniel. 2010. *5 Easy Pieces: The Impact of Fisheries on Marine Ecosystems*. Island press.
- Raab, Thomas, and Robert Frodeman. 2002. “What Is It like to Be a Geologist? A Phenomenology of Geology and Its Epistemological Implications.” *Philosophy & Geography* 5(1):69–81.
- Radder, Hans. 2012. *The Material Realization of Science: From Habermas to Experimentation and Referential Realism*. Vol. 294. Springer Science & Business Media.
- Radivojević, Miljana, Thilo Rehren, Ernst Pernicka, Dušan Šljivar, Michael Brauns, and Dušan Borić. 2010. “On the Origins of Extractive Metallurgy: New Evidence from Europe.” *Journal of Archaeological Science* 37(11):2775–87.
- Revkin, Andrew. 1992. *Global Warming: Understanding the Forecast*. Abbeville Press New York.
- Rigaud, Jean-Philippe, Pierre-Jean Texier, John Parkington, and Cedric Poggenpoel. 2006. “Stillbay and Howiesons Poort Stone Tool Techno-Complexes. South African Middle Stone Age Chronology and Its Implications.” *Comptes Rendus Palevol* 5(6):839–49.
- Rillig, Matthias C. 2012. “Microplastic in Terrestrial Ecosystems and the Soil?”
- Rockström, Johan, Will Steffen, Kevin Noone, Åsa Persson, F. Stuart Chapin, Eric F. Lambin, Timothy M. Lenton, Marten Scheffer, Carl Folke, and Hans Joachim Schellnhuber. 2009. “A Safe Operating Space for Humanity.” *Nature* 461(7263):472–75.
- Rose, Neil L. 2015. “Spheroidal Carbonaceous Fly Ash Particles Provide a Globally Synchronous Stratigraphic Marker for the Anthropocene.” *Environmental Science & Technology* 49(7):4155–62.
- Rosenberger, Robert. 2016. “Husserl’s Missing Multistability.” *Techné: Research in Philosophy and Technology* 20(2):153–67.

- Rosenberger, Robert. 2017. "Notes on a Nonfoundational Phenomenology of Technology." *Foundations of Science* 22(3):471–94.
- Rosenberger, Robert. 2020. "On Variational Cross-Examination: A Method for Postphenomenological Multistability." *AI & SOCIETY* 1–14.
- Rosenberger, Robert, and Peter-Paul Verbeek. 2015. "A Field Guide to Postphenomenology." *Postphenomenological Investigations: Essays on Human-Technology Relations* 9–41.
- Rosenberger, Robert, and Peter P. C. C. Verbeek. 2015. *Postphenomenological Investigations: Essays on Human-Technology Relations*. Lexington Books.
- Rubino, M., D. M. Etheridge, C. M. Trudinger, C. E. Allison, P. J. Rayner, I. Enting, R. Mulvaney, L. P. Steele, R. L. Langenfelds, and W. T. Sturges. 2016. "Low Atmospheric CO₂ Levels during the Little Ice Age Due to Cooling-Induced Terrestrial Uptake." *Nature Geoscience* 9(9):691–94.
- Ruddiman, William F. 2013. "The Anthropocene." *Annual Review of Earth and Planetary Sciences* 41:45–68.
- Ruddiman, William F., Erle C. Ellis, Jed O. Kaplan, and Dorian Q. Fuller. 2015. "Defining the Epoch We Live In." *Science* 348(6230):38–39.
- Rudwick, Martin J. S. 2005. *Bursting the Limits of Time: The Reconstruction of Geohistory in the Age of Revolution*. University of Chicago Press.
- Rudwick, Martin J. S. 2010. *Worlds before Adam: The Reconstruction of Geohistory in the Age of Reform*. University of Chicago Press.
- Rudwick, Martin J. S. 2014. *Earth's Deep History: How It Was Discovered and Why It Matters*. University of Chicago Press.
- Samways, Michael. 1999. "Translocating Fauna to Foreign Lands: Here Comes the Homogenocene." *Journal of Insect Conservation* 3(2):65–66.
- Sandom, Christopher, Søren Faurby, Brody Sandel, and Jens-Christian Svenning. 2014. "Global Late Quaternary Megafauna Extinctions Linked to Humans, Not Climate Change." *Proceedings of the Royal Society B: Biological Sciences* 281(1787):20133254.
- Scholz, Joachim, and Jay Handelman. 2014. "Living in Harmony With Nature: A Post-Human Analysis of Consumers' Relationships With Nature." *ACR North American Advances*.
- Skrbina, David. 2014. *The Metaphysics of Technology*. Routledge.
- Smith, Bruce D., and Melinda A. Zeder. 2013. "The Onset of the Anthropocene." *Anthropocene* 4:8–13.
- Steffen, Will, Wendy Broadgate, Lisa Deutsch, Owen Gaffney, and Cornelia Ludwig. 2015. "The Trajectory of the Anthropocene: The Great Acceleration." *The Anthropocene Review* 2(1):81–98.
- Steffen, Will, Paul J. Crutzen, and John R. McNeill. 2007. "The Anthropocene: Are Humans Now Overwhelming the Great Forces of Nature." *AMBIO: A Journal of the Human Environment* 36(8):614–21.
- Steffen, Will, Jacques Grinevald, Paul Crutzen, and John McNeill. 2011. "The Anthropocene: Conceptual and Historical Perspectives." *Philosophical*

- Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 369(1938):842–67.
- Steffen, Will, Reinhold Leinfelder, Jan Zalasiewicz, Colin N. Waters, Mark Williams, Colin Summerhayes, Anthony D. Barnosky, Alejandro Cearreta, Paul Crutzen, and Matt Edgeworth. 2016. “Stratigraphic and Earth System Approaches to Defining the Anthropocene.” *Earth’s Future* 4(8):324–45.
- Swindles, Graeme T., Elizabeth Watson, T. Edward Turner, Jennifer M. Galloway, Thomas Hadlari, Jane Wheeler, and Karen L. Bacon. 2015. “Spheroidal Carbonaceous Particles Are a Defining Stratigraphic Marker for the Anthropocene.” *Scientific Reports* 5(1):1–6.
- Tansel, Berrin, and Banu Sizerici Yildiz. 2011. “Goal-Based Waste Management Strategy to Reduce Persistence of Contaminants in Leachate at Municipal Solid Waste Landfills.” *Environment, Development and Sustainability* 13(5):821–31.
- Thompson, Richard C., Charles J. Moore, Frederick S. Vom Saal, and Shanna H. Swan. 2009. “Plastics, the Environment and Human Health: Current Consensus and Future Trends.” *Philosophical Transactions of the Royal Society B: Biological Sciences* 364(1526):2153–66.
- Della Torre, C., E. Bergami, A. Salvati, C. Faleri, P. Cirino, K. A. Dawson, and I. Corsi. 2014. “Accumulation and Embryotoxicity of Polystyrene Nanoparticles at Early Stage of Development of Sea Urchin Embryos *Paracentrotus Lividus*.” *Environmental Science & Technology* 48(20):12302–11.
- Turpin, Etienne, and Heather Davis. 2015. *Art in the Anthropocene: Encounters among Aesthetics, Politics, Environments and Epistemologies*. Open Humanities Press.
- Uhrqvist, Ola, and Björn-Ola Linnér. 2015. “Narratives of the Past for Future Earth: The Historiography of Global Environmental Change Research.” *The Anthropocene Review* 2(2):159–73.
- Velzeboer, I., CJAF Kwadijk, and A. A. Koelmans. 2014. “Strong Sorption of PCBs to Nanoplastics, Microplastics, Carbon Nanotubes, and Fullerenes.” *Environmental Science & Technology* 48(9):4869–76.
- Verbeek, Peter-Paul. 2005. *What Things Do: Philosophical Reflections on Technology, Agency, and Design*. Penn State Press.
- Verbeek, Peter-Paul. 2006. “Materializing Morality: Design Ethics and Technological Mediation.” *Science, Technology, & Human Values* 31(3):361–80.
- Verbeek, Peter-Paul. 2008. “Cyborg Intentionality: Rethinking the Phenomenology of Human–Technology Relations.” *Phenomenology and the Cognitive Sciences* 7(3):387–95.
- Verbeek, Peter-Paul. 2011. *Moralizing Technology: Understanding and Designing the Morality of Things*. University of Chicago Press.
- Verbeek, Peter-Paul. 2012. “Expanding Mediation Theory.” *Foundations of*

- Science* 17(4):391–95.
- Vernadsky, Vladimir I. 1998. *The Biosphere*. Springer Science & Business Media.
- Vidas, Davor. 2011. “The Anthropocene and the International Law of the Sea.” *Philosophical Transactions of the Royal Society A: Mathematical, Physical and Engineering Sciences* 369(1938):909–25.
- Villmoare, Brian, William H. Kimbel, Chalachew Seyoum, Christopher J. Campisano, Erin N. DiMaggio, John Rowan, David R. Braun, J. Ramón Arrowsmith, and Kaye E. Reed. 2015. “Early Homo at 2.8 Ma from Ledi-Geraru, Afar, Ethiopia.” *Science* 347(6228):1352–55.
- Vinuales, Jorge E. 2016. “Law and the Anthropocene.” *Jorge E. Vinuales, 'Law and the Anthropocene', C-EENRG Working Paper 4*.
- Walker, Mike J. C., Max Berkelhammer, Svante Björck, Les C. Cwynar, David A. Fisher, Antony J. Long, Jone J. Lowe, Rewi M. Newnham, Sune O. Rasmussen, and Harvey Weiss. 2012. “Formal Subdivision of the Holocene Series/Epoch: A Discussion Paper by a Working Group of INTIMATE (Integration of Ice-core, Marine and Terrestrial Records) and the Subcommittee on Quaternary Stratigraphy (International Commission on Stratigraphy).” *Journal of Quaternary Science* 27(7):649–59.
- Waters, Colin N., Jan A. Zalasiewicz, Mark Williams, Michael A. Ellis, and Andrea M. Snelling. 2014. “A Stratigraphical Basis for the Anthropocene?” *Geological Society, London, Special Publications* 395(1):1–21.
- Waters, Colin N., Jan Zalasiewicz, Colin Summerhayes, Anthony D. Barnosky, Clément Poirier, Agnieszka Gałuszka, Alejandro Cearreta, Matt Edgeworth, Erle C. Ellis, and Michael Ellis. 2016. “The Anthropocene Is Functionally and Stratigraphically Distinct from the Holocene.” *Science* 351(6269).
- Wellner, Galit. 2020. “The Multiplicity of Multistabilities: Turning Multistability into a Multistable Concept.” Pp. 105–22 in *Reimagining Philosophy and Technology, Reinventing Ihde*. Springer.
- Whitmee, Sarah, Andy Haines, Chris Beyrer, Frederick Boltz, Anthony G. Capon, Braulio Ferreira de Souza Dias, Alex Ezeh, Howard Frumkin, Peng Gong, and Peter Head. 2015. “Safeguarding Human Health in the Anthropocene Epoch: Report of The Rockefeller Foundation–Lancet Commission on Planetary Health.” *The Lancet* 386(10007):1973–2028.
- Whyte, Kyle P. 2015. “What Is Multistability? A Theory of the Keystone Concept of Postphenomenological Research.” *Technoscience and Postphenomenology: The Manhattan Papers* 69–81.
- Williams, Mark, Jan Zalasiewicz, Colin N. Waters, Matt Edgeworth, Carys Bennett, Anthony D. Barnosky, Erle C. Ellis, Michael A. Ellis, Alejandro Cearreta, and Peter K. Haff. 2016. “The Anthropocene: A Conspicuous Stratigraphical Signal of Anthropogenic Changes in Production and Consumption across the Biosphere.” *Earth's Future* 4(3):34–53.
- Wolfe, Alexander P., William O. Hobbs, Hilary H. Birks, Jason P. Briner, Sofia U. Holmgren, Ólafur Ingólfsson, Sujay S. Kaushal, Gifford H. Miller, Mark

- Pagani, and Jasmine E. Saros. 2013. "Stratigraphic Expressions of the Holocene–Anthropocene Transition Revealed in Sediments from Remote Lakes." *Earth-Science Reviews* 116:17–34.
- Wolff, Eric W. 2013. "Ice Sheets and Nitrogen." *Philosophical Transactions of the Royal Society B: Biological Sciences* 368(1621):20130127.
- Wolff, Eric W. 2014. "Ice Sheets and the Anthropocene." *Geological Society, London, Special Publications* 395(1):255–63.
- Woodall, Lucy C., Anna Sanchez-Vidal, Miquel Canals, Gordon L. J. Paterson, Rachel Coppock, Victoria Sleight, Antonio Calafat, Alex D. Rogers, Bhavani E. Narayanaswamy, and Richard C. Thompson. 2014. "The Deep Sea Is a Major Sink for Microplastic Debris." *Royal Society Open Science* 1(4):140317.
- Wrigley, Edward Anthony. 2010. *Energy and the English Industrial Revolution*. Cambridge University Press.
- Wu, Xiaohong, Chi Zhang, Paul Goldberg, David Cohen, Yan Pan, Trina Arpin, and Ofer Bar-Yosef. 2012. "Early Pottery at 20,000 Years Ago in Xianrendong Cave, China." *Science* 336(6089):1696–1700.
- Yusoff, Kathryn. 2018. *A Billion Black Anthropocenes or None*. U of Minnesota Press.
- Zalasiewicz, Jan, Maria Bianca Cita, Frits Hilgen, Brian R. Pratt, André Strasser, Jacques Thierry, and Helmut Weissert. 2013. "Chronostratigraphy and Geochronology: A Proposed Realignment." *GSA Today* 23(3):4–8.
- Zalasiewicz, Jan, Will Steffen, Reinhold Leinfelder, Mark Williams, and Colin Waters. 2017. "Petrifying Earth Process: The Stratigraphic Imprint of Key Earth System Parameters in the Anthropocene." *Theory, Culture & Society* 34(2–3):83–104.
- Zalasiewicz, Jan, Colin Waters, Martin J. Head, Will Steffen, James P. Syvitski, Davor Vidas, Colin Summerhayes, and Mark Williams. 2018. "The Geological and Earth System Reality of the Anthropocene."
- Zalasiewicz, Jan, Colin N. Waters, Juliana A. Ivar do Sul, Patricia L. Corcoran, Anthony D. Barnosky, Alejandro Cearreta, Matt Edgeworth, Agnieszka Gałuszka, Catherine Jeandel, and Reinhold Leinfelder. 2016. "The Geological Cycle of Plastics and Their Use as a Stratigraphic Indicator of the Anthropocene." *Anthropocene* 13:4–17.
- Zalasiewicz, Jan, Colin N. Waters, Mark Williams, Anthony D. Barnosky, Alejandro Cearreta, Paul Crutzen, Erle Ellis, Michael A. Ellis, Ian J. Fairchild, and Jacques Grinevald. 2015. "When Did the Anthropocene Begin? A Mid-Twentieth Century Boundary Level Is Stratigraphically Optimal." *Quaternary International* 383:196–203.
- Zalasiewicz, Jan, Colin N. Waters, Alexander P. Wolfe, Anthony D. Barnosky, Alejandro Cearreta, Matt Edgeworth, Erle C. Ellis, Ian J. Fairchild, Felix M. Gradstein, and Jacques Grinevald. 2017. "Making the Case for a Formal Anthropocene Epoch: An Analysis of Ongoing Critiques." *Newsletters on*

- Stratigraphy* 50(2):205–26.
- Zalasiewicz, Jan, Mark Williams, Alan Haywood, and Michael Ellis. 2011. “The Anthropocene: A New Epoch of Geological Time?”
- Zalasiewicz, Jan, Mark Williams, Alan Smith, Tiffany L. Barry, Angela L. Coe, Paul R. Bown, Patrick Brenchley, David Cantrill, Andrew Gale, and Philip Gibbard. 2008. “Are We Now Living in the Anthropocene?” *Gsa Today* 18(2):4.
- Zalasiewicz, Jan, Mark Williams, and Colin N. Waters. 2014. “Can an Anthropocene Series Be Defined and Recognized?” *Geological Society, London, Special Publications* 395(1):39–53.
- Zalasiewicz, Jan, Mark Williams, Colin N. Waters, Anthony D. Barnosky, and Peter Haff. 2014. “The Technofossil Record of Humans.” *The Anthropocene Review* 1(1):34–43.
- Zalasiewicz, Jan, Mark Williams, Colin N. Waters, Anthony D. Barnosky, John Palmesino, Ann-Sofi Rönnskog, Matt Edgeworth, Cath Neal, Alejandro Cearreta, and Erle C. Ellis. 2017. “Scale and Diversity of the Physical Technosphere: A Geological Perspective.” *The Anthropocene Review* 4(1):9–22.
- Zbyszewski, Maciej, Patricia L. Corcoran, and Alexandra Hockin. 2014. “Comparison of the Distribution and Degradation of Plastic Debris along Shorelines of the Great Lakes, North America.” *Journal of Great Lakes Research* 40(2):288–99.
- Zubair, Achmad Charris, and Anton Bakker. 1990. “Metodologi Penelitian Filsafat.” *Yogyakarta: Kanisius*.
- Zwier, Jochem, Vincent Blok, and Pieter Lemmens. 2016. “Phenomenology and the Empirical Turn: A Phenomenological Analysis of Postphenomenology.” *Philosophy & Technology* 29(4):313–33.