



Universiteit  
Leiden  
The Netherlands

## **From monsters to mediators: The evolution of the theme of altruism in early robotic science fiction texts**

Siglé, J.A.

### **Citation**

Siglé, J. A. (2021, January 28). *From monsters to mediators: The evolution of the theme of altruism in early robotic science fiction texts*. Retrieved from <https://hdl.handle.net/1887/3134626>

Version: Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/3134626>

**Note:** To cite this publication please use the final published version (if applicable).

Cover Page



Universiteit Leiden



The handle <https://hdl.handle.net/1887/3134626> holds various files of this Leiden University dissertation.

**Author:** Siglé, J.A.

**Title:** From monsters to mediators: The evolution of the theme of altruism in early robotic science fiction texts

**Issue Date:** 2021-01-28

## List of Figures

Figure 1: "The Steam-Powered Robot of 1868." *The Saturday Evening Post*, 10 Mar. 2016,  
[www.saturdayeveningpost.com/2016/03/10/history/post-perspective/the-steam-powered-robot-of-1868.html](http://www.saturdayeveningpost.com/2016/03/10/history/post-perspective/the-steam-powered-robot-of-1868.html).

Figure 2: "Zadoc Dederick." *Wikipedia*, Wikimedia Foundation, 4 Nov. 2016

Figure 3: *Scientific American* (1845-1908); Apr 15, 1893; Vol. LXVIII., No. 15.; American Periodicals pg. 233

Figure 4: "The Steam-Powered Robot of 1868." *The Saturday Evening Post*, 10 Mar. 2016,  
[www.saturdayeveningpost.com/2016/03/10/history/post-perspective/the-steam-powered-robot-of-1868.html](http://www.saturdayeveningpost.com/2016/03/10/history/post-perspective/the-steam-powered-robot-of-1868.html).

Figure 5: Ebenstein, Joanna. *The Anatomical Venus: Wax, God, Death & the Ecstatic*. Distributed Art Publishers, 2016.

Figure 6: "R.U.R." *Wikipedia*, Wikimedia Foundation, 16 Mar. 2018, [en.wikipedia.org/wiki/R.U.R.](http://en.wikipedia.org/wiki/R.U.R.)

Figure 7: "R.U.R." *Wikipedia*, Wikimedia Foundation, 16 Mar. 2018, [en.wikipedia.org/wiki/R.U.R.](http://en.wikipedia.org/wiki/R.U.R.)

Figure 8: Catalan, Cristobal. "Metropolis at 90: You'll Never See a Movie Like This Again." *The American Conservative*, 2 Nov. 2017,  
[www.theamericanconservative.com/blog/author/cristobal-catalan/](http://www.theamericanconservative.com/blog/author/cristobal-catalan/).

## Works Cited

- Aamoth, Doug. "Interview: Eugene Goostman Passes the Turing Test." *Time*, Time, 9 June 2014, [time.com/2847900/eugene-goostman-turing-test/](http://time.com/2847900/eugene-goostman-turing-test/).
- Adams, Douglas. *The Hitch Hiker's Guide to the Galaxy*. Picador, 2002.
- Alkon, Paul K. *Science Fiction Before 1900: Imagination Discovers Technology*. Routledge, 2002.
- "AlphaGo: The Story so Far." *Deepmind*, [deepmind.com/research/case-studies/alphago-the-story-so-far](http://deepmind.com/research/case-studies/alphago-the-story-so-far).
- Asimov, Isaac, and Martin H. Greenberg. "Robbie." *Machines That Think: The Best Science Fiction Stories about Robots & Computers*, edited by Patricia S. Warrick, Henry Holt and Company, 1984, pp. 68–89.
- Asimov, Isaac. *I, Robot*. Harper Voyager, 2018.
- Asimov, Isaac. "Introduction: Robots, Computers, and Fear." *Machines That Think: The Best Science Fiction Stories about Robots & Computers*, edited by Patricia S. Warrick and Martin H. Greenberg, Henry Holt and Company, 1984, pp. 1–11.
- Asimov, Isaac. *Robots and Empire*. Harper Voyager, 2018.
- Badham, Van. "We Can Beat the Robots - with Democracy | Van Badham." *The Guardian*, Guardian News and Media, 2 Nov. 2017, [www.theguardian.com/commentisfree/2017/nov/03/we-can-beat-the-robots-with-democracy](http://www.theguardian.com/commentisfree/2017/nov/03/we-can-beat-the-robots-with-democracy).
- Badmington, Neil. *Alien Chic: Posthumanism and the Other Within*. Routledge, 2004.
- Bellamy, Elizabeth W. "Ely's Automatic Housemaid." *The Feminine Future: Early Science Fiction by Women Writers*, edited by Mike Ashley, Dover Publications Inc., 2015, pp. 43–52.
- Bernatchez, Josh. "Monstrosity, Suffering, Subjectivity, and Sympathetic Community in Frankenstein and 'The Structure of Torture.'" *Vintage Visions: Essays on Early Science Fiction*, edited by Arthur B. Evans, Wesleyan University Press, 2014, pp. 66–81.
- Bernays, Edward. *Propaganda*. Ig Publishing, 2005.

- Binder, Eando. *Adam Link: Robot*. Paperback Library, 1965.
- Binder, Eando. "I, Robot." *Amazing Stories January 1939*, edited by B. G. Davis and Raymond A. Palmer, vol. 13, ser. 1, Ziff-Davis Publishing Company, 1939, pp. 8–18. 1.
- Blackford, Russell. *Science Fiction and the Moral Imagination - Visions, Minds, Ethics*. Springer International Publish, 2017.
- Blascovich, Jim, and Jeremy Bailenson. *Infinite Reality: Avatars, Eternal Life, New Worlds, and the Dawn of the Virtual Revolution*. William Morrow, 2011.
- Bleiler, Everett Franklin. *Science-Fiction: The Early Years*. Kent State University Press, 1990.
- Bloom, Howard. *Global Brain: The Evolution of Mass Mind from the Big Bang to the 21st Century*. John Wiley & Sons, 2000.
- Brown, Bill. "Science Fiction, the World's Fair, and the Prosthetics of Empire, 1910-1915." *Cultures of United States Imperialism*, edited by Amy Kaplan and Donald E. Pease, Duke University Press, 1993, pp. 129–163.
- Buchen, Irving H. "Frankenstein and the Alchemy of Creation and Evolution." *The Wordsworth Circle*, vol. 8, no. 2, 1977, pp. 103–112., doi:10.1086/twc24039234.
- Calvin, Ritch. "The French Dick: Villiers De L'Isle-Adam, Philip K. Dick, and the Android." *Extrapolation (Pre-2012)*, vol. 48, no. 2, 2007, pp. 1–14.
- Cameron, James, et al. *James Cameron's Story of Science Fiction*. Insight Editions, 2018.
- Čapek, Karel. *Believe in People - The Essential Karel Čapek*. Translated by Sarka Tobrmanova-kuhnova, Faber And Faber, 2010.
- Čapek Karel. *R.U.R. (Rossum's Universal Robots)*. Translated by Claudia Novack, Penguin Books, 2004.
- Chomsky, Noam. "The Mysteries of Nature: How Deeply Hidden." *What Kind of Creatures Are We?*, by Noam Chomsky, Columbia University Press, 2016, pp. 81–127.
- Christian, Brian. *Most Human Human; What Artificial Intelligence Teaches Us About Being Alive*. Penguin Books Ltd, 2012.

- Clarke, Peter. *The Singularity Survival Guide: How to Get On the Good Side of Your Future Robot Overlords*. Logos Literature, 2019.
- Cloonan, William. *Frères Ennemis: The French in American Literature, Americans in French Literature*. Liverpool University Press, 2018.
- Condliffe, Jamie. "Top Breakthrough Technologies For 2018 : Dueling Neural Networks." *CITI I/O*, 8 Mar. 2018, [citi.io/2018/03/08/top-breakthrough-technologies-for-2018-dueling-neural-networks/](http://citi.io/2018/03/08/top-breakthrough-technologies-for-2018-dueling-neural-networks/).
- Conybear, Frederick C. "The Testament of Solomon." *The Three Magical Books of Solomon: The Testament of Solomon & His Greater & Lesser Keys in One Volume*, Mockingbird Press, 2017, pp. 255–296.
- Copeland, B. Jack. *Turing: Pioneer of the Information Age*. Oxford University Press, 2012.
- Copestake, Jen. "How Pope Francis Could Shape the Future of Robotics." *BBC News*, BBC, 24 Mar. 2019, [www.bbc.com/news/technology-47668476](http://www.bbc.com/news/technology-47668476).
- Courtland, Rachel. "Gordon Moore: The Man Whose Name Means Progress." *IEEE Spectrum: Technology, Engineering, and Science News*, 30 Mar. 2015, [spectrum.ieee.org/computing/hardware/gordon-moore-the-man-whose-name-means-progress](http://spectrum.ieee.org/computing/hardware/gordon-moore-the-man-whose-name-means-progress).
- Darwin, Charles. "Descent of Man." *Darwin Online*, 1871, [darwin-online.org.uk/content/frameset?itemID=F937.1&viewtype=text&pageseq=1](http://darwin-online.org.uk/content/frameset?itemID=F937.1&viewtype=text&pageseq=1).
- De Heussey, Robert Du Pontavice. *Villiers De L'Isle-Adam: His Life and Works*. Translated by Mary Loyd, 1894. <https://quod.lib.umich.edu/g/genpub/ahs9353.0001.001>
- Del Rey, Lester. "Helen O'Loy." *Astounding Science-Fiction December 1938*, XXII, ser. 4, Street and Smith, 1938, pp. 118–125. 4.
- Dick, Philip K. *Do Androids Dream of Electric Sheep*. Gollancz, 2010.

- Dinan, Matthew. "The Robot Condition: Karel Čapek's R.U.R. and Hannah Arendt on Labor, Technology, and Innovation." *Perspectives on Political Science*, vol. 46, no. 2, 2017, pp. 108–117., doi:10.1080/10457097.2016.1270677.
- Edwards, Justin D. "Introduction: Technogothics." *Technologies of the Gothic in Literature and Culture*, edited by Justin D Edwards, Routledge , 2015, pp. 1–16.
- Ellis, Edward S. "The Huge Hunter; or, The Steam Man of the Prairies." *The Steam Man of the Prairies: a Dime Novel Anthology*, edited by John Spencer, Monroe St. Press, 2016, pp. 1–123.
- "Ellis, Edward Sylvester." *EDWARD SYLVESTER ELLIS*, Northern Illinois University Libraries, [www.ulib.niu.edu/badndp/ellis\\_edward.html](http://www.ulib.niu.edu/badndp/ellis_edward.html).
- Eugenios, Jillian. "Ray Kurzweil: Humans Will Be Hybrids by 2030." *CNNMoney*, Cable News Network, 4 June 2015, [money.cnn.com/2015/06/03/technology/ray-kurzweil-predictions/index.html](http://money.cnn.com/2015/06/03/technology/ray-kurzweil-predictions/index.html).
- Ford, Martin. *The Rise of the Robots; Technology and the Threat of Mass Enemployment*. Oneworld, 2015.
- Forrest, Jennifer. "The Lord of Hadaly's Rings: Regulating the Female Body in Villiers De L'Isle-Adam's 'L'Eve Future.'" *South Central Review*, vol. 13, no. 4, 1996, pp. 18–37.
- Forster, Edward Morgan. *The Machine Stops*. Penguin Classics, 2011.
- Gasché, Rodolphe. "The Stelliferous Fold: On Villiers De L'Isle-Adam's 'L'Eve Future.'" *Studies in Romanticism*, vol. 22, no. 2, 1983, pp. 293–327., doi:10.2307/25600430.
- Gibbs, Samuel. "Musk, Wozniak and Hawking Urge Ban on Warfare AI and Autonomous Weapons." *The Guardian*, 27 July 2015, [www.theguardian.com/technology/2015/jul/27/musk-wozniak-hawking-ban-ai-autonomous-weapons](http://www.theguardian.com/technology/2015/jul/27/musk-wozniak-hawking-ban-ai-autonomous-weapons).
- Greenhill, Jennifer A. "The View from Outside: Rockwell and Race in 1950" *American Art*, vol. 21, no. 2, 2007, pp. 70–95., doi:10.1086/521890.
- Hales, Barbara. "Taming the Technological Shrew: Woman as Machine in Weimar Culture." *Neophilologus*, vol. 94, 2010, pp. 301–316., doi:10.1007/s11061-009-9177-5.

- Hampton, Gregory Jerome. *Imagining Slaves and Robots in Literature, Film, and Popular Culture: Reinventing Yesterday's Slave with Tomorrow's Robot*. Lexington Books, 2015.
- Hapgood, Fred. "When Robots Live Among Us." *Discover Magazine*, Discover Magazine, 27 May 2008, [www.discovermagazine.com/technology/when-robots-live-among-us](http://www.discovermagazine.com/technology/when-robots-live-among-us).
- Haraway, Donna J. "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century." *Simians, Cyborgs, and Women: the Reinvention of Nature*, by Donna J Haraway, Free Assoc. Books, 1991, pp. 149–181.
- Harbou, Thea von, and Forrest J. Ackerman. *Metropolis*. Sense of Wonder Press, 2002.
- Harding, James, and Loveday Alexander. "Dating the Testament of Solomon." *Old Testament Pseudepigrapha*, University of St Andrews, 28 May 1999, [otp.wp.st-andrews.ac.uk/guest-lectures/dating-the-testament-of-solomon/](http://otp.wp.st-andrews.ac.uk/guest-lectures/dating-the-testament-of-solomon/).
- Harman, Oren. *The Price of Altruism: George Price and the Search for the Origins of Kindness*. Vintage, 2011.
- Harris, Clare Winger. "The Artificial Man." *The Feminine Future: Early Science Fiction by Women Writers*, edited by Mike Ashley, Dover Publications Inc., 2015, pp. 164–175.
- Hayles, N. Katherine. *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature and Informatics*. Univ. of Chicago Press, 1999.
- Haynes, Roslynn. "Chapter 1: The Alchemist in Fiction: The Master Narrative." *The Public Image of Chemistry*, edited by Joachim Schummer et al., World Scientific, 2007, pp. 7–36.
- Johannsen, Robert W. "The Meaning of Manifest Destiny." *Manifest Destiny and Empire: American Antebellum Expansionism*, edited by Sam W. Haynes and Christopher Morris, Texas A&M University Press, 1997, pp. 7–20.
- Johnson, Jeffrey Allan. "Dr. Frankenstein, I Presume? Revising the Popular Image of Frankenstein." *Literature and Medicine*, vol. 36, no. 2, 2018, pp. 287–311.,  
doi:<https://doi.org/10.1353/lm.2018.0015>.



- Kakoudaki, Despina. *Anatomy of a Robot: Literature, Cinema, and the Cultural Work of Artificial People*. Rutgers University Press, 2014.
- Kang, Minsoo. *Sublime Dreams of Living Machines: The Automaton in the European Imagination*. Harvard University Press, 2011.
- Kang, Minsoo. "The Question of the Woman-Machine: Gender, Thermodynamics, and Hysteria in the Nineteenth Century." *SubStance*, vol. 47, no. 3, 2018, pp. 27–43.
- Keim, Brandon. "Robots Evolve Altruism, Just as Biology Predicts." *Wired*, Conde Nast, 4 May 2011, [www.wired.com/2011/05/robot-altruism/](http://www.wired.com/2011/05/robot-altruism/).
- Kelly, Dorothy. *Reconstructing Woman: from Fiction to Reality in the Nineteenth-Century Novel*. Pennsylvania State University Press, 2007.
- Klíma, Ivan, and Peter Kussi. "Introduction." *R.U.R. (Rossum's Universal Robots)*, translated by Claudia Novack, by Čapek Karel, Penguin Books, 2004, pp. vii-xxv.
- Landon, Brooks. *Science Fiction After 1900: from the Steam Man to the Stars*. Routledge, 2002.
- Lanier, Jaron. *You Are Not a Gadget: a Manifesto*. Penguin, 2011.
- Lathers, Marie. *The Aesthetics of Artifice: Villiers's "L'Eve Future"*. University of North Carolina Press, 1996.
- L'Isle-Adam, Auguste Villiers de. *The Future Eve*. Translated by Florence Crewe-Jones, Read Books, 2013.
- L'Isle-Adam, Auguste Villiers de. *Tomorrow's Eve*. Translated by Robert M. Adams, University of Illinois Press, 2001.
- Luckhurst, Roger. *Science Fiction*. Polity, 2005.
- MacArthur, Sian. *Gothic Science Fiction: 1818 to the Present*. Palgrave Macmillan, 2015.
- Mayor, Adrienne. *Gods and Robots: Myths, Machines, and Ancient Dreams of Technology*. Princeton University Press, 2018.
- Mellby, Julie L. "The British Bee Hive." *Princeton University*, The Trustees of Princeton University, 18 Dec. 2009, [www.princeton.edu/~graphicarts/2009/12/the\\_british\\_bee\\_hive.html](http://www.princeton.edu/~graphicarts/2009/12/the_british_bee_hive.html).

- Miah, Andy. "Posthumanism: A Critical History." *Medical Enhancement and Posthumanity*, edited by Ruth F. Chadwick and Bert Gordijn, Springer Netherlands, 2007.
- Miles, Robert. *Gothic Writing 1750-1820: A Genealogy*. Manchester University Press, 2002.
- Miller, John H., and Scott E. Page. *Complex Adaptive Systems: An Introduction to Computational Models of Social Life*. Princeton University Press, 2007.
- Monod Paul Kléber. *Solomon's Secret Arts: the Occult in the Age of Enlightenment*. Yale University Press, 2013.
- Mozur, Paul. "Google's AlphaGo Defeats Chinese Go Master in Win for A.I." *The New York Times*, The New York Times, 23 May 2017, [www.nytimes.com/2017/05/23/business/google-deepmind-alphago-go-champion-defeat.html](http://www.nytimes.com/2017/05/23/business/google-deepmind-alphago-go-champion-defeat.html).
- Nocks, Lisa. *The Robot: The Life Story of a Technology*. John Hopkins University Press, 2008.
- Okasha, Samir. *Evolution and the Levels of Selection*. Oxford University Press, 2008.
- Okasha, Samir. "The Controversy of Kin Selection, Group Selection and Altruism: A Controversy Without End." *OUPblog*, 29 Jan. 2015, [blog.oup.com/2015/01/kin-group-selection-controversy/](http://blog.oup.com/2015/01/kin-group-selection-controversy/).
- Page, Michael R. *Literary Imagination From Erasmus Darwin to H.G. Wells: Science, Evolution, and Ecology*. Routledge , 2016.
- Parrinder, Patrick. *Utopian Literature and Science: from the Scientific Revolution to Brave New World and Beyond*. Palgrave Macmillan, 2015.
- Pepperell, Robert. *The Posthuman Condition: Consciousness Beyond the Brain*. Intellect, 2004.
- Peterfreund, Stuart. "Composing What May Not Be 'Sad Trash': A Reconsideration of Mary Shelley's Use of Paracelsus in 'Frankenstein.'" *Studies in Romanticism*, vol. 43, no. 1, 2004, pp. 79–98., doi:10.2307/25601660.
- Poe, Edgar Allan. "The Man That Was Used Up." *The Murders in the Rue Morgue and Other Tales*, Penguin, 2015, pp. 32–43.

- Putnam, George Haven. *The Artificial Mother; A Marital Fantasy*. Knickerbocker Press, New York, 1894.
- Rand, Ayn, and Nathaniel Branden. *The Virtue of Selfishness; A New Concept of Egoism*. Signet, 1964.
- Reill, Peter. *Vitalizing Nature in the Enlightenment*. Berkeley: University of California Press, 2005.
- Richardson, Kathleen. *An Anthropology of Robots and AI: Annihilation Anxiety and Machines*. Routledge, 2017.
- Rieder, John. *Colonialism and the Emergence of Science Fiction*. Wesleyan University Press, 2008.
- Rodgers, Diane M. *Debugging the Link Between Social Theory and Social Insects*. Louisiana State University Press, 2008.
- Rutsky, R. L. *High Techne: Art and Technology from the Machine Aesthetic to the Posthuman*. University of Minneapolis Press, 1999.
- Sandoval, Eduardo Benitez, et al. "Human Robot Interaction and Fiction: A Contradiction." *Social Robotics: 6th International Conference, ICSR 2014, Sydney, NSW, Australia, October 27-29 ; Proceedings*, edited by Michael Beetz et al., Springer, 2014, pp. 54–63.
- Scientific American. "Steam Man." *Friends' Review; a Religious, Literary and Miscellaneous Journal (1847-1894)*, vol. 21, no. 29, 1868, p. 463.
- Shavit, Ayelet. "Altruism and Group Selection." *Internet Encyclopedia of Philosophy*, [www.iep.utm.edu/altr-grp/](http://www.iep.utm.edu/altr-grp/).
- Shelley, Mary Wollstonecraft. *The Complete Frankenstein*. Edited by Pollan Strober, The Literary Folio, 2018.
- Sleigh, Charlotte. *Ant. Reaktion*, 2003.
- Stableford, Brian. *Science Fiction and Science Fact: An Encyclopedia*. Routledge, 2006.
- Sterrett, Susan G. "Turing on the Integration of Human and Machine Intelligence." *SOAR Home*, Wichita State University, 2016, [soar.wichita.edu/handle/10057/12539](http://soar.wichita.edu/handle/10057/12539).
- Suvin, Darko. "Karel Čapek, or the Aliens Amongst Us." *Metamorphoses of Science Fiction*, Yale University Press, 1979, pp. 270–283.

- Symons, Arthur. *The Symbolist Movement in Literature*. Echo Library, 2017.
- Szollósy, Michael. "Freud, Frankenstein and Our Fear of Robots: Projection in Our Cultural Perception of Technology." *Ai & Society*, vol. 32, no. 3, 2016, pp. 433–439., doi:10.1007/s00146-016-0654-7.
- "The Steam Man." *Scientific American (1845-1908)*, xxii., No. 21., 1870, p. 335.
- "The Steam Man" *Scientific American (1845-1908)*, lxviii, No. 15., 1893, p. 233.
- Turing, Alan M. "Computing Machinery and Intelligence." *The Essential Turing: Seminal Writings in Computing, Logic, Philosophy, Artificial Intelligence, and Artificial Life: Plus the Secrets of Enigma*, edited by B. Jack Copeland, Oxford University Press, 2004, pp. 441–464.
- Turing, Alan M. "Intelligent Machinery, A Heretical Theory." *The Essential Turing: Seminal Writings in Computing, Logic, Philosophy, Artificial Intelligence, and Artificial Life: Plus the Secrets of Enigma*, edited by B. Jack Copeland, Oxford University Press, 2004, pp. 472–475.
- Turing, Alan M. "Intelligent Machinery." *The Essential Turing: Seminal Writings in Computing, Logic, Philosophy, Artificial Intelligence, and Artificial Life: Plus the Secrets of Enigma*, edited by B. Jack Copeland, Oxford University Press, 2004, pp. 410–432.
- Turkle, Sherry. *Alone Together: Why We Expect More from Technology and Less from Each Other*. Basic Books, a Member of the Perseus Books Group, 2012.
- Vartanian, Aram, and Julien Offray de La Mettrie. *La Mettrie's L'Homme Machine: A Study in the Origins of an Idea*. Princeton University Press, 2016.
- Veelen, Matthijs Van. "On the Use of the Price Equation." *Journal of Theoretical Biology*, vol. 237, 2005, pp. 412–426., doi:10.1016/j.jtbi.2005.04.026.
- Vint, Sherryl. *Bodies of Tomorrow: Technology, Subjectivity, Science Fiction*. University of Toronto Press, 2019.
- Waibel, Markus, et al. "A Quantitative Test of Hamilton's Rule for the Evolution of Altruism." *PLoS Biology*, vol. 9, no. 5, 2011, doi:10.1371/journal.pbio.1000615.
- Warrick, Patricia S. *The Cybernetic Imagination in Science Fiction*. MIT Press, 1980.

- Weller, Chris. "Meet the First-Ever Robot Citizen - a Humanoid Named Sophia That Once Said It Would 'Destroy Humans'." *Business Insider*, Business Insider, 27 Oct. 2017, [www.businessinsider.com/meet-the-first-robot-citizen-sophia-animatronic-humanoid-2017-10?international=true&r=US&IR=T](http://www.businessinsider.com/meet-the-first-robot-citizen-sophia-animatronic-humanoid-2017-10?international=true&r=US&IR=T).
- Wells, H. G. "The Empire of the Ants." *H. G. Wells Complete Short Story Omnibus*, Gollancz, 2011, pp. 636–649.
- Wiener, Norbert. *The Human Use of Human Beings: Cybernetics and Society*. Da Capo Press, 1954.
- Wilson, David Sloan. *Does Altruism Exist?: Culture, Genes, and the Welfare of Others*. Yale University Press, 2015.
- Wilson, Edward O. *The Social Conquest of Earth*. Liveright, 2012.
- Wilson, Eric G. *The Melancholy Android: On the Psychology of Sacred Machines*. State University of New York Press, 2006.
- Wolfe, Gary K. "Icon of the Robot." *The Known and the Unknown: The Iconography of Science Fiction*, Kent State University Press, 1979, pp. 151–183.
- Wong, Julia Carrie. "Elon Musk Unveils Plan to Build Mind-Reading Implants: 'The Monkey Is out of the Bag'." *The Guardian*, Guardian News and Media, 17 July 2019, [www.theguardian.com/technology/2019/jul/17/elon-musk-neuralink-brain-implants-mind-reading-artificial-intelligence](http://www.theguardian.com/technology/2019/jul/17/elon-musk-neuralink-brain-implants-mind-reading-artificial-intelligence).
- Wood, Gaby. *Edison's Eve: A Magical History of the Quest for Mechanical Life*. Anchor Books, 2003.
- Wosk, Julie. "Metropolis." *Technology and Culture*, vol. 51, no. 2, 2010, pp. 403–408.
- Wosk, Julie. "Update on the Film 'Metropolis'." *Technology and Culture*, vol. 51, no. 4, 2010, pp. 1061–1062.
- Wyndham, John. "The Lost Machine." *Machines That Think: The Best Science Fiction Stories about Robots & Computers*, edited by Isaac Asimov et al., Henry Holt and Company, 1984, pp. 29–49.

Wright, S. Fowler. "Automata." *S. Fowler Wright's Short Stories*, by S. Fowler Wright, Sadler Print, 1996, pp. 121–132.

## Biography

Jan Sigle, born in 1984 in Pretoria, South Africa, emigrated to the Netherlands in 2004 to pursue a tertiary education at Leiden University. From 2005 to 2009 he completed the *BA in English Language and Culture* program with full marks for his final thesis. His thesis explored the role of consciousness in Daniel Keyes' science fiction novel *Flowers for Algernon* (1966), which he subsequently presented at a conference in Groningen in 2010. From 2010 to 2012, he completed the *Research MA in the Study of Art and Literature* with cum laude and was a finalist for the Best Thesis Prize at Leiden University in 2012. His thesis performed a posthumanist analysis of contemporary science fiction cinematic representations of humanoids. From 2013 to 2014, he worked full-time as an English teacher at a college of higher education. In 2016, he pursued his PhD as an external candidate at Leiden University. From 2015 to 2017, he worked as a part-time lecturer at Leiden University teaching two courses (BA level) and guest lectures (BA and MA levels). In 2018, he presented at a conference at Birkbeck, University of London. He works as a freelancer in academia, proofreading and copyediting.