

References

- Agre, P. (1997). *Computation and human experience*. New York, NY: Cambridge University Press.
- Agullo, M., Carlson, D., Clague, K., Ferrari, G., Ferrari, M., Yabuki, H., et al. (2003). *LEGO mindstorms masterpieces*. Rockland, MA: Syngress Publishing.
- Albright, T. D. (1984). Direction and orientation selectivity of neurons in visual area MT of the macaque. *Journal of Neurophysiology*, *52*, 1106–1130.
- Alerstam, T. (2006). Conflicting evidence about long-distance animal navigation. *Science*, *313*(5788), 791–794.
- Alexander, R. M. (2005). Walking made simple. *Science*, *308*(5718), 58–59.
- Altendorfer, R., Moore, N., Komsuolu, H., Buehler, M., Brown, H. B., McMordie, D., et al. (2001). RHex: A biologically inspired hexapod runner. *Autonomous Robots*, *11*(3), 207–213.
- Altendorfer, R., Saranlı, U., Komsuoglu, H., Koditschek, D., Brown, H. B., Buehler, M., et al. (2001). Evidence for spring loaded inverted pendulum running in a hexapod robot. *Experimental Robotics VII*, 271, 291–302.
- Anderson, J. A., Silverstein, J. W., Ritz, S. A., & Jones, R. S. (1977). Distinctive features, categorical perception and probability learning: Some applications of a neural model. *Psychological Review*, *84*, 413–451.
- Anderson, J. R. (1983). *The architecture of cognition*. Cambridge, MA: Harvard University Press.
- Anderson, J. R. (1985). *Cognitive psychology and its implications* (2nd ed.). New York, NY: W. H. Freeman.
- Anderson, J. R., Bothell, D., Byrne, M. D., Douglass, S., Lebiere, C., & Qin, Y. L. (2004). An integrated theory of the mind. *Psychological Review*, *111*(4), 1036–1060.
- Anderson, J. R., & Matessa, M. (1997). A production system theory of serial memory. *Psychological Review*, *104*(4), 728–748.
- Andriacchi, T. P., & Alexander, E. J. (2000). Studies of human locomotion: Past, present and future. *Journal of Biomechanics*, *33*(10), 1217–1224.
- Aristotle. (1953/350 BC). *On the heavens*. Cambridge, MA; London, UK: Harvard University Press.
- Arleo, A., & Gerstner, W. (2000). Spatial cognition and neuro-mimetic navigation: A model of hippocampal place cell activity. *Biological Cybernetics*, *83*, 287–299.
- Ashby, W. R. (1956). *An introduction to cybernetics*. London: Chapman & Hall.
- Ashby, W. R. (1960). *Design for a brain* (2nd ed.). New York, NY: John Wiley & Sons.
- Asimov, I. (2004). *I, robot* (Bantam hardcover ed.). New York, NY: Bantam Books.

- Assayag, G., Feichtinger, H. G., Rodrigues, J.-F., & European Mathematical Society. (2002). *Mathematics and music: A Diderot mathematical forum*. Berlin, Germany; New York, NY: Springer-Verlag.
- Astolfo, D., Ferrari, M., & Ferrari, G. (2007). *Building robots with LEGO Mindstorms NXT* (Updated ed.). Rockland, MA: Syngress.
- Baerends, G. P. (1959). Ethological studies of insect behavior. *Annual Review of Entomology*, 4, 207–234.
- Bailey, D. (1992). *Improvisation: Its nature and practice in music*. New York, NY: Da Capo Press.
- Baird, J. (1999). Returning to the tropics: The epic autumn flight of the blackpoll warbler. In K. P. Able (Ed.), *Gatherings of angels: Migrating birds and their ecology* (pp. 63–77). Ithaca, NY: Cornell University Press.
- Balch, T. (2002). Taxonomies of multirobot task and reward. In T. Balch & L. E. Parker (Eds.), *Robot teams* (pp. 23–35). Natick, MA: A. K. Peters.
- Balch, T., & Parker, L. E. (2002). *Robot teams*. Natick, MA: A. K. Peters.
- Ballard, D. (1986). Cortical structures and parallel processing: Structure and function. *The Behavioral And Brain Sciences*, 9, 67–120.
- Bar-Cohen, Y. (2006). Biomimetics: Using nature to inspire human innovation. *Bioinspiration & Biomimetics*, 1, P1–P12.
- Barnes, D. M., & Mallik, A. U. (1997). Habitat factors influencing beaver dam establishment in a northern Ontario watershed. *Journal of Wildlife Management*, 61(4), 1371–1377.
- Bartsch, M. S., Federle, W., Full, R. J., & Kenny, T. W. (2007). A multi-axis force sensor for the study of insect biomechanics. *Journal of Microelectromechanical Systems*, 16(3), 709–718.
- Baudrillard, J. (1994). *Simulacra and simulation*. Ann Arbor: University of Michigan Press.
- Bateson, G. (1972). *Steps to an ecology of mind*. New York, NY: Ballantine Books.
- Bayraktaroglu, Z. Y. (2009). Snake-like locomotion: Experimentations with a biologically inspired wheel-less snake robot. *Mechanism and Machine Theory*, 44(3), 591–602.
- Bechtel, W., & Abrahamsen, A. A. (2002). *Connectionism and the mind: Parallel processing, dynamics, and evolution in networks* (2nd ed.). Malden, MA: Blackwell.
- Bechtel, W., Graham, G., & Balota, D. A. (1998). *A companion to cognitive science*. Malden, MA: Blackwell.
- Bellmore, M., & Nemhauser, G. L. (1968). The traveling salesman problem: A survey. *Operations Research*, 16(3), 538–558.
- Beni, G. (2005). From swarm intelligence to swarm robotics. *Swarm Robotics*, 3342, 1–9.
- Beni, G., & Wang, J. (1991, April 9–11). *Theoretical problems for the realization of distributed robotic systems*. Paper presented at the IEEE International Conference on Robotics and Automation, Sacramento, CA.
- Benson, B. (2003). *The improvisation of musical dialogue: A phenomenology of music*. Cambridge, UK; New York, NY: Cambridge University Press.
- Benson, D. J. (2007). *Music: A mathematical offering*. Cambridge, UK; New York, NY: Cambridge University Press.
- Bertalanffy, L. v. (1967). *Robots, men, and minds*. New York, NY: G. Braziller.
- Best, J. B. (1995). *Cognitive psychology*. St. Paul: West Publishing.
- Blackwell, T. (2003). *Swarm music: Improvised music with multiswarms*. Paper presented at the AISB Symposium on Artificial Intelligence and Creativity in Arts and Science, Aberystwith, Wales.
- Blackwell, T., & Young, M. (2004a). Self-organised music. *Organised Sound*, 9, 123–136.
- Blackwell, T., & Young, M. (2004b). Swarm granulator. *Applications of Evolutionary Computing*, 3005, 399–408.

- Bladin, P. F. (2006). W. Grey Walter, pioneer in the electroencephalogram, robotics, cybernetics, artificial intelligence. *Journal of Clinical Neuroscience*, *13*, 170–177.
- Blickhan, R., & Full, R. J. (1993). Similarity in multilegged locomotion: Bouncing like a monopode. *Journal of Comparative Physiology A*, *173*, 509–517.
- Boden, M. A. (2006). *Mind as machine: A history of cognitive science*. New York, NY: Clarendon Press.
- Bonabeau, E., & Meyer, C. (2001). Swarm intelligence: A whole new way to think about business. *Harvard Business Review*, *79*(5), 106–114.
- Bonabeau, E., Theraulaz, G., Deneubourg, J. L., Franks, N. R., Rafelsberger, O., Joly, J. L., et al. (1998). A model for the emergence of pillars, walls and royal chambers in termite nests. *Philosophical Transactions of the Royal Society of London Series B-Biological Sciences*, *353*(1375), 1561–1576.
- Bonds, M. E. (2006). *Music as thought: Listening to the symphony in the age of Beethoven*. Princeton, NJ: Princeton University Press.
- Boogaarts, M. (2007). *The LEGO Mindstorms NXT idea book: Design, invent, and build*. San Francisco, CA: No Starch Press.
- Boole, G. (1854). *An investigation of the laws of thought, on which are founded the mathematical theories of logic and probabilities*. London, UK: Walton & Maberley.
- Botez, M. I. (1975). Two visual systems in clinical neurology: Readaptive role of the primitive system in visual agnosia patients. *European Neurology*, *13*, 101–122.
- Braitenberg, V. (1984). *Vehicles: Explorations in synthetic psychology*. Cambridge, MA: MIT Press.
- Braun, H. (1991). On solving traveling salesman problems by genetic algorithms. *Lecture Notes in Computer Science*, *496*, 129–133.
- Bregler, C., Malik, J., & Pullen, K. (2004). Twist based acquisition and tracking of animal and human kinematics. *International Journal of Computer Vision*, *56*(3), 179–194.
- Brentano, F. C. (1874/1995). *Psychology from an empirical standpoint* (Paperback ed.). London, UK; New York, NY: Routledge.
- Bronowski, J. (1973). *The ascent of man*. London, UK: British Broadcasting Corporation.
- Brooks, R., & Flynn, A. M. (1989). Fast, cheap and out of control: A robot invasion of the solar system. *Journal of The British Interplanetary Society*, *42*, 478–485.
- Brooks, R. A. (1989). A robot that walks: Emergent behaviours from a carefully evolved network. *Neural Computation*, *1*, 253–262.
- Brooks, R. A. (1999). *Cambrian intelligence: The early history of the new AI*. Cambridge, MA: MIT Press.
- Brooks, R. A. (2002). *Flesh and machines: How robots will change us*. New York, NY: Pantheon Books.
- Bruner, J. S. (1957). On perceptual readiness. *Psychological Review*, *64*, 123–152.
- Bruner, J. S., Postman, L., & Rodrigues, J. (1951). Expectation and the perception of color. *American Journal of Psychology*, *64*(2), 216–227.
- Burgess, N., Donnett, J. G., Jeffery, K. J., & O'Keefe, J. (1997). Robotic and neuronal simulation of the hippocampus and rat navigation. *Philosophical Transactions Of the Royal Society Of London, B*, *352*, 1535–1543.
- Cage, J. (1961). *Silence: Lectures and writings* (1st ed.). Middletown, CT: Wesleyan University Press.
- Canetti, E. (1962). *Crowds and power*. London, UK: Gollancz.
- Caudill, M. (1992). *In our own image: Building an artificial person*. New York, NY: Oxford University Press.

- Cheng, K. (1986). A purely geometric module in the rat's spatial representation. *Cognition*, 23, 149–178.
- Cheng, K. (2005). Reflections on geometry and navigation. *Connection Science*, 17(1–2), 5–21.
- Cheng, K. (2008a). Geometry and navigation. In M. E. Jefferies & W. K. Yeap (Eds.), *Robotics and cognitive approaches to spatial mapping* (pp. 145–161). Berlin, Germany: Springer-Verlag.
- Cheng, K. (2008b). Whither geometry? Troubles of the geometric module. *Trends in Cognitive Sciences*, 12(9), 355–361.
- Cheung, A., Stuerzl, W., Zeil, J., & Cheng, K. (2008). The information content of panoramic images II: View-based navigation in nonrectangular experimental arenas. *Journal of Experimental Psychology-Animal Behavior Processes*, 34(1), 15–30.
- Chirikjian, G. S., & Burdick, J. W. (1995). The kinematics of hyper-redundant robot locomotion. *IEEE Transactions on Robotics and Automation*, 11(6), 781–793.
- Chomsky, N. (1980). *Rules and representations*. New York, NY: Columbia University Press.
- Clague, K., Agullo, M., & Hassing, L. C. (2002). *LEGO Software Power Tools*. Rockland, MA: Syngress Publishing.
- Clancey, W. J. (1997). *Situated cognition*. Cambridge, UK: Cambridge University Press.
- Clark, A. (1989). *Microcognition*. Cambridge, MA: MIT Press.
- Clark, A. (1993). *Associative engines*. Cambridge, MA: MIT Press.
- Clark, A. (1997). *Being there: Putting brain, body, and world together again*. Cambridge, MA: MIT Press.
- Clark, A. (1999). An embodied cognitive science? *Trends in Cognitive Sciences*, 3(9), 345–351.
- Clark, A. (2003). *Natural-born cyborgs*. Oxford, UK; New York, NY: Oxford University Press.
- Clark, A. (2008). *Supersizing the mind: Embodiment, action, and cognitive extension*. Oxford, UK; New York, NY: Oxford University Press.
- Clark, A., & Chalmers, D. (1998). The extended mind (Active externalism). *Analysis*, 58(1), 7–19.
- Clegg, B. (2007). *The man who stopped time*. Washington, D.C.: Joseph Henry Press.
- Collins, S. H., Ruina, A., Tedrake, R., & Wisse, M. (2005). Efficient bipedal robots based on passive-dynamic walkers. *Science*, 307(5712), 1082–1085.
- Collins, S. H., Wisse, M., & Ruina, A. (2001). A three-dimensional passive-dynamic walking robot with two legs and knees. *International Journal of Robotics Research*, 20(7), 607–615.
- Conrad, R. (1964). Information, acoustic confusion, and memory span. *British Journal of Psychology*, 55, 429–432.
- Conway, F., & Siegelman, J. (2005). *Dark hero of the information age: In search of Norbert Wiener, the father of cybernetics*. New York, NY: Basic Books.
- Cooper, R. (1977). Obituary, W. Grey Walter. *Nature*, 268, 383–384.
- Copland, A. (1939). *What to listen for in music*. New York, NY; London, UK: Whittlesey House, McGraw-Hill Book Company.
- Cottingham, J. (1978). 'A brute to the brutes?': Descartes' treatment of animals. *Philosophy*, 53(206), 551–559.
- Couzin, I. D., & Franks, N. R. (2003). Self-organized lane formation and optimized traffic flow in army ants. *Proceedings of the Royal Society of London Series B-Biological Sciences*, 270(1511), 139–146.
- Craik, K. J. M. (1943). *The nature of explanation*. Cambridge, UK: Cambridge University Press.
- Cummins, R. (1975). Functional analysis. *Journal of philosophy*, 72, 741–760.
- Cummins, R. (1983). *The nature of psychological explanation*. Cambridge, MA: MIT Press.
- Curtis, P. D., & Jensen, P. G. (2004). Habitat features affecting beaver occupancy along roadsides in New York state. *Journal of Wildlife Management*, 68(2), 278–287.

- Cybenko, G. (1989). Approximation by superpositions of a sigmoidal function. *Mathematics of Control, Signals, and Systems* 2, 303–314.
- Danckert, J., & Rossetti, Y. (2005). Blindsight in action: What can the different sub-types of blindsight tell us about the control of visually guided actions? *Neuroscience and Biobehavioral Reviews*, 29(7), 1035–1046.
- Dawkins, M. S. (1993). *Through our eyes only? The search for animal consciousness*. Oxford, UK: W. H. Freeman.
- Dawson, M. R. W. (1998). *Understanding cognitive science*. Oxford, UK: Blackwell.
- Dawson, M. R. W. (2004). *Minds and machines: Connectionism and psychological modeling*. Malden, MA: Blackwell Pub.
- Dawson, M. R. W. (2009). Review of Philip Robbins and Murat Aydede, The Cambridge handbook of situated cognition. *Canadian Psychology, in press*.
- Dawson, M. R. W., Boechler, P. M., & Valsangkar-Smyth, M. (2000). Representing space in a PDP network: Coarse allocentric coding can mediate metric and nonmetric spatial judgements. *Spatial Cognition and Computation*, 2, 181–218.
- Dawson, M. R. W., Kelly, D. M., Spetch, M. L., & Dupuis, B. (2008). Learning about environmental geometry: A flaw in Miller and Shettleworth's (2007) operant model. *Journal of Experimental Psychology-Animal Behavior Processes*, 34(3), 415–418.
- Dawson, M. R. W., & Zimmerman, C. (2003). Interpreting the internal structure of a connectionist model of the balance scale task. *Brain & Mind*, 4, 129–149.
- de Latil, P. (1956). *Thinking by machine: A study of cybernetics*. London, UK: Sidgwick & Jackson.
- Delcomyn, F. (2004). Insect walking and robotics. *Annual Review of Entomology*, 49, 51–70.
- Deneubourg, J. L., & Goss, S. (1989). Collective patterns and decision-making. *Ethology Ecology & Evolution*, 1(4), 295–311.
- Deneubourg, J. L., Goss, S., Franks, N., Sendova-Franks, A., Detrain, C., & Chretien, L. (1991). *The dynamics of collective sorting robot-like ants and ant-like robots. Proceedings of the first international conference on simulation of adaptive behavior (From animals to animats)* (pp. 356–363). Paris, France: MIT Press.
- Dennett, D. C. (1987). *The Intentional Stance*. Cambridge, MA: MIT Press.
- Dennett, D. C. (1991). *Consciousness explained*. Boston, MA: Little, Brown.
- Dennett, D. C. (2005). *Sweet dreams: Philosophical obstacles to a science of consciousness*. Cambridge, MA: MIT Press.
- Descartes, R. (1637/1960). *Discourse on method and meditations*. Indianapolis, IN: Bobbs-Merrill.
- Detrain, C., & Deneubourg, J. L. (2006). Self-organized structures in a superorganism: Do ants “behave” like molecules? *Physics of Life Reviews*, 3(3), 162–187.
- Dickinson, M. H., Farley, C. T., Full, R. J., Koehl, M. A. R., Kram, R., & Lehman, S. (2000). How animals move: An integrative view. *Science*, 288, 100–106.
- Devlin, K. (1996). Good-bye Descartes? *Mathematics Magazine*, 69, 344–349.
- Dorigo, M., & Gambardella, L. M. (1997). Ant colonies for the travelling salesman problem. *Biosystems*, 43(2), 73–81.
- Dourish, P. (2001). *Where the action is: The foundations of embodied interaction*. Cambridge, MA: MIT Press.
- Downing, H. A., & Jeanne, R. L. (1986). Intraspecific and interspecific variation in nest architecture in the paper wasp *Polistes* (Hymenoptera, Vespidae). *Insectes Sociaux*, 33(4), 422–443.
- Downing, H. A., & Jeanne, R. L. (1988). Nest construction by the paper wasp, *Polistes*: A test of stigmergy theory. *Animal Behaviour*, 36, 1729–1739.

- Drury, W. H., & Keith, J. A. (1962). Radar studies of songbird migration in eastern New England. *The Ibis*, *104*, 449–489.
- Dubner, R., & Zeki, S. M. (1971). Response properties and receptive fields of cells in an anatomically defined region of the superior temporal sulcus in the monkey. *Brain Research*, *35*, 528–532.
- Dudek, D. M., & Full, R. J. (2006). Passive mechanical properties of legs from running insects. *Journal of Experimental Biology*, *209*(8), 1502–1515.
- Endo, G., Togawa, K., & Hirose, S. (1999). *Study on self-contained and terrain adaptive active chord mechanism*. Paper presented at the IEEE/RSJ International Conference on Intelligent Robots and Systems.
- Evans, H. E. (1966). Behavior patterns of solitary wasps. *Annual Review of Entomology*, *11*, 123–&.
- Evans, H. E., & West-Eberhard, M. J. (1970). *The wasps*. Ann Arbor: University of Michigan Press.
- Evans, M. A., & Evans, H. E. (1970). *William Morton Wheeler, biologist*. Cambridge, MA: Harvard University Press.
- Fabre, J. H. (1915). *The hunting wasps*. New York, NY: Dodd, Mead and Company.
- Fabre, J. H. (1919). *The mason wasps*. New York, NY: Dodd, Mead and company.
- Feldman, J. A., & Ballard, D. H. (1982). Connectionist models and their properties. *Cognitive Science*, *6*, 205–254.
- Feynman, R. P. (1985). *“Surely you’re joking, Mr. Feynman!”: Adventures of a curious character*. New York, NY: W. W. Norton.
- Filliat, D., & Meyer, J. A. (2003). Map-based navigation in mobile robots: I. A review of localization strategies. *Cognitive Systems Research*, *4*, 243–282.
- Finney, B. R. (1976). *Pacific navigation and voyaging*. Wellington, New Zealand: Polynesian Society.
- Flavell, J. H. (1963). *The developmental psychology of Jean Piaget*. Princeton, NJ: Van Nostrand.
- Fodor, J. A. (1968). *Psychological explanation: An introduction to the philosophy of psychology*. New York, NY: Random House.
- Fodor, J. A. (1975). *The language of thought*. Cambridge, MA: Harvard University Press.
- Fodor, J. A. (1980). Methodological solipsism considered as a research strategy in cognitive psychology. *Behavioral and Brain Sciences*, *3*(1), 63–73.
- Fodor, J. A. (1983). *The modularity of mind*. Cambridge, MA: MIT Press.
- Fodor, J. A., & Pylyshyn, Z. W. (1988). Connectionism and cognitive architecture. *Cognition*, *28*, 3–71.
- Fogel, D. B. (1988). An evolutionary approach to the traveling salesman problem. *Biological Cybernetics*, *60*(2), 139–144.
- Fong, T., Nourbakhsh, I., & Dautenhahn, K. (2003). A survey of socially interactive robots. *Robotics and Autonomous Systems*, *42*(3–4), 143–166.
- Forbes, P. (2006). *The gecko’s foot* (1st American ed.). New York, NY: W. W. Norton & Co.
- Franks, N. R., & Sendova-Franks, A. B. (1992). Brood sorting by ants: Distributing the workload over the work surface. *Behavioral Ecology and Sociobiology*, *30*(2), 109–123.
- Franks, N. R., Sendova-Franks, A. B., & Anderson, C. (2001). Division of labour within teams of New World and Old World army ants. *Animal Behaviour*, *62*, 635–642.
- Franks, N. R., Wilby, A., Silverman, B. W., & Tofts, C. (1992). Self-organizing nest construction in ants: Sophisticated building by blind bulldozing. *Animal Behaviour*, *44*(2), 357–375.
- Freud, S. (1919/1976). The uncanny. *New Literary History*, *7*(3), 619–645.

- Frisch, K. v. (1966). *The dancing bees: An account of the life and senses of the honey bee* (2nd ed.). London, UK: Methuen.
- Frisch, K. v. (1967). *The dance language and orientation of bees*. Cambridge, MA: Belknap Press of Harvard University Press.
- Frisch, K. v. (1974). Decoding the language of the bee. *Science*, 185, 663–668.
- Full, R. J., Earls, K., Wong, M., & Caldwell, R. (1993). Locomotion like a wheel. *Nature*, 365(6446), 495–495.
- Full, R. J., & Tu, M. S. (1991). Mechanics of a rapid running insect: Two-, four-, and six-legged locomotion. *Journal of Experimental Biology*, 156, 215–231.
- Gaines, J. R. (2005). *Evening in the palace of reason: Bach meets Frederick the Great in the Age of Enlightenment*. London, UK; New York, NY: Fourth Estate.
- Gallistel, C. R. (1990). *The organization of learning*. Cambridge, MA: MIT Press.
- Gallup, G. G. (1970). Chimpanzees: Self-recognition. *Science*, 167, 86–87.
- Gardner, H. (1984). *The mind's new science*. New York, NY: Basic Books.
- Gardner, M. (1982). *Logic machines and diagrams* (2nd ed.) Chicago, IL: The University of Chicago Press.
- Gasperi, M., Hurbain, P., & Hurbain, I. (2007). *Extreme NXT: Extending the LEGO® MIND-STORMS® NXT to the next level*. Berkeley, CA; New York, NY: Apress.
- Genesereth, M. R., & Nilsson, N. J. (1987). *Logical foundations of artificial intelligence*. Los Altos, CA: Morgan Kaufmann.
- Gerkey, B. P., & Mataric, M. J. (2002). Sold!: Auction methods for multirobot coordination. *IEEE Transactions on Robotics and Automation*, 18(5), 758–768.
- Gerkey, B. P., & Mataric, M. J. (2004). A formal analysis and taxonomy of task allocation in multi-robot systems. *International Journal of Robotics Research*, 23(9), 939–954.
- Gibbs, R. W. (2006). *Embodiment and cognitive science*. Cambridge, UK: Cambridge University Press.
- Gibson, J. J. (1966). *The senses considered as perceptual systems*. Boston, MA: Houghton Mifflin.
- Gibson, J. J. (1979). *The ecological approach to visual perception*. Boston, MA: Houghton Mifflin.
- Gladwin, T. (1970). *East is a big bird: Navigation and logic on Puluwat Atoll*. Cambridge, MA: Harvard University Press.
- Glass, P. (1987). *Music by Philip Glass* (1st ed.). New York, NY: Harper & Row.
- Goldman, A. I. (1993). *Readings in philosophy and cognitive science*. Cambridge, MA: MIT Press.
- Goldstone, R. L., & Janssen, M. A. (2005). Computational models of collective behavior. *Trends in Cognitive Sciences*, 9(9), 424–430.
- Goodale, M. A. (1988). Modularity in visuomotor control: From input to output. In Z. W. Pylyshyn (Ed.), *Computational processes in human vision: An interdisciplinary perspective* (pp. 262–285). Norwood, NJ: Ablex.
- Goodale, M. A. (1990). *Vision and action: The control of grasping*. Norwood, NJ: Ablex.
- Goodale, M. A. (1995). The cortical organization of visual perception and visuomotor control. In S. M. Kosslyn & D. N. Osherson (Eds.), *An invitation to cognitive science: Visual cognition* (Vol. 2, pp. 167–213). Cambridge, MA: MIT Press.
- Goodale, M. A., & Humphrey, G. K. (1998). The objects of action and perception. *Cognition*, 67, 181–207.
- Goodale, M. A., Milner, A. D., Jakobson, L. S., & Carey, D. P. (1991). A neurological dissociation between perceiving objects and grasping them. *Nature*, 349(6305), 154–156.

- Goss, S., Aron, S., Deneubourg, J. L., & Pasteels, J. M. (1989). Self-organized shortcuts in the Argentine ant. *Naturwissenschaften*, 76(12), 579–581.
- Grant, M. J. (2001). *Serial music, serial aesthetics: Compositional theory in post-war Europe*. New York, NY: Cambridge University Press.
- Grasse, P. P. (1959). La reconstruction du nid et les coordinations interindividuelles chez *Bellicositermes natalensis* et *Cubitermes* sp. la théorie de la stigmergie: Essai d'interprétation du comportement des termites constructeurs. *Insectes Sociaux*, 6(1), 41–80.
- Green, E. A. H., & Malko, N. A. (1975). *The conductor and his score*. Englewood Cliffs, NJ: Prentice-Hall.
- Greeno, J. G., & Moore, J. L. (1993). Situativity and symbols: Response to Vera and Simon. *Cognitive Science*, 17, 49–59.
- Gregory, R. L. (1970). *The intelligent eye*. London, UK: Weidenfeld & Nicolson.
- Grenville, B. (2001). *The uncanny: Experiments in cyborg culture*. Vancouver, BC: Vancouver Art Gallery; Arsenal Pulp Press.
- Grey Walter, W. (1950a). An electro-mechanical animal. *Dialectica*, 4(3), 206–213.
- Grey Walter, W. (1950b). An imitation of life. *Scientific American*, 182(5), 42–45.
- Grey Walter, W. (1951). A machine that learns. *Scientific American*, 184(8), 60–63.
- Grey Walter, W. (1963). *The living brain*. New York, NY: W. W. Norton & Co.
- Griffiths, P. (1994). *Modern music: A concise history* (Rev. ed.). New York, NY: Thames and Hudson.
- Griffiths, P. (1995). *Modern music and after*. Oxford, UK; New York, NY: Oxford University Press.
- Gutin, G., & Punnen, A. P. (2002). *The traveling salesman problem and its variations*. Dordrecht, The Netherlands; Boston: Kluwer Academic Publishers.
- Haberlandt, K. (1994). *Cognitive psychology*. Boston, MA: Allyn and Bacon.
- Harkleroad, L. (2006). *The math behind the music*. Cambridge, UK; New York, NY: Cambridge University Press.
- Hartman, G., & Tornlov, S. (2006). Influence of watercourse depth and width on dam-building behaviour by Eurasian beaver (*Castor fiber*). *Journal of Zoology*, 268(2), 127–131.
- Hastie, R. (2001). Problems for judgment and decision making. *Annual Review of Psychology*, 52, 653–683.
- Haugeland, J. (1985). *Artificial intelligence: The very idea*. Cambridge, MA: MIT Press.
- Hayes-Roth, B. (1985). A blackboard architecture for control. *Artificial Intelligence*, 26(3), 251–321.
- Hayles, N. K. (1999). *How we became posthuman: Virtual bodies in cybernetics, literature, and informatics*. Chicago, IL: University of Chicago Press.
- Hayward, R. (2001). The tortoise and the love-machine: Grey Walter and the politics of electroencephalography. *Science in Context*, 14(4), 615–641.
- Healy, S. (1998). *Spatial Representation In Animals*. Oxford, UK: Oxford University Press.
- Heidegger, M. (1962). *Being and time*. New York, NY: Harper.
- Helmholtz, H. v., & Ellis, A. J. (1954). *On the sensations of tone as a physiological basis for the theory of music* (2d English ed.). New York, NY: Dover Publications.
- Henle, M. (1977). The influence of Gestalt psychology in America. *Annals of the New York Academy of Sciences*, 291(1), 3–12.
- Hermer, L., & Spelke, E. S. (1994). A geometric process for spatial reorientation in young children. *Nature*, 370(6484), 57–59.
- Hess, R. H., Baker, C. L., & Zihl, J. (1989). The “motion-blind” patient: Low-level spatial and temporal filters. *The Journal of Neuroscience*, 9, 1628–1640.

- Hildesheimer, W. (1983). *Mozart* (1st Vintage Books ed.). New York, NY: Vintage Books.
- Hinchey, M. G., Sterritt, R., & Rouff, C. (2007). Swarms and swarm intelligence. *Computer*, 40(4), 111–113.
- Hingston, R. W. (1929). *Instinct and intelligence*. New York, NY: The Macmillan Company.
- Hingston, R. W. (1933). Instinct and intelligence in insects. *Journal of Personality*, 1, 129–136.
- Hirose, M., & Ogawa, K. (2007). Honda humanoid robots development. *Philosophical Transactions of the Royal Society a-Mathematical Physical and Engineering Sciences*, 365(1850), 11–19.
- Hirose, S. (1993). *Biologically inspired robots: Snake-like locomotors and manipulators*. Oxford, UK; New York, NY: Oxford University Press.
- Hirose, S., Fukushima, E. F., & Tsukagoshi, S. (1995). Basic steering control methods for the articulated body mobile robot. *IEEE Control Systems Magazine*, 15(1), 5–14.
- Hirose, S., & Mori, M. (2004). *Biologically inspired snake-like robots*. Paper presented at the IEEE International Conference On Robotics And Biomimetics, Shenyang, China.
- Hirose, S., & Morishima, A. (1990). Design and control of a mobile robot with an articulated body. *International Journal of Robotics Research*, 9(2), 99–114.
- Hjelmfelt, A., Weinberger, E. D., & Ross, J. (1991). Chemical implementation of neural networks and Turing machines. *Proceedings of the National Academy of Sciences of the United States of America*, 88(24), 10983–10987.
- Hodges, A. (1983). *Alan Turing: The enigma of intelligence*. London, UK: Unwin Paperbacks.
- Hofstadter, D. (1995). *Fluid concepts and creative analogies*. New York, NY: Basic Books.
- Hofstadter, D. R. (1979). *Godel, Escher, Bach: An eternal golden braid*. New York, NY: Basic Books.
- Holland, J. H. (1992). *Adaptation in natural and artificial systems*. Cambridge, MA: MIT Press.
- Holland, J. H. (1998). *Emergence*. Reading, MA: Perseus Books.
- Holland, O. (2001). From the imitation of life to machine consciousness. In T. Gomi (Ed.), *Evolutionary robotics* (pp. 1–38). New York, NY: Springer-Verlag.
- Holland, O. (2003a). Exploration and high adventure: The legacy of Grey Walter. *Philosophical Transactions of the Royal Society of London Series a-Mathematical Physical and Engineering Sciences*, 361(1811), 2085–2121.
- Holland, O. (2003b). The first biologically inspired robots. *Robotica*, 21, 351–363.
- Holland, O., & Melhuish, C. (1999). Stigmergy, self-organization, and sorting in collective robotics. *Artificial Life*, 5, 173–202.
- Hopfield, J. J. (1982). Neural networks and physical systems with emergent collective computational abilities. *Proceedings of the National Academy of Sciences*, 79, 2554–2558.
- Hopfield, J. J. (1984). Neurons with graded response have collective computational properties like those of two state neurons. *Proceedings of the National Academy of Sciences USA*, 81, 3008–3092.
- Hopfield, J. J., & Tank, D. W. (1985). “Neural” computation of decisions in optimization problems. *Biological Cybernetics*, 52(3), 141–152.
- Horchler, A. D., Reeve, R. E., Webb, B., & Quinn, R. D. (2004). Robot phonotaxis in the wild: A biologically inspired approach to outdoor sound localization. *Advanced Robotics*, 18(8), 801–816.
- Hornik, M., Stinchcombe, M., & White, H. (1989). Multilayer feedforward networks are universal approximators. *Neural Networks*, 2, 359–366.
- Hurley, S. (2001). Perception and action: Alternative views. *Synthese*, 129(1), 3–40.
- Hutchins, E. (1995). *Cognition in the wild*. Cambridge, MA: MIT Press.

- Ichbiah, D. (2005). *Robots: From science fiction to technological revolution*. New York, NY: Harry N. Abrams.
- Ingle, D. (1973). Two visual systems in the frog. *Science*, *181*(4104), 1053–1055.
- Inhelder, B., & Piaget, J. (1958). *The growth of logical thinking from childhood to adolescence*. New York, NY: Basic Books.
- Inhelder, B., & Piaget, J. (1964). *The early growth of logic in the child*. New York, NY: Harper & Row.
- Isacoff, S. (2001). *Temperament: The idea that solved music's greatest riddle* (1st ed.). New York, NY: Alfred A. Knopf.
- Ito, K., & Murai, R. (2008). Snake-like robot for rescue operations: Proposal of a simple adaptive mechanism designed for ease of use. *Advanced Robotics*, *22*(6–7), 771–785.
- Jakobson, L. S., Archibald, Y. M., Carey, D. P., & Goodale, M. A. (1991). A kinematic analysis of reaching and grasping movements in a patient recovering from optic ataxia. *Neuropsychologia*, *29*(8), 803–&.
- Jansen, T. (2007). *The great pretender*. Rotterdam, The Netherlands: o10 Publishers.
- Jeanne, R. L. (1996). Regulation of nest construction behaviour in *Polybia occidentalis*. *Animal Behaviour*, *52*, 473–488.
- Jefferies, M. E., & Yeap, W. K. (2008). *Robotics and cognitive approaches to spatial mapping*. Berlin, Germany; New York, NY: Springer-Verlag.
- Johnson-Laird, P. N. (1983). *Mental models*. Cambridge, MA: Harvard University Press.
- Johnson, S. (2001). *Emergence*. New York, NY: Scribner.
- Jones, J. E., & Kamil, A. C. (2001). The use of relative and absolute bearings by Clark's nutcrackers, *Nucifraga columbiana*. *Animal Learning and Behavior*, *29*(2), 120–132.
- Jordà, S., Geiger, G., Alonso, M., & Kaltenbrunner, M. (2007). *The reactTable: Exploring the synergy between live music performance and tabletop tangible interfaces*. Paper presented at the Proceedings of the first international conference on “Tangible and Embedded Interaction” (TEI07), Baton Rouge, Louisiana.
- Josephson, M. (1961). *Edison*. New York, NY: McGraw Hill.
- Kalish, D., & Montague, R. (1964). *Logic: Techniques of formal reasoning*. New York, NY: Harcourt, Brace, & World.
- Kaltenbrunner, M., Jordà, S., Geiger, G., & Alonso, M. (2007). *The reactTable*: A collaborative musical instrument*. Paper presented at the Proceedings of the Workshop on “Tangible Interaction in Collaborative Environments” (TICE), at the 15th International IEEE Workshops on Enabling Technologies (WETICE 2006), Manchester, UK.
- Kamil, A. C., & Cheng, K. (2001). Way-finding and landmarks: The multiple-bearings hypothesis. *Journal of Experimental Biology*, *204*(1), 103–113.
- Kamil, A. C., & Jones, J. E. (1997). The seed-storing corvid Clark's nutcracker learns geometric relationships among landmarks. *Nature*, *390*(6657), 276–279.
- Kamil, A. C., & Jones, J. E. (2000). Geometric rule learning by Clark's nutcrackers (*Nucifraga columbiana*). *Journal of Experimental Psychology-Animal Behavior Processes*, *26*(4), 439–453.
- Karsai, I. (1999). Decentralized control of construction behavior in paper wasps: An overview of the stigmergy approach. *Artificial Life*, *5*, 117–136.
- Karsai, I., & Penzes, Z. (1998). Nest shapes in paper wasps: Can the variability of forms be deduced from the same construction algorithm? *Proceedings of the Royal Society of London Series B-Biological Sciences*, *265*(1402), 1261–1268.
- Karsai, I., & Wenzel, J. W. (2000). Organization and regulation of nest construction behavior in *Metapolybia* wasps. *Journal of Insect Behavior*, *13*(1), 111–140.

- Kelly, D. M., Spetch, M. L., & Heth, C. D. (1998). Pigeons' (*Columba livia*) encoding of geometric and featural properties of a spatial environment. *Journal of Comparative Psychology*, *112*(3), 259–269.
- Khinchin, A. I. A. (1957). *Mathematical foundations of information theory* (New Dover ed.). New York, NY: Dover Publications.
- Kirkpatrick, S., Gelatt, C. D., & Vecchi, M. P. (1983). Optimization by simulated annealing. *Science*, *220*(4598), 671–680.
- Kivy, P. (1991). *Sound and semblance: Reflections on musical representation*. Ithaca, NY: Cornell University Press.
- Koditschek, D. E., Full, R. J., & Buehler, M. (2004). Mechanical aspects of legged locomotion control. *Arthropod Structure & Development*, *33*(3), 251–272.
- Koenig, G. M. (1999). PROJECT 1 Revisited. On the Analysis and Interpretation of PR1 Tables. In J. Tabor (Ed.), *Otto Laske: Navigating new horizons* (pp. 53–72). Westport, CT: Greenwood Press.
- Koffka, K. (1935). *Principles of Gestalt psychology*. New York, NY: Harcourt, Brace & World.
- Köhler, W. (1947). *Gestalt psychology: An introduction to new concepts in modern psychology*. New York, NY: Liveright Publishing Corporation.
- Krumhansl, C. L. (1990). *Cognitive foundations of musical pitch*. New York, NY: Oxford University Press.
- Kube, C. R., & Bonabeau, E. (2000). Cooperative transport by ants and robots. *Robotics and Autonomous Systems*, *30*, 85–101.
- Kube, C. R., & Zhang, H. (1994). Collective robotics: From social insects to robots. *Adaptive Behavior*, *2*, 189–218.
- Laporte, G., & Osman, I. H. (1995). Routing problems: A bibliography. *Annals of Operations Research*, *61*, 227–262.
- Lawler, E. L. (1985). *The traveling salesman problem: A guided tour of combinatorial optimization*. Chichester, West Sussex, UK; New York, NY: Wiley.
- Lee, E. M. (1916). *The story of the symphony*. London, UK: Walter Scott Publishing Co., Ltd.
- Lee, J. Y., Shin, S. Y., Park, T. H., & Zhang, B. T. (2004). Solving traveling salesman problems with DNA molecules encoding numerical values. *Biosystems*, *78*(1–3), 39–47.
- Leibovic, K. N. (1969). *Information processing in the nervous system*. New York, NY: Springer-Verlag.
- Lepore, E., & Pylyshyn, Z. W. (1999). *What is cognitive science?* Malden, MA: Blackwell.
- Levesque, H. J., & Lakemeyer, G. (2000). *The logic of knowledge bases*. Cambridge, MA: MIT Press.
- Lévi-Strauss, C. (1966). *The savage mind*. Chicago, IL: University of Chicago Press.
- Levin, I. (2002). *The Stepford wives* (1st Perennial ed.). New York, NY: Perennial.
- Lindsay, P. H., & Norman, D. A. (1972). *Human information processing*. New York, NY: Academic Press.
- Lippmann, R. P. (1987). An introduction to computing with neural nets. *IEEE ASSP magazine*, *April*, 4–22.
- Livingstone, M., & Hubel, D. (1988). Segregation of form, color, movement and depth: Anatomy, physiology, and perception. *Science*, *240*, 740–750.
- Lobontiu, N., Goldfarb, M., & Garcia, E. (2001). A piezoelectric-driven inchworm locomotion device. *Mechanism and Machine Theory*, *36*(4), 425–443.
- Luce, R. D. (1999). Where is mathematical modeling in psychology headed? *Theory & Psychology*, *9*, 723–737.

- Lund, H., & Miglino, O. (1998). Evolving and breeding robots. In P. Husbands & J. A. Meyer (Eds.), *Evolutionary robotics. First European workshop, EvoRobot'98. Paris, France, April 16–17, 1998; proceedings* (pp. 192–210). Heidelberg; Berlin, Germany: Springer-Verlag.
- MacDorman, K. F., & Ishiguro, H. (2006). The uncanny advantage of using androids in cognitive and social science research. *Interaction Studies*, 7(3), 297–337.
- Maclver, M. A. (2008). Neuroethology: From morphological computation to planning. In P. Robbins & M. Aydede (Eds.), *The Cambridge handbook of situated cognition* (pp. 480–504). New York, NY: Cambridge University Press.
- MacKay, D. (1969). *Information, mechanism and meaning*. Cambridge, MA: MIT Press.
- Marr, D. (1976). Early processing of visual information. *Philosophical Transactions of the Royal Society of London*, 275, 483–524.
- Marr, D. (1982). *Vision*. San Francisco, CA: W. H. Freeman.
- Marr, D., & Hildreth, E. (1980). Theory of edge detection. *Proceedings of the Royal Society of London*, B207, 187–217.
- Marr, D., & Ullman, S. (1981). Directional selectivity and its use in early visual processing. *Proceedings of the Royal Society of London*, B211, 151–180.
- Martin, F. G., Mikhak, B., Resnick, M., Silverman, S., & Berg, R. (2000). To mindstorms and beyond: Evolution of a construction kit for magical machines. In A. Druin & J. Hendler (Eds.), *Robots for kids: Exploring new technologies for learning* (pp. 9–33). San Francisco, CA: Morgan Kaufmann Publishers Inc.
- Mataric, M. J. (1998). Using communication to reduce locality in distributed multiagent learning. *Journal of Experimental and Theoretical Artificial Intelligence*, 10(3), 357–369.
- Matsuno, F. (2002). A mobile robot for collecting disaster information and a snake robot for searching. *Advanced Robotics*, 16(6), 517–520.
- Maunsell, J. H. R., & Newsome, W. T. (1987). Visual processing in monkey extrastriate cortex. *Annual Review of Neuroscience*, 10, 363–401.
- Maunsell, J. H. R., & van Essen, D. C. (1983). The connections of the middle temporal visual area (MT) and their relationship to a cortical hierarchy in the macaque monkey. *Journal of Neuroscience*, 3, 2563–2586.
- McClelland, J. L., & Rumelhart, D. E. (1986). *Parallel distributed processing, Vol. 2*. Cambridge, MA: MIT Press.
- McClelland, J. L., Rumelhart, D. E., & Hinton, G. E. (1986). The appeal of parallel distributed processing. In D. Rumelhart & J. McClelland (Eds.), *Parallel distributed processing Vol. 1* (pp. 3–44). Cambridge, MA: MIT Press.
- McCulloch, W. S., & Pitts, W. (1943). A logical calculus of the ideas immanent in nervous activity. *Bulletin of Mathematical Biophysics*, 5, 115–133.
- McGeer, T. (1990a). Passive dynamic walking. *International Journal of Robotics Research*, 9(2), 62–82.
- McGeer, T. (1990b). *Passive walking with knees*. Paper presented at the Proceedings of the IEEE International Conference On Robotics And Automation, Cincinnati OH.
- McLuhan, M. (1994). *Understanding media: The extensions of man* (1st MIT Press ed.). Cambridge, MA: MIT Press.
- Medler, D. A. (1998). A brief history of connectionism. *Neural Computing Surveys*, 1, 18–72.
- Melhuish, C., Sendova-Franks, A. B., Scholes, S., Horsfield, I., & Welsby, F. (2006). Ant-inspired sorting by robots: The importance of initial clustering. *Journal of the Royal Society Interface*, 3(7), 235–242.

- Mellers, B. A., Schwartz, A., & Cooke, A. D. J. (1998). Judgment and decision making. *Annual Review of Psychology*, 49, 447–477.
- Menzel, P., D’Aluisio, F., & Mann, C. C. (2000). *Robo sapiens: Evolution of a new species*. Cambridge, MA: MIT Press.
- Meyer, D. E., Glass, J. M., Mueller, S. T., Seymour, T. L., & Kieras, D. E. (2001). Executive-process interactive control: A unified computational theory for answering 20 questions (and more) about cognitive ageing. *European Journal of Cognitive Psychology*, 13(1–2), 123–164.
- Meyer, D. E., & Kieras, D. E. (1997a). A computational theory of executive cognitive processes and multiple-task performance .1. Basic mechanisms. *Psychological Review*, 104(1), 3–65.
- Meyer, D. E., & Kieras, D. E. (1997b). A computational theory of executive cognitive processes and multiple-task performance .2. Accounts of psychological refractory-period phenomena. *Psychological Review*, 104(4), 749–791.
- Meyer, D. E., & Kieras, D. E. (1999). Precis to a practical unified theory of cognition and action: Some lessons from EPIC computational models of human multiple-task performance. *Attention and Performance XVII*, 17, 17–88.
- Meyer, L. B. (1956). *Emotion and meaning in music*. Chicago, IL: University of Chicago Press.
- Milford, M. J. (2008). *Robot navigation from nature: Simultaneous localisation, mapping, and path planning based on hippocampal models*. Berlin, Germany: Springer-Verlag.
- Miller, G. A. (2003). The cognitive revolution: A historical perspective. *Trends in Cognitive Sciences*, 7(3), 141–144.
- Miller, N. Y., & Shettleworth, S. J. (2007). Learning about environmental geometry: An associative model. *Journal of Experimental Psychology-Animal Behavior Processes*, 33, 191–212.
- Miller, N. Y., & Shettleworth, S. J. (2008). An associative model of geometry learning: A modified choice rule. *Journal of Experimental Psychology-Animal Behavior Processes*, 34(3), 419–422.
- Minsky, M. (1972). *Computation: Finite and infinite machines*. London, UK: Prentice-Hall International.
- Minsky, M. (1985). *The society of mind*. New York, NY: Simon & Schuster.
- Minsky, M. (2006). *The emotion machine: Commonsense thinking, artificial intelligence, and the future of the human mind*. New York, NY: Simon & Schuster.
- Mitchell, M. (1996). *An introduction to genetic algorithms*. Cambridge, MA: MIT Press.
- Mlinar, E. J., & Goodale, M. A. (1984). Cortical and tectal control of visual orientation in the gerbil: Evidence for parallel channels. *Experimental Brain Research*, 55(1), 33–48.
- Mondada, F., & Floreano, D. (1995). Evolution of neural control structures: Some experiments on mobile robots. *Robotics and Autonomous Systems*, 16(2–4), 183–195.
- Mondada, F., Franzi, E., & lenne, P. (1994). Mobile robot miniaturisation: A tool for investigation in control algorithms In M. Thoma (Ed.), *Third International Symposium on Experimental Robotics* (pp. 501–513). Berlin, Germany: Springer-Verlag.
- Moravec, H. (1999). *Robot*. New York, NY: Oxford University Press.
- Morgan, L. H. (1868/1986). *The american beaver: A classic of natural history and ecology*. New York, NY: Dover Publications.
- Mori, M. (1970). Bukimi no tani [the uncanny valley]. *Energy*, 7, 33–35.
- Mouritsen, H. (2001). Navigation in birds and other animals. *Image and Vision Computing*, 19(11), 713–731.

- Müller-Schwarze, D., & Sun, L. (2003). *The beaver: Natural history of a wetlands engineer*. Ithaca, NY: Comstock Publishing Associates.
- Muybridge, E. (1887/1957). *Animals in motion*. New York, NY: Dover Publications.
- Negroponte, N. (1995). *Being digital*. New York, NY: Vintage Books.
- Newell, A. (1973). Production systems: Models of control structures. In W. G. Chase (Ed.), *Visual information processing* (pp. 463–526). New York, NY: Academic Press.
- Newell, A. (1980). Physical symbol systems. *Cognitive Science*, 4, 135–183.
- Newell, A. (1990). *Unified theories of cognition*. Cambridge, MA: Harvard University Press.
- Newell, A., & Simon, H. A. (1961). Computer simulation of human thinking. *Science*, 134(349), 2011–2017.
- Newell, A., & Simon, H. A. (1972). *Human problem solving*. Englewood Cliffs, NJ: Prentice-Hall.
- Nilsson, N. J. (1984). *Shakey the robot*. Menlo Park, CA: Stanford Research Institute.
- Nishikawa, K., Biewener, A. A., Aerts, P., Ahn, A. N., Chiel, H. J., Daley, M. A., et al. (2007). Neuromechanics: An integrative approach for understanding motor control. *Integrative and Comparative Biology*, 47(1), 16–54.
- Nishiwaki, K., Kuffner, J., Kagami, S., Inaba, M., & Inoue, H. (2007). The experimental humanoid robot H7: A research platform for autonomous behaviour. *Philosophical Transactions of the Royal Society a-Mathematical Physical and Engineering Sciences*, 365(1850), 79–107.
- Nolfi, S. (2002). Power and limits of reactive agents. *Neurocomputing*, 42, 119–145.
- Nolfi, S., & Floreano, D. (2000). *Evolutionary robotics*. Cambridge, MA: MIT Press.
- Norman, D. A. (2002). *The design of everyday things* (1st Basic paperback ed.). New York, NY: Basic Books.
- Nyman, M. (1999). *Experimental music: Cage and beyond* (2nd ed.). Cambridge, UK; New York, NY: Cambridge University Press.
- Oaksford, M., & Chater, N. (1998). *Rationality in an uncertain world: Essays on the cognitive science of human reasoning*. Hove, East Sussex, UK: Psychology Press.
- Ohta, H., Yamakita, M., & Furuta, K. (2001). From passive to active dynamic walking. *International Journal of Robust and Nonlinear Control*, 11(3), 287–303.
- O’Keefe, J., & Nadel, L. (1978). *The hippocampus as a cognitive map*. Oxford, UK: Clarendon Press.
- Papert, S. (1980). *Mindstorms: Children, computers and powerful ideas*. New York, NY: Basic Books.
- Papert, S. (1993). *The children’s machine: Rethinking school in the age of the computer*. New York, NY: BasicBooks.
- Parker, C. A. C., Zhang, H., & Kube, C. R. (2003). *Blind bulldozing: Multiple robot nest construction*. Paper presented at the Conference on Intelligent Robots and Systems, Las Vegas, Nevada.
- Parker, L. E. (1998). ALLIANCE: An architecture for fault tolerant multirobot cooperation. *IEEE Transactions on Robotics and Automation*, 14(2), 220–240.
- Parker, L. E. (2001). Evaluating success in autonomous multi-robot teams: Experiences from ALLIANCE architecture implementations. *Journal of Experimental & Theoretical Artificial Intelligence*, 13(2), 95–98.
- Pelisson, D., Prablanc, C., Goodale, M. A., & Jeannerod, M. (1986). Visual control of reaching movements without vision of the limb. II. Evidence of fast unconscious processes correcting the trajectory of the hand to the final position of a double-step stimulus. *Experimental Brain Research*, 62(2), 303–311.

- Pessin, A., Goldberg, S., & Putnam, H. (1996). *The twin Earth chronicles: Twenty years of reflection on Hilary Putnam's "The meaning of 'meaning'"*. Armonk, NY: M. E. Sharpe.
- Petre, M., & Price, B. (2004). Using robotics to motivate 'back door' learning. *Education and Information Technologies*, 9, 147–158.
- Pfeifer, R., & Scheier, C. (1999). *Understanding intelligence*. Cambridge, MA: MIT Press.
- Phee, L., Accoto, D., Menciaci, A., Stefanini, C., Carrozza, M. C., & Dario, P. (2002). Analysis and development of locomotion devices for the gastrointestinal tract. *IEEE Transactions on Biomedical Engineering*, 49(6), 613–616.
- Piaget, J. (1970a). *The child's conception of movement and speed*. London, UK: Routledge & Kegan Paul.
- Piaget, J. (1970b). *Psychology and epistemology*. Harmondsworth, UK: Penguin Books.
- Piaget, J. (1972). *The child and reality*. Harmondsworth, UK: Penguin Books.
- Piaget, J., & Inhelder, B. (1969). *The psychology of the child*. London, UK: Routledge & Kegan Paul.
- Piattelli-Palmarini, M. (1994). *Inevitable illusions: How mistakes of reason rule our minds*. New York, NY: Wiley.
- Picard, R. W., Papert, S., Bender, W., Blumberg, B., Breazeal, C., Cavallo, D., et al. (2004). Affective learning: A manifesto. *Bt Technology Journal*, 22(4), 253–269.
- Pleasants, H. (1955). *The agony of modern music*. New York, NY: Simon and Schuster.
- Popper, K. (1978). Natural selection and the emergence of mind. *Dialectica*, 32, 339–355.
- Port, R. F., & Van Gelder, T. (1995). *Mind as motion: Explorations in the dynamics of cognition*. Cambridge, MA: MIT Press.
- Potter, K. (2000). *Four musical minimalists: La Monte Young, Terry Riley, Steve Reich, Philip Glass*. Cambridge, UK; New York, NY: Cambridge University Press.
- Prochnow, D. (2007). *LEGO Mindstorms NXT hacker's guide*. New York, NY: McGraw-Hill.
- Punnen, A. P. (2002). The traveling salesman problem: Applications, formulations, and variations. In G. Gutin & A. P. Punnen (Eds.), *The traveling salesman problem and its variations* (pp. 1–28). Dordrecht, The Netherlands; Boston: Kluwer Academic Publishers.
- Putnam, H. (1967). Psychological predicates. In W. H. Capitan & D. D. Merrill (Eds.), *Art, mind, and religion* (pp. 37–48). Pittsburgh, PA: University of Pittsburgh Press.
- Pylyshyn, Z. W. (1979). Metaphorical imprecision and the "top-down" research strategy. In A. Ortony (Ed.), *Metaphor and thought* (pp. 420–436). Cambridge, UK: Cambridge University Press.
- Pylyshyn, Z. W. (1980). Computation and cognition: Issues in the foundations of cognitive science. *Behavioral and Brain Sciences*, 3, 111–169.
- Pylyshyn, Z. W. (1981). The imagery debate: Analogue media versus tacit knowledge. *Psychological Review*, 88(1), 16–45.
- Pylyshyn, Z. W. (1984). *Computation and cognition*. Cambridge, MA: MIT Press.
- Pylyshyn, Z. W. (1987). *The robot's dilemma: The frame problem in artificial intelligence*. Norwood, NJ: Ablex.
- Queller, D. C., & Strassmann, J. E. (2002). The many selves of social insects. *Science*, 296(5566), 311–313.
- Quinlan, P. (1991). *Connectionism and psychology*. Chicago, IL: University of Chicago Press.
- Reddy, M. J. (1979). The conduit metaphor: A case of frame conflict in our language about language. In A. Ortony (Ed.), *Metaphor and thought* (pp. 284–324). Cambridge, UK: Cambridge University Press.

- Redish, A. D. (1999). *Beyond the cognitive map*. Cambridge, MA: MIT Press.
- Reeve, R., Webb, B., Horchler, A., Indiveri, G., & Quinn, R. (2005). New technologies for testing a model of cricket phonotaxis on an outdoor robot. *Robotics and Autonomous Systems*, 51(1), 41–54.
- Reeve, R. E., & Webb, B. H. (2003). New neural circuits for robot phonotaxis. *Philosophical Transactions of the Royal Society of London Series a-Mathematical Physical and Engineering Sciences*, 361(1811), 2245–2266.
- Reich, S. (1974). *Writings about music*. Halifax, NS: Press of the Nova Scotia College of Art and Design.
- Reich, S. (2002). *Writings on music, 1965–2000*. Oxford, UK; New York, NY: Oxford University Press.
- Rescorla, R. A., & Wagner, A. R. (1972). A theory of Pavlovian conditioning: Variations in the effectiveness of reinforcement and nonreinforcement. In A. H. Black & W. F. Prokasy (Eds.), *Classical conditioning II: Current research and theory* (pp. 64–99). New York, NY: Appleton-Century-Crofts.
- Resnick, M., Martin, F. g., Sargent, R., & Silverman, B. (1996). Programmable bricks: Toys to think with. *IBM Systems Journal*, 35(3–4), 443–452.
- Robbins, P., & Aydede, M. (2009). *The Cambridge handbook of situated cognition*. Cambridge, UK; New York, NY: Cambridge University Press.
- Robinson-Riegler, B., & Robinson-Riegler, G. (2003). *Readings in cognitive psychology: Applications, connections, and individual differences*. Boston, MA: Pearson Allyn & Bacon.
- Robinson, J. (1994). The expression and arousal of emotion in music. In P. Alperson (Ed.), *Musical worlds: New directions in the philosophy of music* (pp. 13–22). University Park, PA: Pennsylvania State University Press.
- Robinson, J. (1997). *Music and meaning*. Ithaca, NY: Cornell University Press.
- Rock, I. (1983). *The logic of perception*. Cambridge, MA: MIT Press.
- Rodman, H. R., & Albright, T. D. (1987). Coding of visual stimulus velocity in area MT of the macaque. *Vision Research*, 27, 2035–2048.
- Rosen, C. (1988). *Sonata forms* (Rev. ed.). New York, NY: Norton.
- Rosen, C. (2002). *Piano notes: The world of the pianist*. New York, NY: Free Press.
- Ross, A. (2007). *The rest is noise: Listening to the twentieth century* (1st ed.). New York, NY: Farrar, Straus & Giroux.
- Rumelhart, D. E., & McClelland, J. L. (1986). *Parallel distributed processing, Vol. 1*. Cambridge, MA: MIT Press.
- Safa, A. T., Saadat, M. G., & Naraghi, M. (2007). Passive dynamic of the simplest walking model: Replacing ramps with stairs. *Mechanism and Machine Theory*, 42(10), 1314–1325.
- Saito, M., Fukaya, M., & Iwasaki, T. (2002). Serpentine locomotion with robotic snakes. *IEEE Control Systems Magazine*, 22(1), 64–81.
- Sawyer, R. K. (2002). Emergence in psychology: Lessons from the history of non-reductionist science. *Human Development*, 45, 2–28.
- Schneider, W. (1987). Connectionism: Is it a paradigm shift for psychology? *Behavior Research Methods, Instruments, and Computers*, 19, 73–83.
- Scholes, S., Wilson, M., Sendova-Franks, A. B., & Melhuish, C. (2004). Comparisons in evolution and engineering: The collective intelligence of sorting. *Adaptive Behavior*, 12(3–4), 147–159.
- Schultz, A. C., & Parker, L. E. (2002). *Multi-robot systems: From swarms to intelligent automata*. Dordrecht, The Netherlands; Boston, MA: Kluwer Academic Publishers.

- Schwarz, K. R. (1996). *Minimalists*. London: Phaidon.
- Seeley, T. D. (1989). The honey bee colony as a superorganism. *American Scientist*, 77(6), 546–553.
- Selfridge, O. G. (1956). Pattern recognition and learning. In C. Cherry (Ed.), *Information theory* (pp. 345–353). London, UK: Butterworths Scientific Publications.
- Sendova-Franks, A. B., Scholes, S. R., Franks, N. R., & Melhuish, C. (2004). Brood sorting by ants: Two phases and differential diffusion. *Animal Behaviour*, 68, 1095–1106.
- Shan, Y. S., & Koren, Y. (1993). Design and motion planning of a mechanical snake. *IEEE Transactions on Systems Man and Cybernetics*, 23(4), 1091–1100.
- Shannon, C. E. (1948). A mathematical theory of communication. *The Bell System Technical Journal*, 27, 379–423, 623–656.
- Sharkey, N. E. (1997). The new wave in robot learning. *Robotics and Autonomous Systems*, 22(3–4), 179–185.
- Sharkey, A. J. C. (2006). Robots, insects and swarm intelligence. *Artificial Intelligence Review*, 26(4), 255–268.
- Sharkey, N., & Sharkey, A. (2009). Electro-mechanical robots before the computer. *Proceedings of the Institution of Mechanical Engineers Part C-Journal of Mechanical Engineering Science*, 223(1), 235–241.
- Sharp, P. E., Blair, H. T., & Cho, J. W. (2001). The anatomical and computational basis of the rat head-direction cell signal. *Trends in Neurosciences*, 24(5), 289–294.
- Shipton, H. W. (1977). Obituary: W. Grey Walter. *Electroencephalography and Clinical Neurophysiology*, 43, iii–iv.
- Siegelmann, H. T. (1999). *Neural networks and analog computation: Beyond the Turing limit*. Boston, MA: Birkhauser.
- Simon, H. A. (1969). *The sciences of the artificial* (1st ed.). Cambridge, MA: MIT Press.
- Simon, H. A. (1979). Information processing models of cognition. *Annual Review of Psychology*, 30, 363–396.
- Simon, H. A. (1980). Cognitive science: The newest science of the artificial. *Cognitive science*, 4, 33–46.
- Simon, H. A., & Newell, A. (1958). Heuristic problem solving: The next advance in operations research. *Operation Research*, 6, 1–10.
- Singh, J. (1966). *Great ideas in information theory, language, and cybernetics*. New York, NY: Dover Publications.
- Siqueira, P. H., Steiner, M. T. A., & Scheer, S. (2007). A new approach to solve the traveling salesman problem. *Neurocomputing*, 70(4–6), 1013–1021.
- Skonieczny, K., & D’Eleuterio, G. M. T. (2008). Modeling friction for a snake-like robot. *Advanced Robotics*, 22(5), 573–585.
- Smith, A. P. (1978). Investigation of mechanisms underlying nest construction in mud wasp *Paralastor* sp. (Hymenoptera Eumenidae). *Animal Behaviour*, 26(Feb.), 232–240.
- Snow, C. P. (1969). *The two cultures and a second look*. London, UK: Cambridge University Press.
- Solnit, R. (2003). *Motion studies: Time, space and Eadweard Muybridge*. London: Bloomsbury.
- Solso, R. L. (1995). *Cognitive psychology* (4th ed.). Boston, MA: Allyn and Bacon.
- Sovrano, V. A., Bisazza, A., & Vallortigara, G. (2003). Modularity as a fish (*Xenotoca eiseni*) views it: Conjoining geometric and nongeometric information for spatial reorientation. *Journal of Experimental Psychology-Animal Behavior Processes*, 29(3), 199–210.

- Sparshoot, F. (1994). Music and feeling. In P. Alperson (Ed.), *Musical worlds: New directions in the philosophy of music* (pp. 23–36). University Park, PA: Pennsylvania State University Press.
- Spenko, M. J., Haynes, G. C., Saunders, J. A., Cutkosky, M. R., Rizzi, A. A., Full, R. J., et al. (2008). Biologically inspired climbing with a hexapedal robot. *Journal of Field Robotics*, 25(4–5), 223–242.
- Spetch, M. L., Rust, T. B., Kamil, A. C., & Jones, J. E. (2003). Searching by rules: Pigeons' (*Columba livia*) landmark-based search according to constant bearing or constant distance. *Journal of Comparative Psychology*, 117(2), 123–132.
- Standage, T. (2002). *The Turk: The life and times of the famous eighteenth-century chess-playing machine*. New York, NY: Walker & Co.
- Sternberg, R. J. (1996). *Cognitive psychology*. Fort Worth, TX: Harcourt Brace College Publishers.
- Stewart, I. (1994). A subway named Turing. *Scientific American*, 271, 104–107.
- Stillings, N., Feinstein, M. H., Garfield, J. L., Rissland, E. L., Rosenbaum, D. A., Weisler, S. E., et al. (1987). *Cognitive science: An introduction*. Cambridge, MA: MIT Press.
- Stoerig, P., & Cowey, A. (1997). Blindsight in man and monkey. *Brain*, 120, 535–559.
- Stone, G. O. (1986). An analysis of the delta rule and the learning of statistical associations. In D. E. Rumelhart & J. McClelland (Eds.), *Parallel distributed processing, Vol. 1* (pp. 444–459). Cambridge, MA: MIT Press.
- Stuerzl, W., Cheung, A., Cheng, K., & Zeil, J. (2008). The information content of panoramic images I: The rotational errors and the similarity of views in rectangular experimental arenas. *Journal of Experimental Psychology-Animal Behavior Processes*, 34(1), 1–14.
- Sugawara, K., & Sano, M. (1997). Cooperative acceleration of task performance: Foraging behavior of interacting multi-robots system. *Physica D*, 100(3–4), 343–354.
- Sulis, W. (1997). Fundamental concepts of collective intelligence. *Nonlinear Dynamics, Psychology, and Life Sciences*, 1, 35–53.
- Susi, T., & Ziemke, T. (2001). Social cognition, artefacts, and stigmergy: A comparative analysis of theoretical frameworks for the understanding of artefact-mediated collaborative activity. *Journal of Cognitive Systems Research*, 2, 273–290.
- Swade, D. D. (1993). Redeeming Charles Babbage's mechanical computer. *Scientific American*, 268, 86–91.
- Tarasewich, P., & McMullen, P. R. (2002). Swarm intelligence: Power in numbers. *Communications of the ACM*, 45(8), 62–67.
- Taube, J. S., & Muller, R. U. (1998). Comparisons of head direction cell activity in the post-subiculum and anterior thalamus of freely moving rats. *Hippocampus*, 8(2), 87–108.
- Thagard, P. (1996). *Mind: Introduction to cognitive science*. Cambridge, MA: MIT Press.
- Theraulaz, G., & Bonabeau, E. (1995). Coordination in distributed building. *Science*, 269(5224), 686–688.
- Theraulaz, G., & Bonabeau, E. (1999). A brief history of stigmergy. *Artificial Life*, 5, 97–116.
- Theraulaz, G., Bonabeau, E., & Deneubourg, J. L. (1998). The origin of nest complexity in social insects. *Complexity*, 3(6), 15–25.
- Theraulaz, G., Bonabeau, E., Nicolis, S. C., Sole, R. V., Fourcassie, V., Blanco, S., et al. (2002). Spatial patterns in ant colonies. *Proceedings of the National Academy of Sciences of the United States of America*, 99(15), 9645–9649.
- Thorpe, W. H. (1963). *Learning and instinct in animals* (New ed.). London, UK: Methuen.
- Tolman, E. C. (1948). Cognitive maps in rats and men. *Psychological Review*, 55, 189–208.
- Touretzky, D. S., & Pomerleau, D. A. (1994). Reconstructing physical symbol systems. *Cognitive Science*, 18, 345–353.

- Transth, A. A., Leine, R. I., Glocker, C., & Pettersen, K. Y. (2008). 3-D snake robot motion: Nonsmooth modeling, simulations, and experiments. *IEEE Transactions on Robotics*, 24(2), 361–376.
- Transth, A. A., Leine, R. I., Glocker, C., Pettersen, K. Y., & Liljebach, P. (2008). Snake robot obstacle-aided locomotion: Modeling, simulations, and experiments. *IEEE Transactions on Robotics*, 24(1), 88–104.
- Trullier, O., Wiener, S. I., Berthoz, A., & Meyer, J. A. (1997). Biologically based artificial navigation systems: Review and prospects. *Progress in Neurobiology*, 51(5), 483–544.
- Turing, A. M. (1936). On computable numbers, with an application to the Entscheidungsproblem. *Proceedings of the London Mathematical Society, Series 2h*, 42, 230–265.
- Turing, A. M. (1950). Computing machinery and intelligence. *Mind*, 59, 433–460.
- Turkle, S. (1995). *Life on the screen: Indentity in the age of the Internet*. New York, NY: Simon & Schuster.
- Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science*, 185(4157), 1124–1131.
- Uexküll, J. v. (2001). An introduction to umwelt. *Semiotica*, 134(1–4), 107–110.
- Ungerleider, L. G., & Mishkin, M. (1982). Two cortical visual systems. In D. Ingle, M. A. Goodale & R. J. W. Mansfield (Eds.), *Analysis of visual behavior* (pp. 549–586). Cambridge, MA: MIT Press.
- VanLehn, K. (1991). *Architectures for intelligence*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Varela, F. J., Thompson, E., & Rosch, E. (1991). *The embodied mind: Cognitive science and human experience*. Cambridge, MA: MIT Press.
- Vera, A. H., & Simon, H. A. (1993). Situated action: A symbolic interpretation. *Cognitive Science*, 17, 7–48.
- Vico, G. (1984). *The new science of Giambattista Vico* (Unabridged translation of the 3rd ed.). Ithaca, NY: Cornell University Press.
- Vico, G. (1988). *On the most ancient wisdom of the Italians*. Ithaca, NY: Cornell University Press.
- Vico, G. (1990). *On the study methods of our time*. Ithaca, NY: Cornell University Press.
- Von Eckardt, B. (1993). *What is cognitive science?* Cambridge, MA: MIT Press.
- von Frisch, K. (1974). *Animal architecture* (1st ed.). New York, NY: Harcourt Brace Jovanovich.
- Vygotsky, L. S. (1986). *Thought and language* (Translation newly rev. and edited). Cambridge, MA: MIT Press.
- Walton, K. (1994). Listening with imagination: Is music representational? In P. Alpers (Ed.), *Musical worlds: New directions in the philosophy of music* (pp. 47–62). University Park, PA: Pennsylvania State University Press.
- Webb, B. (1996). A cricket robot. *Scientific American*, 275, 94–99.
- Webb, B., & Consi, T. R. (2001). *Biorobotics: Methods and applications*. Menlo Park, CA: AAAI Press/MIT Press.
- Webb, B., & Scutt, T. (2000). A simple latency-dependent spiking-neuron model of cricket phonotaxis. *Biological Cybernetics*, 82(3), 247–269.
- Weiskrantz, L. (1986). *Blindsight: A case study and implications*. Oxford, UK: Oxford University Press; New York, NY: Clarendon Press.
- Weiskrantz, L. (1997). *Consciousness lost and found*. Oxford, UK: Oxford University Press.
- Weiskrantz, L., Warrington, E. K., Sanders, M. D., & Marshall, J. (1974). Visual capacity in hemianopic field following a restricted occipital ablation. *Brain*, 97(Dec), 709–728.

- Wenzel, J. W. (1991). Evolution of nest architecture. In K. G. Ross & R. W. Matthews (Eds.), *The Social Biology of Wasps* (pp. 480–519). Ithaca, NY: Comstock Publishing Associates.
- Wheeler, W. M. (1911). The ant colon as an organism. *Journal of Morphology*, 22(2), 307–325.
- Wheeler, W. M. (1923). Social life among the insects. Lecture I. General remarks on insect societies. The social beetles. *The Scientific Monthly*, 14(6), 497–524.
- Wheeler, W. M. (1926). Emergent evolution and the social. *Science*, 64(1662), 433–440.
- Wiener, N. (1948). *Cybernetics: Or control and communication in the animal and the machine*. Cambridge, MA: MIT Press.
- Wiener, N. (1964). *God and Golem, Inc.: A comment on certain points where cybernetics impinges on religion*. Cambridge, MA: MIT Press.
- Wilson, D. S., & Sober, E. (1989). Reviving the superorganism. *Journal of Theoretical Biology*, 136(3), 337–356.
- Wilson, E. O., & Lumsden, C. J. (1991). Holism and reduction in sociobiology: Lessons from the ants and human culture. *Biology and Philosophy*, 6(4), 401–412.
- Wilson, M., Melhuish, C., Sendova-Franks, A. B., & Scholes, S. (2004). Algorithms for building annular structures with minimalist robots inspired by brood sorting in ant colonies. *Autonomous Robots*, 17(2–3), 115–136.
- Wilson, R. A. (2004). *Boundaries of the mind: The individual in the fragile sciences; Cognition*. Cambridge, UK; New York, NY: Cambridge University Press.
- Wilson, R. A. (2005). *Genes and the agents of life: The individual in the fragile sciences, biology*. New York, NY: Cambridge University Press.
- Wiltschko, R., & Wiltschko, W. (2003). Avian navigation: From historical to modern concepts. *Animal Behaviour*, 65, 257–272.
- Winograd, T., & Flores, F. (1987). *Understanding computers and cognition*. New York, NY: Addison-Wesley.
- Wisse, M., Hobbelen, D. G. E., & Schwab, A. L. (2007). Adding an upper body to passive dynamic walking robots by means of a bisecting hip mechanism. *IEEE Transactions on Robotics*, 23(1), 112–123.
- Wisse, M., & Linde, R. Q. v. d. (2007). *Delft pneumatic bipeds*. Berlin, Germany; New York, NY: Springer-Verlag.
- Wisse, M., Schwab, A. L., & van der Helm, F. C. T. (2004). Passive dynamic walking model with upper body. *Robotica*, 22, 681–688.
- Wood, G. (2002). *Living dolls: A magical history of the quest for artificial life*. London, UK: Faber & Faber.
- Wright, R. D., & Dawson, M. R. W. (1994). To what extent do beliefs affect apparent motion? *Philosophical Psychology*, 7, 471–491.
- Wu, Q., & Sabet, N. (2004). An experimental study of passive dynamic walking. *Robotica*, 22, 251–262.
- Wystrach, A., & Beugnon, G. (2009). Ants learn geometry and features. *Current Biology*, 19(1), 61–66.
- Zeki, S. M. (1974). Functional organization of a visual area in the posterior bank of the superior temporal sulcus of the rhesus monkey. *Journal of Physiology*, 236, 549–573.
- Zihl, J., von Cramon, D., & Mai, N. (1983). Selective disturbance of movement vision after bilateral brain damage. *Brain*, 106, 313–340.