Bibliography

Aarup, M., Arentoft, M. M., Parrod, Y., Stader, J., and Stokes, I. (1994). OPTIMUM-AIV: A knowledge-based planning and scheduling system for spacecraft AIV. In Fox, M. and Zweben, M., editors, *Knowledge Based Scheduling*. Morgan Kaufmann, San Mateo, California.

Abu-Mostafa, Y. S. and Psaltis, D. (1987). Optical neural computers. *Scientific American*, 256:88–95.

Acharya, A., Tambe, M., and Gupta, A. (1992). Implementation of production systems on message-passing computers. *IEEE Transactions on Parallel and Distributed Systems*, 3(4):477–487.

Adelson-Velsky, G. M., Arlazarov, V. L., Bitman, A. R., Zhivotovsky, A. A., and Uskov, A. V. (1970). Programming a computer to play chess. *Russian Mathematical Surveys*, 25:221–262.

Adelson-Velsky, G. M., Arlazarov, V. L., and Donskoy, M. V. (1975). Some methods of controlling the tree search in chess programs. *Artificial Intelligence*, 6(4):361–371.

Agmon, S. (1954). The relaxation method for linear inequalities. *Canadian Journal of Mathematics*, 6(3):382–392.

Agre, P. E. and Chapman, D. (1987). Pengi: an implementation of a theory of activity. In *Proceedings of the Tenth International Joint Conference on Artificial Intelligence (IJCAI-87)*, pages 268–272, Milan, Italy. Morgan Kaufmann.

Aho, A. V., Hopcroft, J. E., and Ullman, J. D. (1974). *The Design and Analysis of Computer Algorithms*. Addison-Wesley, Reading, Massachusetts.

Ait-Kaci, H. (1991). *Warren's Abstract Machine: A Tutorial Reconstruction*. MIT Press, Cambridge, Massachusetts.

Ait-Kaci, H. and Nasr, R. (1986). LOGIN: a logic programming language with built-in inheritance. *Journal of Logic Programming*, 3(3):185–215.

Ait-Kaci, H. and Podelski, A. (1993). Towards a meaning of LIFE. *Journal of Logic Programming*, 16(3-4):195–234.

Allais, M. (1953). Le comportment de l'homme rationnel devant le risque: Critique des postulats et axiomes de l'école américaine. *Econometrica*, 21:503–546.

Allen, J. F. (1983). Maintaining knowledge about temporal intervals. *Communications of the Association for Computing Machinery*, 26(11):832–843.

Allen, J. F. (1984). Towards a general theory of action and time. *Artificial Intelligence*, 23:123–154.

Allen, J. F. (1991). Time and time again: the many ways to represent time. *International Journal of Intelligent Systems*, 6:341–355.

Allen, J. F. (1995). *Natural Language Understanding*. Benjamin/Cummings, Redwood City, California.

Allen, J. F., Hendler, J., and Tate, A., editors (1990). *Readings in Planning*. Morgan Kaufmann, San Mateo, California.

Almuallim, H. and Dietterich, T. G. (1991). Learning with many irrelevant features. In *Proceedings of the Ninth National Conference on Artificial Intelligence (AAAI-91)*, volume 2, pages 547–552, Anaheim, California. AAAI Press.

Aloimonos, J., Weiss, I., and Bandyopadhyay, A. (1988). Active vision. *International Journal of Computer Vision*, 1:333–356.

Aloimonos, Y. (1992). Special issue on purposive, qualitative, active vision. *CVGIP: Image Understanding*, 56(1).

Alshawi, H., editor (1992). *The Core Language Engine*. MIT Press, Cambridge, Massachusetts.

Alspector, J., Allen, R. B., Hu, V., and Satyanarayana, S. (1987). Stochastic learning networks and their electronic implementation. In Anderson, D. Z., editor, *Neural Information Processing Systems, Denver 1987*, pages 9–21, Denver, Colorado. American Institute of Physics.

Alterman, R. (1988). Adaptive planning. *Cognitive Science*, 12:393–422.

Amarel, S. (1968). On representations of problems of reasoning about actions. In Michie, D., editor, *Machine Intelligence 3*, volume 3, pages 131–171. Elsevier/North-Holland, Amsterdam, London, New York.

Ambros-Ingerson, J. and Steel, S. (1988). Integrating planning, execution and monitoring. In *Proceedings of the Seventh National Conference on Artificial Intelligence (AAAI-88)*, pages 735–740, St. Paul, Minnesota. Morgan Kaufmann.

Amit, D., Gutfreund, H., and Sompolinsky, H. (1985). Spin-glass models of neural networks. *Physical Review*, A 32:1007–1018.

Ammon, K. (1993). An automatic proof of Gödel's incompleteness theorem. *Artificial Intelligence*, 61(2):291–306.

Andersen, S. K., Olesen, K. G., Jensen, F. V., and Jensen, F. (1989). HUGIN—a shell for building Bayesian belief universes for expert systems. In *Proceedings of the Eleventh International Joint Conference on Artificial Intelligence (IJCAI-89)*, volume 2, pages 1080–1085, Detroit, Michigan. Morgan Kaufmann.

Anderson, A. R., editor (1964). *Minds and Machines*. Prentice-Hall, Englewood Cliffs, New Jersey.

Anderson, J. (1980). *Cognitive Psychology and its Implications*. W. H. Freeman, New York.

Anderson, J. A. and Rosenfeld, E., editors (1988). *Neurocomputing: Foundations of Research*. MIT Press, Cambridge, Massachusetts.

Anderson, J. R. (1983). *The Architecture of Cognition*. Harvard University Press, Cambridge, Massachusetts.

Armstrong, D. M. (1968). *A Materialist Theory of the Mind*. Routledge and Kegan Paul, London.

Arnauld, A. (1662). *La logique, ou l'art de penser*. Chez Charles Savreux, au pied de la Tour de Nostre Dame, Paris. Usually referred to as the *Port-Royal Logic*; translated into English as Arnauld (1964).

Arnauld, A. (1964). *The Art of Thinking*. Bobbs-Merrill, Indianapolis, Indiana. Translation of Arnauld (1662), usually referred to as the *Port-Royal Logic*.

Ashby, W. R. (1952). *Design for a Brain*. Wiley, New York.

Asimov, I. (1942). Runaround. *Astounding Science Fiction*.

Asimov, I. (1950). *I, Robot*. Doubleday, Garden City, New York.

Astrom, K. J. (1965). Optimal control of Markov decision processes with incomplete state estimation. *J. Math. Anal. Applic.*, 10:174–205.

Austin, J. L. (1962). *How To Do Things with Words*. Harvard University Press, Cambridge, Massachusetts.

Bacchus, F. (1990). *Representing and Reasoning with Probabilistic Knowledge*. MIT Press, Cambridge, Massachusetts.

Bacchus, F., Grove, A., Halpern, J. Y., and Koller, D. (1992). From statistics to beliefs. In *Proceedings of the Tenth National Conference on Artificial Intelligence (AAAI-92)*, pages 602–608, San Jose, California. AAAI Press.

Bach, E. (1986). The algebra of events. *Linguistics and Philosophy*, 9:5–16.

Bachmann, P. G. H. (1894). *Die analytische Zahlentheorie*. B. G. Teubner, Leipzig.

Bain, M. and Muggleton, S. H. (1991). Non-monotonic learning. In Hayes, J. E., Michie, D., and Tyugu, E., editors, *Machine Intelligence 12*, pages 105–119. Oxford University Press, Oxford.

Bajcsy, R. (1988). Active perception. *Proceedings of the IEEE*, 76(8):996–1005.

Bajcsy, R. and Lieberman, L. (1976). Texture gradient as a depth cue. *Computer Graphics and Image Processing*, 5(1):52–67.

Baker, C. L. (1989). *English Syntax*. MIT Press, Cambridge, Massachusetts.

Baker, J. (1975). The Dragon system—an overview. *IEEE Transactions on Acoustics, Speech, and Signal Processing*, 23.

Ballard, B. W. (1983). The *-minimax search procedure for trees containing chance nodes. *Artificial Intelligence*, 21(3):327–350.

Bar-Hillel, Y. (1954). Indexical expressions. *Mind*, 63:359–379.

Bar-Hillel, Y. (1960). The present status of automatic translation of languages. In Alt, F. L., editor, *Advances in Computers*. Academic Press, New York.

Bar-Shalom, Y. and Fortmann, T. E. (1988). *Tracking and Data Association*. Academic Press, New York.

Barr, A., Cohen, P. R., and Feigenbaum, E. A., editors (1989). *The Handbook of Artificial Intelligence*, volume 4. Addison-Wesley, Reading, Massachusetts.

Barr, A. and Feigenbaum, E. A., editors (1981). *The Handbook of Artificial Intelligence*, volume 1. HeurisTech Press and William Kaufmann, Stanford, California and Los Altos, California. First of four volumes; other volumes published separately (Barr and Feigenbaum, 1982; Cohen and Feigenbaum, 1982; Barr *et al.*, 1989).

Barr, A. and Feigenbaum, E. A., editors (1982). *The Handbook of Artificial Intelligence*, volume 2. HeurisTech Press and William Kaufmann, Stanford, California and Los Altos, California.

Barrett, A., Golden, K., Penberthy, J. S., and Weld, D. S. (1993). UCPOP user's manual (version 2.0). Technical Report 93-09-06, Department of Computer Science and Engineering, University of Washington.

Barrett, R., Ramsay, A., and Sloman, A. (1985). *POP-11: A Practical Language for Artificial Intelligence*. Ellis Horwood, Chichester, England.

Barstow, D. R. (1979). *Knowledge-Based Program Construction*. Elsevier/North-Holland, Amsterdam, London, New York.

Barto, A. G., Bradtke, S. J., and Singh, S. P. (1991). Real-time learning and control using asynchronous dynamic programming. Technical Report TR-91-57, University of Massachusetts Computer Science Department, Amherst, Massachusetts.

Barto, A. G., Sutton, R. S., and Brouwer, P. S. (1981). Associative search network: a reinforcement learning associative memory. *Biological Cybernetics*, 40(3):201–211.

Barwise, J. (1993). Everyday reasoning and logical inference. *Behavioral and Brain Sciences*, 16(2):337–338.

Barwise, J. and Etchemendy, J. (1993). *The Language of First-Order Logic: Including the Macintosh Program Tarski's World 4.0*. Center for the Study of Language and Information (CSLI), Stanford, California, third revised and expanded edition.

Baum, L. E. and Petrie, T. (1966). Statistical inference for probabilistic functions of finite state Markov chains. *Annals of Mathematical Statistics*, 41.

Bayes, T. (1763). An essay towards solving a problem in the doctrine of chances. *Philosophical Transactions of the Royal Society of London*, 53:370–418.

Beal, D. F. (1980). An analysis of minimax. In Clarke, M. R. B., editor, *Advances in Computer Chess 2*, pages 103–109. Edinburgh University Press, Edinburgh, Scotland.

Beck, H. W., Gala, S. K., and Navathe, S. B. (1989). Classification as a query processing technique in the CANDIDE semantic data model. In *Proceedings Fifth International Conference on Data Engineering*, pages 572–581, Los Angeles, California. IEEE Computer Society Press.

Belhumeur, P. N. (1993). A binocular stereo algorithm for reconstructing sloping, creased, and broken surfaces in the presence of half-occlusion. In *Proceedings of the 4th International Conference on Computer Vision*, Berlin. IEEE Computer Society Press.

Bell, C. and Tate, A. (1985). Using temporal constraints to restrict search in a planner. In *Proceedings of the Third Alvey IKBS SIG Workshop*, Sunningdale, Oxfordshire.

Bell, J. L. and Machover, M. (1977). *A Course in Mathematical Logic*. Elsevier/North-Holland, Amsterdam, London, New York.

Bellman, R. E. (1957). *Dynamic Programming*. Princeton University Press, Princeton, New Jersey.

Bellman, R. E. (1978). *An Introduction to Artificial Intelligence: Can Computers Think?* Boyd & Fraser Publishing Company, San Francisco.

Bellman, R. E. and Dreyfus, S. E. (1962). *Applied Dynamic Programming*. Princeton University Press, Princeton, New Jersey.

Berlekamp, E. R., Conway, J. H., and Guy, R. K. (1982). *Winning Ways, For Your Mathematical Plays*. Academic Press, New York.

Berliner, H. J. (1977). BKG—A program that plays backgammon. Technical report, Computer Science Department, Carnegie-Mellon University, Pittsburgh, Pennsylvania.

Berliner, H. J. (1979). The B* tree search algorithm: A best-first proof procedure. *Artificial Intelligence*, 12(1):23–40.

Berliner, H. J. (1980a). Backgammon computer program beats world champion. *Artificial Intelligence*, 14:205–220.

Berliner, H. J. (1980b). Computer backgammon. *Scientific American*, 249(6):64–72.

Berliner, H. J. (1989). Hitech chess: From master to senior master with no hardware change. In *MIV-89: Proceedings of the International Workshop on Industrial Applications of Machine Intelligence and Vision (Seiken Symposium)*, pages 12–21.

Berliner, H. J. and Ebeling, C. (1989). Pattern knowledge and search: The SUPREM architecture. *Artificial Intelligence*, 38(2):161–198.

Berliner, H. J. and Goetsch, G. (1984). A quantitative study of search methods and the effect of constraint satisfaction. Technical Report CMU-CS-84-187, Computer Science Department, Carnegie-Mellon University, Pittsburgh, Pennsylvania.

Bernoulli, D. (1738). Specimen theoriae novae de mensura sortis. *Proceedings of the St. Petersburg Imperial Academy of Sciences*, 5. Translated into English as Bernoulli (1954).

Bernoulli, D. (1954). Exposition of a new theory of the measurement of risk. *Econometrica*, 22:123–136. Translation of Bernoulli (1738) by Louise Sommer.

Bernstein, A. and Roberts, M. (1958). Computer vs. chess player. *Scientific American*, 198(6):96–105.

Bernstein, A., Roberts, M., Arbuckle, T., and Belsky, M. S. (1958). A chess playing program for the IBM 704. In *Proceedings of the 1958 Western Joint Computer Conference*, pages 157–159, Los Angeles.

Berry, D. A. and Fristedt, B. (1985). *Bandit Problems: Sequential Allocation of Experiments*. Chapman and Hall, London.

Bertsekas, D. P. (1987). *Dynamic Programming: Deterministic and Stochastic Models*. Prentice-Hall, Englewood Cliffs, New Jersey.

Beth, E. W. (1955). Semantic entailment and formal derivability. *Mededelingen van de Koninklijke Nederlandse Akademie van Wetenschappen, Afdeling Letterkunde, N.R.*, 18(13):309–342.

Bibel, W. (1981). On matrices with connections. *Journal of the Association for Computing Machinery*, 28(4):633–645.

Bibel, W. (1986). A deductive solution for plan generation. *New Generation Computing*, 4(2):115–132.

Birnbaum, L. and Selfridge, M. (1981). Conceptual analysis of natural language. In Schank, R. and Riesbeck, C., editors, *Inside Computer Understanding*. Lawrence Erlbaum.

Biro, J. I. and Shahan, R. W., editors (1982). *Mind, Brain and Function: Essays in the Philosophy of Mind*. University of Oklahoma Press, Norman, Oklahoma.

Birtwistle, G., Dahl, O.-J., Myrhaug, B., and Nygaard, K. (1973). *Simula Begin*. Studentliteratur (Lund) and Auerbach, New York.

Bitner, J. R. and Reingold, E. M. (1975). Backtrack programming techniques. *Communications of the Association for Computing Machinery*, 18(11):651–656.

Black, E., Jelinek, F., Lafferty, J., Magerman, D., Mercer, R., and Roukos, S. (1992). Towards history-based grammars: using richer models for probabilistic parsing. In Marcus, M., editor, *Fifth DARPA Workshop on Speech and Natural Language*, Arden Conference Center, Harriman, New York.

Block, N., editor (1980). *Readings in Philosophy of Psychology*, volume 1. Harvard University Press, Cambridge, Massachusetts.

Bloom, P. (1994). *Language Acquisition: Core Readings*. MIT Press.

Blum, A. L. and Rivest, R. L. (1992). Training a 3-node neural network is NP-complete. *Neural Networks*, 5(1):117–127.

Blumer, A., Ehrenfeucht, A., Haussler, D., and Warmuth, M. K. (1989). Learnability and the Vapnik-Chervonenkis dimension. *Journal of the Association for Computing Machinery*, 36(4):929–965.

Blumer, A., Ehrenfeucht, A., Haussler, D., and Warmuth, M. K. (1990). Occam's razor. In Shavlik, J. W. and Dietterich, T. G., editors, *Readings in Machine Learning*, pages 201–204. Morgan Kaufmann.

Board, R. and Pitt, L. (1992). On the necessity of Occam algorithms. *Theoretical Computer Science*, 100(1):157–184.

Bobrow, D. G. (1967). Natural language input for a computer problem solving system. In Minsky, M. L., editor, *Semantic Information Processing*, pages 133–215. MIT Press, Cambridge, Massachusetts.

Bobrow, D. G. and Raphael, B. (1974). New programming languages for artificial intelligence research. *Computing Surveys*, 6(3):153–174.

Boden, M. A. (1977). *Artificial Intelligence and Natural Man*. Basic Books, New York.

Boden, M. A., editor (1990). *The Philosophy of Artificial Intelligence*. Oxford University Press, Oxford.

Boole, G. (1847). *The Mathematical Analysis of Logic: Being an Essay towards a Calculus of Deductive Reasoning*. Macmillan, Barclay, and Macmillan, Cambridge.

Boolos, G. S. (1990). On "seeing" the truth of the Gödel sentence. *Behavioral and Brain Sciences*, 13(4):655–656. Peer commentary on Penrose (1990).

Boolos, G. S. and Jeffrey, R. C. (1989). *Computability and Logic*. Cambridge University Press, Cambridge, third edition.

Borgida, A., Brachman, R. J., McGuinness, D. L., and Alperin Resnick, L. (1989). CLASSIC: a structural data model for objects. *SIGMOD Record*, 18(2):58–67.

Boyer, R. S. (1971). *Locking: A Restriction of Resolution*. PhD thesis, University of Texas, Austin, Texas.

Boyer, R. S. and Moore, J. S. (1972). The sharing of structure in theorem-proving programs. In Meltzer, B. and Michie, D., editors, *Machine Intelligence 7*, pages 101–116. Edinburgh University Press, Edinburgh, Scotland.

Boyer, R. S. and Moore, J. S. (1979). *A Computational Logic*. Academic Press, New York.

Boyer, R. S. and Moore, J. S. (1984). Proof checking the RSA public key encryption algorithm. *American Mathematical Monthly*, 91(3):181–189.

Brachman, R. J. (1979). On the epistemological status of semantic networks. In Findler, N. V., editor, *Associative Networks: Representation and Use of Knowledge by Computers*, pages 3–50. Academic Press, New York.

Brachman, R. J., Fikes, R. E., and Levesque, H. J. (1983). Krypton: A functional approach to knowledge representation. *Computer*, 16(10):67–73.

Brachman, R. J. and Levesque, H. J., editors (1985). *Readings in Knowledge Representation*. Morgan Kaufmann, San Mateo, California.

Bransford, J. and Johnson, M. K. (1973). Consideration of some problems in comprehension. In Chase, W. G., editor, *Visual Information Processing*. Academic Press, New York.

Bratko, I. (1986). *Prolog Programming for Artificial Intelligence*. Addison-Wesley, Reading, Massachusetts, first edition.

Bratko, I. (1990). *Prolog Programming for Artificial Intelligence*. Addison-Wesley, Reading, Massachusetts, second edition.

Bratman, M. E. (1987). *Intention, Plans, and Practical Reason*. Harvard University Press, Cambridge, Massachusetts.

Bratman, M. E. (1992). Planning and the stability of intention. *Minds and Machines*, 2(1):1–16.

Brelaz, D. (1979). New methods to color the vertices of a graph. *Communications of the Association for Computing Machinery*, 22(4):251–256.

Bresnan, J. (1982). *The Mental Representation of Grammatical Relations*. MIT Press, Cambridge, Massachusetts.

Briggs, R. (1985). Knowledge representation in Sanskrit and artificial intelligence. *AI Magazine*, 6(1):32–39.

Brooks, R. A. (1981). Symbolic reasoning among 3-D models and 2-D images. *Artificial Intelligence*, 17:285–348.

Brooks, R. A. (1986). A robust layered control system for a mobile robot. *IEEE Journal of Robotics and Automation*, 2:14–23.

Brooks, R. A. (1989). Engineering approach to building complete, intelligent beings. *Proceedings of the SPIE—The International Society for Optical Engineering*, 1002:618–625.

Brudno, A. L. (1963). Bounds and valuations for shortening the scanning of variations. *Problems of Cybernetics*, 10:225–241.

Bryson, A. E. and Ho, Y.-C. (1969). *Applied Optimal Control*. Blaisdell, New York.

Buchanan, B. G. and Mitchell, T. M. (1978). Model-directed learning of production rules. In Waterman, D. A. and Hayes-Roth, F., editors, *Pattern-Directed Inference Systems*, pages 297–312. Academic Press, New York.

Buchanan, B. G., Mitchell, T. M., Smith, R. G., and Johnson, C. R. (1978). Models of learning systems. In *Encyclopedia of Computer Science and Technology*, volume 11. Dekker.

Buchanan, B. G. and Shortliffe, E. H., editors (1984). *Rule-Based Expert Systems: The MYCIN Experiments of the Stanford Heuristic Programming Project*. Addison-Wesley, Reading, Massachusetts.

Buchanan, B. G., Sutherland, G. L., and Feigenbaum, E. A. (1969). Heuristic DENDRAL: a program for generating explanatory hypotheses in organic chemistry. In Meltzer, B., Michie, D., and Swann, M., editors, *Machine Intelligence 4*, pages 209–254. Edinburgh University Press, Edinburgh, Scotland.

Buchler, J., editor (1955). *Philosophical Writings of Peirce*. Dover, New York.

Bundy, A. (1983). *The Computer Modelling of Mathematical Reasoning*. Academic Press, New York.

Bunt, H. C. (1985). The formal representation of (quasi-) continuous concepts. In Hobbs, J. R. and Moore, R. C., editors, *Formal Theories of the Commonsense World*, chapter 2, pages 37–70. Ablex, Norwood, New Jersey.

Burstall, R. M. (1974). Program proving as hand simulation with a little induction. In *Information Processing '74*, pages 308–312. Elsevier/North-Holland, Amsterdam, London, New York.

Burstall, R. M. and Darlington, J. (1977). A transformation system for developing recursive programs. *Journal of the Association for Computing Machinery*, 24(1):44–67.

Bylander, T. (1992). Complexity results for serial decomposability. In *Proceedings of the Tenth National Conference on Artificial Intelligence (AAAI-92)*, pages 729–734, San Jose, California. AAAI Press.

Caianello, E. R. (1961). Outline of a theory of thought and thinking machines. *Journal of Theoretical Biology*, 1:204–235.

Campbell, P. K., Johnes, K. E., Huber, R. J., Horch, K. W., and Normann, R. A. (1991). A silicon-based, 3-dimensional neural interface: manufacturing processes for an intracortical electrode array. *IEEE Transactions on Biomedical Engineering*, 38(8):758–768.

Canny, J. (1986). A computational approach to edge detection. *IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)*, 8:679–698.

Canny, J. and Reif, J. (1987). New lower bound techniques for robot motion planning problems. In *IEEE FOCS*, pages 39–48.

Canny, J. F. (1988). *The Complexity of Robot Motion Planning*. MIT Press, Cambridge, Massachusetts.

Carbonell, J. R. and Collins, A. M. (1973). Natural semantics in artificial intelligence. In *Proceedings of the Third International Joint Conference on Artificial Intelligence (IJCAI-73)*, Stanford, California. IJCAII.

Carnap, R. (1948). On the application of inductive logic. *Philosophy and Phenomenological Research*, 8:133–148.

Carnap, R. (1950). *Logical Foundations of Probability*. University of Chicago Press, Chicago, Illinois.

Cassandra, A. R., Kaelbling, L. P., and Littman, M. L. (1994). Acting optimally in partially observable stochastic domains. In *Proceedings of the Twelfth National Conference on Artificial Intelligence (AAAI-94)*, pages 1023–1028, Seattle, Washington. AAAI Press.

Chakrabarti, P. P., Ghose, S., Acharya, A., and de Sarkar, S. C. (1989). Heuristic search in restricted memory. *Artificial Intelligence*, 41(2):197–122.

Chang, C.-L. and Lee, R. C.-T. (1973). *Symbolic Logic and Mechanical Theorem Proving*. Academic Press, New York.

Chapman, D. (1987). Planning for conjunctive goals. *Artificial Intelligence*, 32(3):333–377.

Chapuis, A. and Droz, E. (1958). *Automata: A Historical and Technological Study*. Editions du Griffon, Neufchatel, Switzerland.

Charniak, E. (1972). *Toward a Model of Children's Story Comprehension*. PhD thesis, Massachusetts Institute of Technology.

Charniak, E. (1993). *Statistical Language Learning*. MIT Press.

Charniak, E. and Goldman, R. P. (1992). A Bayesian model of plan recognition. *Artificial Intelligence*, 64(1):53–79.

Charniak, E. and McDermott, D. (1985). *Introduction to Artificial Intelligence*. Addison-Wesley, Reading, Massachusetts.

Charniak, E., Riesbeck, C., McDermott, D., and Meehan, J. (1987). *Artificial Intelligence Programming*. Lawrence Erlbaum Associates, Potomac, Maryland, second edition.

Cheeseman, P. (1985). In defense of probability. In *Proceedings of the Ninth International Joint Conference on Artificial Intelligence (IJCAI-85)*, pages 1002–1009, Los Angeles, California. Morgan Kaufmann.

Cheeseman, P. (1988). An inquiry into computer understanding. *Computational Intelligence*, 4(1):58–66.

Cheeseman, P., Self, M., Kelly, J., and Stutz, J. (1988). Bayesian classification. In *Proceedings of the Seventh National Conference on Artificial Intelligence (AAAI-88)*, volume 2, pages 607–611, St. Paul, Minnesota. Morgan Kaufmann.

Chellas, B. F. (1980). *Modal Logic: An Introduction*. Cambridge University Press, Cambridge.

Cherniak, C. (1986). *Minimal Rationality*. MIT Press, Cambridge, Massachusetts.

Chierchia, G. and McConnell-Ginet, S. (1990). *Meaning and Grammar*. MIT Press.

Chitrao, M. and Grishman, R. (1990). Statistical parsing of messages. In *Proceedings of DARPA Speech and Natural Language Processing*. Morgan Kaufman: New York.

Chomsky, N. (1956). Three models for the description of language. *IRE Transactions on Information Theory*, 2(3):113–124.

Chomsky, N. (1957). *Syntactic Structures*. Mouton, The Hague and Paris.

Chomsky, N. (1965). *Aspects of the Theory of Syntax*. MIT Press, Cambridge, Massachusetts.

Chomsky, N. (1980). Rules and representations. *The Behavioral and Brain Sciences*, 3:1–61.

Chung, K. L. (1979). *Elementary Probability Theory with Stochastic Processes*. Springer-Verlag, Berlin, third edition.

Church, A. (1936). A note on the Entscheidungsproblem. *Journal of Symbolic Logic*, 1:40–41 and 101–102.

Church, A. (1941). *The Calculi of Lambda-Conversion*. Princeton University Press, Princeton, New Jersey.

Church, K. (1988). A stochastic parts program and noun phrase parser for unrestricted texts. In *Proceedings of the Second Conference on Applied Natural Language Processing*, Austin, Texas.

Church, K. and Patil, R. (1982). Coping with syntactic ambiguity or how to put the block in the box on the table. *American Journal of Computational Linguistics*, 8(3–4):139–149.

Churchland, P. M. (1979). *Scientific Realism and the Plasticity of Mind*. Cambridge University Press, Cambridge.

Churchland, P. M. and Churchland, P. S. (1982). Functionalism, qualia, and intentionality. In Biro, J. I. and Shahan, R. W., editors, *Mind, Brain and Function: Essays in the Philosophy of Mind*, pages 121–145. University of Oklahoma Press, Norman, Oklahoma.

Churchland, P. S. (1986). *Neurophilosophy: Toward a Unified Science of the Mind-Brain*. MIT Press, Cambridge, Massachusetts.

Clark, K. L. (1978). Negation as failure. In Gallaire, H. and Minker, J., editors, *Logic and Data Bases*, pages 293–322. Plenum, New York.

Clark, K. L. and Gregory, S. (1986). PARLOG: parallel programming in logic. *ACM Transactions on Programming Languages*, 8:1–49.

Clark, R. (1992). The selection of syntactic knowledge. *Language Acquisition*, 2(2):83–149.

Clarke, M. R. B., editor (1977). *Advances in Computer Chess 1*. Edinburgh University Press, Edinburgh, Scotland.

Clocksin, W. F. and Mellish, C. S. (1987). *Programming in Prolog*. Springer-Verlag, Berlin, third revised and extended edition.

Clowes, M. B. (1971). On seeing things. *Artificial Intelligence*, 2(1):79–116.

Cobham, A. (1964). The intrinsic computational difficulty of functions. In Bar-Hillel, Y., editor, *Proceedings of the 1964 International Congress for Logic, Methodology, and Philosophy of Science*, pages 24–30. Elsevier/North-Holland.

Cohen, J. (1966). *Human Robots in Myth and Science*. Allen and Unwin, London.

Cohen, J. (1988). A view of the origins and development of PROLOG. *Communications of the Association for Computing Machinery*, 31:26–36.

Cohen, P., Morgan, J., and Pollack, M. (1990). *Intentions in Communication*. MIT Press.

Cohen, P. and Perrault, C. R. (1979). Elements of a plan-based theory of speech acts. *Cognitive Science*, 3(3):177–212.

Cohen, P. R. and Feigenbaum, E. A., editors (1982). *The Handbook of Artificial Intelligence*, volume 3. HeurisTech Press and William Kaufmann, Stanford, California and Los Altos, California.

Colmerauer, A. (1975). Les grammaires de métamorphose. Technical report, Groupe d'Intelligence Artificielle, Université de Marseille-Luminy. Translated into English as Colmerauer (1978).

Colmerauer, A. (1978). Metamorphosis grammars. In Bolc, L., editor, *Natural Language Communication with Computers*. Springer-Verlag, Berlin. English translation of Colmerauer (1975).

Colmerauer, A. (1985). Prolog in 10 figures. *Communications of the Association for Computing Machinery*, 28(12):1296–1310.

Colmerauer, A. (1990). Prolog III as it actually is. In Warren, D. H. D. and Szeredi, P., editors, *Logic Programming: Proceedings of the Seventh International Conference*, page 766, Jerusalem. MIT Press.

Colmerauer, A., Kanoui, H., Pasero, R., and Roussel, P. (1973). Un système de communication homme-machine en français. Rapport, Groupe d'Intelligence Artificielle, Université d'Aix-Marseille II.

Colomb, R. M. (1991). Enhancing unification in PROLOG through clause indexing. *Journal of Logic Programming*, 10(1):23–44.

Condon, E. U., Tawney, G. L., and Derr, W. A. (1940). Machine to play game of Nim. U.S. Patent 2,215,544, United States Patent Office, Washington, D.C.

Condon, J. H. and Thompson, K. (1982). Belle chess hardware. In Clarke, M. R. B., editor, *Advances in Computer Chess 3*, pages 45–54. Pergamon, New York.

Cook, S. A. (1971). The complexity of theorem-proving procedures. In *Proceedings of the 3rd Annual ACM Symposium on Theory of Computing*, pages 151–158, New York.

Cooper, G. and Herskovits, E. (1992). A Bayesian method for the induction of probabilistic networks from data. *Machine Learning*, 9:309–347.

Cooper, G. F. (1990). The computational complexity of probabilistic inference using Bayesian belief networks. *Artificial Intelligence*, 42:393–405.

Copeland, J. (1993). *Artificial Intelligence: A Philosophical Introduction*. Blackwell, Oxford.

Cormen, T. H., Leiserson, C. E., and Rivest, R. R. (1990). *Introduction to Algorithms*. MIT Press, Cambridge, Massachusetts.

Covington, M. A. (1994). *Natural Language Processing for Prolog Programmers*. Prentice-Hall, Englewood Cliffs, New Jersey.

Cowan, J. D. and Sharp, D. H. (1988a). Neural nets. *Quarterly Reviews of Biophysics*, 21:365–427.

Cowan, J. D. and Sharp, D. H. (1988b). Neural nets and artificial intelligence. *Daedalus*, 117:85–121.

Cox, R. T. (1946). Probability, frequency, and reasonable expectation. *American Journal of Physics*, 14(1):1–13.

Cragg, B. G. and Temperley, H. N. V. (1954). The organization of neurones: A cooperative analogy. *EEG and Clinical Neurophysiology*, 6:85–92.

Cragg, B. G. and Temperley, H. N. V. (1955). Memory: The analogy with ferromagnetic hysteresis. *Brain*, 78(II):304–316.

Craik, K. J. W. (1943). *The Nature of Explanation*. Cambridge University Press, Cambridge.

Crevier, D. (1993). *AI: The Tumultuous History of the Search for Artificial Intelligence*. Basic Books, New York.

Crockett, L. (1994). *The Turing Test and the Frame Problem: AI's Mistaken Understanding of Intelligence*. Ablex, Norwood, New Jersey.

Cullingford, R. E. (1981). Integrating knowledge sources for computer 'understanding' tasks. *IEEE Transactions on Systems, Man and Cybernetics*, SMC-11.

Currie, K. W. and Tate, A. (1991). O-Plan: the Open Planning Architecture. *Artificial Intelligence*, 52(1):49–86.

Curry, H. B. and Feys, R. (1958). *Combinatory Logic*, volume 1. Elsevier/North-Holland, Amsterdam, London, New York.

Cybenko, G. (1988). Continuous valued neural networks with two hidden layers are sufficient. Technical report, Department of Computer Science, Tufts University, Medford, Massachusetts.

Cybenko, G. (1989). Approximation by superpositions of a sigmoidal function. *Mathematics of Controls, Signals, and Systems*, 2:303–314.

Dagum, P. and Luby, M. (1993). Approximating probabilistic inference in Bayesian belief networks is NP-hard. *Artificial Intelligence*, 60(1):141–153.

Dahl, O.-J., Myrhaug, B., and Nygaard, K. (1970). (Simula 67) common base language. Technical Report N. S-22, Norsk Regnesentral (Norwegian Computing Center), Oslo.

Dantzig, G. B. (1960). On the significance of solving linear programming problems with some integer variables. *Econometrica*, 28:30–44.

Darwiche, A. Y. and Ginsberg, M. L. (1992). A symbolic generalization of probability theory. In *Proceedings of the Tenth National Conference on Artificial Intelligence (AAAI-92)*, pages 622–627, San Jose, California. AAAI Press.

Davidson, D. (1980). *Essays on Actions and Events*. Oxford University Press, Oxford.

Davies, T. (1985). Analogy. Informal Note IN-CSLI-85-4, Center for the Study of Language and Information (CSLI), Stanford, California.

Davies, T. R. and Russell, S. J. (1987). A logical approach to reasoning by analogy. In *Proceedings of the Tenth International Joint Conference on Artificial Intelligence (IJCAI-87)*, volume 1, pages 264–270, Milan, Italy. Morgan Kaufmann.

Davis, E. (1986). *Representing and Acquiring Geographic Knowledge*. Pitman and Morgan Kaufmann, London and San Mateo, California.

Davis, E. (1990). *Representations of Commonsense Knowledge*. Morgan Kaufmann, San Mateo, California.

Davis, M. (1957). A computer program for Presburger's algorithm. In Robinson, A., editor, *Proving Theorems, (as Done by Man, Logician, or Machine)*, pages 215–233, Cornell University, Ithaca, New York. Communications Research Division, Institute for Defense Analysis. Summaries of Talks Presented at the 1957 Summer Institute for Symbolic Logic. Second edition; publication date is 1960.

Davis, M. and Putnam, H. (1960). A computing procedure for quantification theory. *Journal of the Association for Computing Machinery*, 7(3):201–215.

Davis, R. (1980). Meta-rules: reasoning about control. *Artificial Intelligence*, 15(3):179–222.

Davis, R. and Lenat, D. B. (1982). *Knowledge-Based Systems in Artificial Intelligence*. McGraw-Hill, New York.

Dayan, P. (1992). The convergence of TDλ for general λ. *Machine Learning*, 8(3–4):341–362.

de Dombal, F. T., Leaper, D. J., Horrocks, J. C., and Staniland, J. R. (1974). Human and computer-aided diagnosis of abdominal pain: Further report with emphasis on performance of clinicians. *British Medical Journal*, 1:376–380.

de Dombal, F. T., Staniland, J. R., and Clamp, S. E. (1981). Geographical variation in disease presentation. *Medical Decision Making*, 1:59–69.

de Finetti, B. (1937a). Foresight: Its logical laws, its subjective sources. In Kyburg, H. E. and Smokler, H. E., editors, *Studies in Subjective Probability*, pages 55–118. Krieger, New York.

de Finetti, B. (1937b). La prévision: Ses lois logiques, ses sources subjectives. *Ann. Inst. Poincaré*, 7:1–68. Translated into English as De-Finetti (1937a).

de Groot, A. D. (1946). *Het Denken van den Schaker*. Elsevier/North-Holland, Amsterdam, London, New York. Translated as DeGroot (1978).

de Groot, A. D. (1978). *Thought and Choice in Chess*. Mouton, The Hague and Paris, second edition.

de Kleer, J. (1975). Qualitative and quantitative knowledge in classical mechanics. Technical Report AI-TR-352, MIT Artificial Intelligence Laboratory.

de Kleer, J. (1986). An assumption-based TMS. *Artificial Intelligence*, 28(2):127–162.

de Kleer, J. (1986a). Extending the ATMS. *Artificial Intelligence*, 28(2):163–196.

de Kleer, J. (1986b). Problem solving with the ATMS. *Artificial Intelligence*, 28(2):197–224.

de Kleer, J. and Brown, J. S. (1985). A qualitative physics based on confluences. In Hobbs, J. R. and Moore, R. C., editors, *Formal Theories of the Commonsense World*, chapter 4, pages 109–183. Ablex, Norwood, New Jersey.

de Kleer, J., Doyle, J., Steele, G. L., and Sussman, G. J. (1977). AMORD: explicit control of reasoning. *SIGPLAN Notices*, 12(8):116–125.

De Morgan, A. (1864). On the syllogism IV and on the logic of relations. *Cambridge Philosophical Transactions*, x:331–358.

De Raedt, L. (1992). *Interactive Theory Revision: An Inductive Logic Programming Approach*. Academic Press, New York.

Dean, T. and Boddy, M. (1988). An analysis of time-dependent planning. In *Proceedings of the Seventh National Conference on Artificial Intelligence (AAAI-88)*, pages 49–54, St. Paul, Minnesota. Morgan Kaufmann.

Dean, T., Firby, J., and Miller, D. (1990). Hierarchical planning involving deadlines, travel time, and resources. *Computational Intelligence*, 6(1).

Dean, T., Kaelbling, L. P., Kirman, J., and Nicholson, A. (1993). Planning with deadlines in stochastic domains. In *Proceedings of the Eleventh National Conference on Artificial Intelligence (AAAI-93)*, pages 574–579, Washington, D.C. AAAI Press.

Dean, T. and Kanazawa, K. (1989). A model for reasoning about persistence and causation. *Computational Intelligence*, 5(3):142–150.

Dean, T. L. and Wellman, M. P. (1991). *Planning and Control*. Morgan Kaufmann, San Mateo, California.

Debreu, G. (1960). Topological methods in cardinal utility theory. In Arrow, K. J., Karlin, S., and Suppes, P., editors, *Mathematical Methods in the Social Sciences, 1959*. Stanford University Press, Stanford, California.

Dechter, R. and Pearl, J. (1985). Generalized best-first search strategies and the optimality of A*. *Journal of the Association for Computing Machinery*, 32(3):505–536.

DeGroot, M. H. (1970). *Optimal Statistical Decisions*. McGraw-Hill, New York.

DeGroot, M. H. (1989). *Probability and Statistics*. Addison-Wesley, Reading, Massachusetts, second edition. Reprinted with corrections.

DeJong, G. (1981). Generalizations based on explanations. In *Proceedings of the Seventh International Joint Conference on Artificial Intelligence (IJCAI-81)*, pages 67–69, Vancouver, British Columbia. Morgan Kaufmann.

DeJong, G. and Mooney, R. (1986). Explanation-based learning: An alternative view. *Machine Learning*, 1:145–176.

Dempster, A., Laird, N., and Rubin, D. (1977). Maximum likelihood from incomplete data via the EM algorithm. *Journal of the Royal Statistical Society*, 39 (Series B):1–38.

Dempster, A. P. (1968). A generalization of Bayesian inference. *Journal of the Royal Statistical Society*, 30 (Series B):205–247.

Dennett, D. C. (1969). *Content and Consciousness*. Routledge and Kegan Paul, London.

Dennett, D. C. (1971). Intentional systems. *The Journal of Philosophy*, 68(4):87–106.

Dennett, D. C. (1978a). *Brainstorms: Philosophical Essays on Mind and Psychology*. MIT Press, Cambridge, Massachusetts, first edition.

Dennett, D. C. (1978b). Why you can't make a computer that feels pain. *Synthese*, 38(3).

Dennett, D. C. (1984). Cognitive wheels: the frame problem of AI. In Hookway, C., editor, *Minds, Machines, and Evolution: Philosophical Studies*, pages 129–151. Cambridge University Press, Cambridge.

Dennett, D. C. (1986). The moral first aid manual. Tanner lectures on human values, University of Michigan.

Deo, N. and Pang, C. (1982). Shortest path algorithms: Taxonomy and annotation. Technical Report CS-80-057, Computer Science Department, Washington State University.

Descotte, Y. and Latombe, J. C. (1985). Making compromises among antagonist constraints in a planner. *Artificial Intelligence*, 27:183–217.

Devanbu, P., Brachman, R. J., Selfridge, P. G., and Ballard, B. W. (1991). LaSSIE: a knowledge-based software information system. *Communications of the Association for Computing Machinery*, 34(5):34–49.

Dickmanns, E. D. and Zapp, A. (1987). Autonomous high speed road vehicle guidance by computer vision. In Isermann, R., editor, *Automatic Control—World Congress, 1987: Selected Papers from the 10th Triennial World Congress of the International Federation of Automatic Control*, pages 221–226, Munich, Germany. Pergamon.

Dietterich, T. G. (1990). Machine learning. *Annual Review of Computer Science*, 4.

Dijkstra, E. W. (1959). A note on two problems in connexion with graphs. *Numerische Mathematik*, 1:269–271.

Dincbas, M. and LePape, J.-P. (1984). Metacontrol of logic programs in METALOG. In *Proceedings of the International Conference on Fifth-Generation Computer Systems*, Tokyo. Elsevier/North-Holland.

Dingwell, W. O. (1988). The evolution of human communicative behavior. In Newmeyer, F. J., editor, *Linguistics: The Cambridge Survey, Vol. III*, pages 274–313. Cambridge University Press.

Doran, J. and Michie, D. (1966). Experiments with the graph traverser program. *Proceedings of the Royal Society of London*, 294, Series A:235–259.

Dowty, D., Wall, R., and Peters, S. (1991). *Introduction to Montague Semantics*. D. Reidel, Dordrecht, The Netherlands.

Doyle, J. (1979). A truth maintenance system. *Artificial Intelligence*, 12(3):231–272. Reprinted in Webber and Nilsson (1981).

Doyle, J. (1980). A model for deliberation, action, and introspection. Technical Report AI-TR-581, Artificial Intelligence Laboratory, Massachusetts Institute of Technology, Cambridge, Massachusetts. Republished PhD dissertation.

Doyle, J. (1983). What is rational psychology? Toward a modern mental philosophy. *AI Magazine*, 4(3):50–53.

Doyle, J. and Patil, R. S. (1991). Two theses of knowledge representation: language restrictions, taxonomic classification, and the utility of representation services. *Artificial Intelligence*, 48(3):261–297.

Drabble, B. (1990). Mission scheduling for spacecraft: Diaries of T-SCHED. In *Expert Planning Systems*, pages 76–81. Institute of Electrical Engineers.

Draper, D., Hanks, S., and Weld, D. (1994). Probabilistic planning with information gathering and contingent execution. In *Proceedings 2nd AIPS*, San Mateo, California. Morgan Kaufmann.

Dreyfus, H. L. (1972). *What Computers Can't Do: A Critique of Artificial Reason*. Harper and Row, New York, first edition.

Dreyfus, H. L. (1979). *What Computers Can't Do: The Limits of Artificial Intelligence*. Harper and Row, New York, revised edition.

Dreyfus, H. L. (1992). *What Computers Still Can't Do: A Critique of Artificial Reason*. MIT Press, Cambridge, Massachusetts.

Dreyfus, H. L. and Dreyfus, S. E. (1986). *Mind over Machine: The Power of Human Intuition and Expertise in the Era of the Computer*. Blackwell, Oxford. With Tom Athanasiou.

Dreyfus, S. E. (1969). An appraisal of some shortest-paths algorithms. *Operations Research*, 17:395–412.

Dubois, D. and Prade, H. (1994). A survey of belief revision and updating rules in various uncertainty models. *International Journal of Intelligent Systems*, 9(1):61–100.

Duda, R., Gaschnig, J., and Hart, P. (1979). Model design in the Prospector consultant system for mineral exploration. In Michie, D., editor, *Expert Systems in the Microelectronic Age*, pages 153–167. Edinburgh University Press, Edinburgh, Scotland.

Dyer, M. (1983). *In-Depth Understanding*. MIT Press, Cambridge, Massachusetts.

Dzeroski, S., Muggleton, S., and Russell, S. J. (1992). PAC-learnability of determinate logic programs. In *Proceedings of the Fifth Annual ACM Workshop on Computational Learning Theory (COLT-92)*, Pittsburgh, Pennsylvania. ACM Press.

Earley, J. (1970). An efficient context-free parsing algorithm. *Communications of the Association for Computing Machinery*, 13(2):94–102.

Ebeling, C. (1987). *All the Right Moves*. MIT Press, Cambridge, Massachusetts.

Edmonds, J. (1962). Covers and packings in a family of sets. *Bulletin of the American Mathematical Society*, 68:494–499.

Edmonds, J. (1965). Paths, trees, and flowers. *Canadian Journal of Mathematics*, 17:449–467.

Edwards, P., editor (1967). *The Encyclopedia of Philosophy*. Macmillan, London.

Elkan, C. (1992). Reasoning about action in first-order logic. In *Proceedings of the Conference of the Canadian Society for Computational Studies of Intelligence*, Vancouver, British Columbia.

Elkan, C. (1993). The paradoxical success of fuzzy logic. In *Proceedings of the Eleventh National Conference on Artificial Intelligence (AAAI-93)*, pages 698–703, Washington, D.C. AAAI Press.

Empson, W. (1953). *Seven Types of Ambiguity*. New Directions.

Enderton, H. B. (1972). *A Mathematical Introduction to Logic*. Academic Press, New York.

Engelberger, J. F. (1980). *Robotics in Practice*. Amacom, New York.

Engelberger, J. F. (1989). *Robotics in Service*. MIT Press, Cambridge, Massachusetts.

Erman, L. D., Hayes-Roth, F., Lesser, V. R., and Reddy, D. R. (1980). The HEARSAY-II speech-understanding system: Integrating knowledge to resolve uncertainty. *Computing Surveys*, 12(2):213–253. Reprinted in Webber and Nilsson (1981).

Ernst, H. A. (1961). *MH-1, a Computer-Operated Mechanical Hand*. PhD thesis, Massachusetts Institute of Technology, Cambridge, Massachusetts.

Erol, K., Hendler, J., and Nau, D. S. (1994). HTN planning: complexity and expressivity. In *Proceedings of the Twelfth National Conference on Artificial Intelligence (AAAI-94)*, Seattle, Washington. AAAI Press.

Etzioni, O. (1989). Tractable decision-analytic control. In *Proc. of 1st International Conference on Knowledge Representation and Reasoning*, pages 114–125, Toronto, Ontario.

Etzioni, O., Hanks, S., Weld, D., Draper, D., Lesh, N., and Williamson, M. (1992). An approach to planning with incomplete information. In *Proceedings of the 3rd International Conference on Principles of Knowledge Representation and Reasoning*.

Evans, T. G. (1968). A program for the solution of a class of geometric-analogy intelligence-test questions. In Minsky, M. L., editor, *Semantic Information Processing*, pages 271–353. MIT Press, Cambridge, Massachusetts.

Fahlman, S. E. (1974). A planning system for robot construction tasks. *Artificial Intelligence*, 5(1):1–49.

Fahlman, S. E. (1979). *NETL: A System for Representing and Using Real-World Knowledge*. MIT Press, Cambridge, Massachusetts.

Farhat, N. H., Psaltis, D., Prata, A., and Paek, E. (1985). Optical implementation of the Hopfield model. *Applied Optics*, 24:1469–1475. Reprinted in Anderson and Rosenfeld (1988).

Faugeras, O. (1993). *Three-Dimensional Computer Vision: A Geometric Viewpoint*. MIT Press, Cambridge, Massachusetts.

Feigenbaum, E. and Shrobe, H. (1993). The Japanese national fifth generation project: introduction, survey, and evaluation. *Future Generation Computer Systems*, 9(2):105–117.

Feigenbaum, E. A. (1961). The simulation of verbal learning behavior. *Proceedings of the Western Joint Computer Conference*, 19:121–131. Reprinted in (Feigenbaum and Feldman, 1963, pp. 297–309).

Feigenbaum, E. A., Buchanan, B. G., and Lederberg, J. (1971). On generality and problem solving: A case study using the DENDRAL program. In Meltzer, B. and Michie, D., editors, *Machine Intelligence 6*, pages 165–190. Edinburgh University Press, Edinburgh, Scotland.

Feigenbaum, E. A. and Feldman, J., editors (1963). *Computers and Thought*. McGraw-Hill, New York.

Feldman, J. A. and Sproull, R. F. (1977). Decision theory and artificial intelligence II: The hungry monkey. Technical report, Computer Science Department, University of Rochester.

Feldman, J. A. and Yakimovsky, Y. (1974). Decision theory and artificial intelligence I: Semantics-based region analyzer. *Artificial Intelligence*, 5(4):349–371.

Fikes, R. E., Hart, P. E., and Nilsson, N. J. (1972). Learning and executing generalized robot plans. *Artificial Intelligence*, 3(4):251–288.

Fikes, R. E. and Nilsson, N. J. (1971). STRIPS: a new approach to the application of theorem proving to problem solving. *Artificial Intelligence*, 2(3–4):189–208.

Fikes, R. E. and Nilsson, N. J. (1993). STRIPS, a retrospective. *Artificial Intelligence*, 59(1–2):227–232.

Findlay, J. N. (1941). Time: A treatment of some puzzles. *Australasian Journal of Psychology and Philosophy*, 19(3):216–235.

Fischer, M. J. and Ladner, R. E. (1977). Propositional modal logic of programs. In *Proceedings of the 9th ACM Symposium on the Theory of Computing*, pages 286–294.

Fisher, R. A. (1922). On the mathematical foundations of theoretical statistics. *Philosophical Transactions of the Royal Society of London*, Series A 222:309–368.

Floyd, R. W. (1962a). Algorithm 96: Ancestor. *Communications of the Association for Computing Machinery*, 5:344–345.

Floyd, R. W. (1962b). Algorithm 97: Shortest path. *Communications of the Association for Computing Machinery*, 5:345.

Fodor, J. A. (1980). Searle on what only brains can do. *Behavioral and Brain Sciences*, 3:431–432. Peer commentary on Searle (1980).

Fodor, J. A. (1983). *The Modularity of Mind: An Essay on Faculty Psychology*. MIT Press, Cambridge, Massachusetts.

Forbus, K. D. (1985). The role of qualitative dynamics in naive physics. In Hobbs, J. R. and Moore, R. C., editors, *Formal Theories of the Commonsense World*, chapter 5, pages 185–226. Ablex, Norwood, New Jersey.

Forbus, K. D. and de Kleer, J. (1993). *Building Problem Solvers*. MIT Press, Cambridge, Massachusetts.

Forsyth, D. and Zisserman, A. (1991). Reflections on shading. *IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)*, 13(7):671–679.

Fox, M. S. (1990). Constraint-guided scheduling: a short history of research at CMU. *Computers in Industry*, 14(1–3):79–88.

Fox, M. S., Allen, B., and Strohm, G. (1981). Job shop scheduling: an investigation in constraint-based reasoning. In *Proceedings of the Seventh International Joint Conference on Artificial Intelligence (IJCAI-81)*, Vancouver, British Columbia. Morgan Kaufmann.

Fox, M. S. and Smith, S. F. (1984). Isis: a knowledge-based system for factory scheduling. *Expert Systems*, 1(1):25–49.

Frean, M. (1990). The upstart algorithm: A method for constructing and training feedforward neural networks. *Neural Computation*, 2:198–209.

Frege, G. (1879). *Begriffsschrift, eine der arithmetischen nachgebildete Formelsprache des reinen Denkens*. Halle, Berlin. Reprinted in English translation in van Heijenoort (1967).

Friedberg, R., Dunham, B., and North, T. (1959). A learning machine: Part II. *IBM Journal of Research and Development*, 3(3):282–287.

Friedberg, R. M. (1958). A learning machine: Part I. *IBM Journal*, 2:2–13.

Fu, K.-S. and Booth, T. L. (1986a). Grammatical inference: Introduction and survey—part I. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, PAMI-8(3):343–359. Reprinted from *IEEE Trans. on Systems, Man, and Cybernetics*, Vol. SMC-5, No. 1, January 1975.

Fu, K.-S. and Booth, T. L. (1986b). Grammatical inference: Introduction and survey—part II. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, PAMI-8(3):360–375. Reprinted from IEEE Trans. on Systems, Man, and Cybernetics, Vol. SMC-5, No. 4, January 1975.

Fuchs, J. J., Gasquet, A., Olalainty, B., and Currie, K. W. (1990). PlanERS-1: An expert planning system for generating spacecraft mission plans. In *First International Conference on Expert Planning Systems*, pages 70–75, Brighton, United Kingdom. Institute of Electrical Engineers.

Fung, R. and Chang, K. C. (1989). Weighting and integrating evidence for stochastic simulation in Bayesian networks. In *Proceedings of the Fifth Conference on Uncertainty in Artificial Intelligence (UAI-89)*, Windsor, Ontario. Morgan Kaufmann.

Furukawa, K. (1992). Summary of basic research activities of the FGCS project. In *Fifth Generation Computer Systems 1992*, volume 1, pages 20–32, Tokyo. IOS Press.

Furuta, K., Ochiai, T., and Ono, N. (1984). Attitude control of a triple inverted pendulum. *International Journal of Control*, 39(6):1351–1365.

Gabbay, D. M. (1991). Abduction in labelled deductive systems: A conceptual abstract. In Kruse, R. and Siegel, P., editors, *Symbolic and Quantitative Approaches to Uncertainty: Proceedings of European Conference ECSQAU*, pages 3–11. Springer-Verlag.

Gallaire, H. and Minker, J., editors (1978). *Logic and Databases*. Plenum, New York.

Gallier, J. H. (1986). *Logic for Computer Science: Foundations of Automatic Theorem Proving*. Harper and Row, New York.

Gamba, A., Gamberini, L., Palmieri, G., and Sanna, R. (1961). Further experiments with PAPA. *Nuovo Cimento Supplemento*, 20(2):221–231.

Garding, J. (1992). Shape from texture for smooth curved surfaces in perspective projection. *Journal of Mathematical Imaging and Vision*, 2(4):327–350.

Gardner, M. (1968). *Logic Machines, Diagrams and Boolean Algebra*. Dover, New York.

Garey, M. R. and Johnson, D. S. (1979). *Computers and Intractability*. W. H. Freeman, New York.

Garside, R., Leech, F., and Sampson, G., editors (1987). *The Computational Analysis of English*. Longman.

Gaschnig, J. (1979). Performance measurement and analysis of certain search algorithms. Technical Report CMU-CS-79-124, Computer Science Department, Carnegie-Mellon University.

Gauss, K. F. (1809). *Theoria Motus Corporum Coelestium in Sectionibus Conicis Solem Ambientium*. Sumtibus F. Perthes et I. H. Besser, Hamburg.

Gazdar, G. (1989). COMIT $\Rightarrow^*$ PATR. In Wilks, Y., editor, *Theoretical Issues in Natural Language Processing*, Potomac, Maryland. Lawrence Erlbaum Associates.

Gazdar, G., Klein, E., Pullum, G., and Sag, I. (1985). *Generalized Phrase Structure Grammar*. Blackwell, Oxford.

Geffner, H. (1992). *Default Reasoning: Causal and Conditional Theories*. MIT Press, Cambridge, Massachusetts.

Gelb, A. (1974). *Applied Optimal Estimation*. MIT Press, Cambridge, Massachusetts.

Gelernter, H. (1959). Realization of a geometry-theorem proving machine. In *Proceedings of an International Conference on Information Processing*, pages 273–282, Paris. UNESCO House.

Gelernter, H., Hansen, J. R., and Gerberich, C. L. (1960). A FORTRAN-compiled list processing language. *Journal of the Association for Computing Machinery*, 7(2):87–101.

Gelfond, M. and Lifschitz, V. (1988). Compiling circumscriptive theories into logic programs. In Reinfrank, M., de Kleer, J., Ginsberg, M. L., and Sandewall, E., editors, *Non-Monotonic Reasoning: 2nd International Workshop Proceedings*, pages 74–99, Grassau, Germany. Springer-Verlag.

Gelfond, M. and Lifschitz, V. (1991). Classical negation in logic programs and disjunctive databases. *New Generation Computing*, 9(3–4):365–385.

Genesereth, M. R. (1984). The use of design descriptions in automated diagnosis. *Artificial Intelligence*, 24(1–3):411–436.

Genesereth, M. R. and Ketchpel, S. P. (1994). Software agents. *Communications of the Association for Computing Machinery*, 37(7).

Genesereth, M. R. and Nilsson, N. J. (1987). *Logical Foundations of Artificial Intelligence*. Morgan Kaufmann, San Mateo, California.

Genesereth, M. R. and Smith, D. (1981). Meta-level architecture. Memo HPP-81-6, Computer Science Department, Stanford University, Stanford, California.

Gentner, D. (1983). Structure mapping: A theoretical framework for analogy. *Cognitive Science*, 7:155–170.

Gentzen, G. (1934). Untersuchungen über das logische Schliessen. *Mathematische Zeitschrift*, 39:176–210, 405–431.

Georgeff, M. P. and Lansky, A. L., editors (1986). *Reasoning about Actions and Plans: Proceedings of the 1986 Workshop*, Timberline, Oregon. Morgan Kaufmann.

Gibson, J. J. (1950). *The Perception of the Visual World*. Houghton Mifflin, Boston, Massachusetts.

Gibson, J. J. (1979). *The Ecological Approach to Visual Perception*. Houghton Mifflin, Boston, Massachusetts.

Gibson, J. J., Olum, P., and Rosenblatt, F. (1955). Parallax and perspective during aircraft landings. *American Journal of Psychology*, 68:372–385.

Gilmore, P. C. (1960). A proof method for quantification theory: Its justification and realization. *IBM Journal of Research and Development*, 4:28–35.

Ginsberg, M. (1993). *Essentials of Artificial Intelligence*. Morgan Kaufmann, San Mateo, California.

Ginsberg, M. L., editor (1987). *Readings in Nonmonotonic Reasoning*. Morgan Kaufmann, San Mateo, California.

Ginsberg, M. L. (1989). Universal planning: An (almost) universally bad idea. *AI Magazine*, 10(4):40–44.

Giralt, G., Alami, R., Chatila, R., and Freedman, P. (1991). Remote operated autonomous robots. In *Intelligent Robotics: Proceedings of the International Symposium*, volume 1571, pages 416–427, Bangalore, India. International Society for Optical Engineering (SPIE).

Glanc, A. (1978). On the etymology of the word "robot". *SIGART Newsletter*, 67:12.

Glover, F. (1989). Tabu search: 1. *ORSA Journal on Computing*, 1(3):190–206.

Gödel, K. (1930). *Über die Vollständigkeit des Logikkalküls*. PhD thesis, University of Vienna.

Gödel, K. (1931). Über formal unentscheidbare Sätze der Principia mathematica und verwandter Systeme I. *Monatshefte für Mathematik und Physik*, 38:173–198.

Gold, E. M. (1967). Language identification in the limit. *Information and Control*, 10:447–474.

Goldberg, D. E. (1989). *Genetic Algorithms in Search, Optimization and Machine Learning*. Addison-Wesley, Reading, Massachusetts.

Goldman, R. P. and Charniak, E. (1992). Probabilistic text understanding. *Statistics and Computing*, 2(2):105–114.

Goldszmidt, M., Morris, P., and Pearl, J. (1990). A maximum entropy approach to nonmonotonic reasoning. In *Proceedings of the Eighth National Conference on Artificial Intelligence (AAAI-90)*, volume 2, pages 646–652, Boston, Massachusetts. MIT Press.

Good, I. J. (1950). Contribution to the discussion of Eliot Slater's "Statistics for the chess computer and the factor of mobility". In *Symposium on Information Theory*, page 199, London. Ministry of Supply.

Good, I. J. (1961). A causal calculus. *British Journal of the Philosophy of Science*, 11:305–318. Reprinted in Good (1983).

Good, I. J. (1983). *Good Thinking: The Foundations of Probability and Its Applications*. University of Minnesota Press, Minneapolis, Minnesota.

Goodman, N. (1954). *Fact, Fiction and Forecast*. University of London Press, London, first edition.

Goodman, N. (1977). *The Structure of Appearance*. D. Reidel, Dordrecht, The Netherlands, third edition.

Gorry, G. A. (1968). Strategies for computer-aided diagnosis. *Mathematical Biosciences*, 2(3–4):293–318.

Gorry, G. A., Kassirer, J. P., Essig, A., and Schwartz, W. B. (1973). Decision analysis as the basis for computer-aided management of acute renal failure. *American Journal of Medicine*, 55:473–484.

Gould, S. J. (1994). This view of life. *Natural History*, 8:10–17.

Graham, S. L., Harrison, M. A., and Ruzzo, W. L. (1980). An improved context-free recognizer. *ACM Transactions on Programming Languages and Systems*, 2(3):415–462.

Grayson, C. J. (1960). Decisions under uncertainty: Drilling decisions by oil and gas operators. Technical report, Division of Research, Harvard Business School, Boston.

Green, C. (1969a). Application of theorem proving to problem solving. In *Proceedings of the First International Joint Conference on Artificial Intelligence (IJCAI-69)*, pages 219–239, Washington, D.C. IJCAII.

Green, C. (1969b). Theorem-proving by resolution as a basis for question-answering systems. In Meltzer, B., Michie, D., and Swann, M., editors, *Machine Intelligence 4*, pages 183–205. Edinburgh University Press, Edinburgh, Scotland.

Greenblatt, R. D., Eastlake, D. E., and Crocker, S. D. (1967). The Greenblatt chess program. In *Proceedings of the Fall Joint Computer Conference*, pages 801–810.

Greiner, R. (1989). Towards a formal analysis of EBL. In *Proceedings of the Sixth International Machine Learning Workshop*, Ithaca, NY. Morgan Kaufmann.

Grice, H. P. (1957). Meaning. *Philosophical Review*, 66:377–388.

Grimes, J. (1975). *The Thread of Discourse*. Moulton.

Grosz, B., Appelt, D., Martin, P., and Pereira, F. (1987). Team: An experiment in the design of transportable natural-language interfaces. *Artificial Intelligence*, 32(2):173–244.

Grosz, B. J. and Sidner, C. L. (1986). Attention, intentions, and the structure of discourse. *Computational Linguistics*, 12(3):175–204.

Grosz, B. J., Sparck Jones, K., and Webber, B. L., editors (1986). *Readings in Natural Language Processing*. Morgan Kaufmann, San Mateo, California.

Gu, J. (1989). *Parallel Algorithms and Architectures for Very Fast AI Search*. PhD thesis, University of Utah.

Guard, J., Oglesby, F., Bennett, J., and Settle, L. (1969). Semi-automated mathematics. *Journal of the Association for Computing Machinery*, 16:49–62.

Haas, A. (1986). A syntactic theory of belief and action. *Artificial Intelligence*, 28(3):245–292.

Hacking, I. (1975). *The Emergence of Probability*. Cambridge University Press, Cambridge.

Hald, A. (1990). *A History of Probability and Statistics and Their Applications Before 1750*. Wiley, New York.

Halpern, J. Y. (1987). Using reasoning about knowledge to analyze distributed systems. In Traub, J. F., Grosz, B. J., Lampson, B. W., and Nilsson, N. J., editors, *Annual review of computer science*, volume 2, pages 37–68. Annual Reviews, Palo Alto.

Hamming, R. W. (1991). *The Art of Probability for Scientists and Engineers*. Addison-Wesley, Reading, Massachusetts.

Hammond, K. (1989). *Case-Based Planning: Viewing Planning as a Memory Task*. Academic Press, New York.

Hanks, S., Russell, S., and Wellman, M., editors (1994). *Proceedings of the AAAI Spring Symposium on Decision-Theoretic Planning*, Stanford, California.

Hanski, I. and Cambefort, Y., editors (1991). *Dung Beetle Ecology*. Princeton University Press, Princeton, New Jersey.

Hansson, O. and Mayer, A. (1989). Heuristic search as evidential reasoning. In *Proceedings of the Fifth Workshop on Uncertainty in Artificial Intelligence*, Windsor, Ontario. Morgan Kaufmann.

Haralick, R. and Elliot, G. (1980). Increasing tree search efficiency for constraint-satisfaction problems. *Artificial Intelligence*, 14(3):263–313.

Harel, D. (1984). Dynamic logic. In Gabbay, D. and Guenthner, F., editors, *Handbook of Philosophical Logic*, volume 2, pages 497–604. D. Reidel, Dordrecht, The Netherlands.

Harkness, K. and Battell, J. S. (1947). This made chess history. *Chess Review*.

Harman, G. H. (1983). *Change in View: Principles of Reasoning*. MIT Press, Cambridge, Massachusetts.

Harp, S. A., Samad, T., and Guha, A. (1990). Designing application-specific neural networks using the genetic algorithm. In Touretzky, D. S., editor, *Advances in Neural Information Processing Systems II*, pages 447–454. Morgan Kaufmann, San Mateo, California.

Harris, L. R. (1984). Experience with INTELLECT: Artificial intelligence technology transfer. *AI Magazine*, 5(2, Summer):43–55.

Hart, P. E., Nilsson, N. J., and Raphael, B. (1968). A formal basis for the heuristic determination of minimum cost paths. *IEEE Transactions on Systems Science and Cybernetics*, SSC-4(2):100–107.

Hart, P. E., Nilsson, N. J., and Raphael, B. (1972). Correction to "A formal basis for the heuristic determination of minimum cost paths". *SIGART Newsletter*, 37:28–29.

Hart, T. P. and Edwards, D. J. (1961). The tree prune (TP) algorithm. Artificial Intelligence Project Memo 30, Massachusetts Institute of Technology, Cambridge, Massachusetts.

Haugeland, J., editor (1981). *Mind Design*. MIT Press, Cambridge, Massachusetts.

Haugeland, J., editor (1985). *Artificial Intelligence: The Very Idea*. MIT Press, Cambridge, Massachusetts.

Haussler, D. (1989). Learning conjunctive concepts in structural domains. *Machine Learning*, 4(1):7–40.

Hawkins, J. (1961). Self-organizing systems: A review and commentary. *Proceedings of the IRE*, 49(1):31–48.

Hayes, J. E. and Levy, D. N. L. (1976). *The World Computer Chess Championship: Stockholm 1974*. Edinburgh University Press, Edinburgh, Scotland.

Hayes, P. J. (1973). Computation and deduction. In *Proceedings of the Second Symposium on Mathematical Foundations of Computer Science*, Czechoslovakia. Czechoslovakian Academy of Science.

Hayes, P. J. (1978). The naive physics manifesto. In Michie, D., editor, *Expert Systems in the Microelectronic Age*. Edinburgh University Press, Edinburgh, Scotland.

Hayes, P. J. (1979). The logic of frames. In Metzing, D., editor, *Frame Conceptions and Text Understanding*, pages 46–61. de Gruyter, Berlin.

Hayes, P. J. (1985a). Naive physics I: ontology for liquids. In Hobbs, J. R. and Moore, R. C., editors, *Formal Theories of the Commonsense World*, chapter 3, pages 71–107. Ablex, Norwood, New Jersey.

Hayes, P. J. (1985b). The second naive physics manifesto. In Hobbs, J. R. and Moore, R. C., editors, *Formal Theories of the Commonsense World*, chapter 1, pages 1–36. Ablex, Norwood, New Jersey.

Hazan, M. (1973). *The Classic Italian Cookbook*. Ballantine.

Hebb, D. O. (1949). *The Organization of Behavior*. Wiley, New York.

Heckerman, D. (1986). Probabilistic interpretation for MYCIN's certainty factors. In Kanal, L. N. and Lemmer, J. F., editors, *Uncertainty in Artificial Intelligence*, pages 167–196. Elsevier/North-Holland, Amsterdam, London, New York.

Heckerman, D. (1991). *Probabilistic Similarity Networks*. MIT Press, Cambridge, Massachusetts.

Heckerman, D., Geiger, D., and Chickering, M. (1994). Learning Bayesian networks: The combination of knowledge and statistical data. Technical Report MSR-TR-94-09, Microsoft Research, Redmond, Washington.

Held, M. and Karp, R. M. (1970). The traveling salesman problem and minimum spanning trees. *Operations Research*, 18:1138–1162.

Helman, D. H., editor (1988). *Analogical Reasoning: Perspectives of Artificial Intelligence, Cognitive Science, and Philosophy*. Kluwer, Dordrecht, The Netherlands.

Hendrix, G. G. (1975). Expanding the utility of semantic networks through partitioning. In *Proceedings of the Fourth International Joint Conference on Artificial Intelligence (IJCAI-75)*, pages 115–121, Tbilisi, Georgia. IJCAII.

Henrion, M. (1988). Propagation of uncertainty in Bayesian networks by probabilistic logic sampling. In Lemmer, J. F. and Kanal, L. N., editors, *Uncertainty in Artificial Intelligence 2*, pages 149–163. Elsevier/North-Holland, Amsterdam, London, New York.

Heppenheimer, T. A. (1985). Man makes man. In Minsky, M., editor, *Robotics*, pages 28–69. Doubleday, Garden City, New York.

Herbrand, J. (1930). *Recherches sur la Théorie de la Démonstration*. PhD thesis, University of Paris.

Hertz, J., Krogh, A., and Palmer, R. G. (1991). *Introduction to the Theory of Neural Computation*. Addison-Wesley, Reading, Massachusetts.

Hewitt, C. (1969). PLANNER: a language for proving theorems in robots. In *Proceedings of the First International Joint Conference on Artificial Intelligence (IJCAI-69)*, pages 295–301, Washington, D.C. IJCAII.

Hintikka, J. (1962). *Knowledge and Belief*. Cornell University Press, Ithaca, New York.

Hinton, G. E. and Anderson, J. A. (1981). *Parallel Models of Associative Memory*. Lawrence Erlbaum Associates, Potomac, Maryland.

Hinton, G. E. and Sejnowski, T. (1983). Optimal perceptual inference. In *Proceedings of the IEEE Computer Society Conference on Computer Vision and Pattern Recognition*, pages 448–453, Washington, D.C. IEEE Computer Society Press.

Hinton, G. E. and Sejnowski, T. J. (1986). Learning and relearning in Boltzmann machines. In Rumelhart, D. E. and McClelland, J. L., editors, *Parallel Distributed Processing*, chapter 7, pages 282–317. MIT Press, Cambridge, Massachusetts.

Hirsh, H. (1987). Explanation-based generalization in a logic programming environment. In *Proceedings of the Tenth International Joint Conference on Artificial Intelligence (IJCAI-87)*, Milan, Italy. Morgan Kaufmann.

Hirst, G. (1987). *Semantic Interpretation Against Ambiguity*. Cambridge University Press.

Hobbs, J. R. (1985). Ontological promiscuity. In *Proceedings, 23rd Annual Meeting of the Association for Computational Linguistics*, pages 61–69, Chicago, Illinois.

Hobbs, J. R. (1986). Overview of the TACITUS project. *Computational Linguistics*, 12(3):220–222.

Hobbs, J. R. (1990). *Literature and Cognition*. CSLI Press, Stanford, California.

Hobbs, J. R., Blenko, T., Croft, B., Hager, G., Kautz, H. A., Kube, P., and Shoham, Y. (1985). Commonsense summer: Final report. Technical Report CSLI-85-35, Center for the Study of Language and Information (CSLI), Stanford, California.

Hobbs, J. R., Croft, W., Davies, T., Edwards, D. D., and Laws, K. I. (1987). Commonsense metaphysics and lexical semantics. *Computational Linguistics*, 13(3–4):241–250.

Hobbs, J. R. and Moore, R. C., editors (1985). *Formal Theories of the Commonsense World*. Ablex, Norwood, New Jersey.

Hobbs, J. R., Stickel, M., Appelt, D., and Martin, P. (1990). Interpretation as abduction. Technical Note 499, SRI International, Menlo Park, California.

Hobbs, J. R., Stickel, M. E., Appelt, D. E., and Martin, P. (1993). Interpretation as abduction. *Artificial Intelligence*, 63(1–2):69–142.

Holland, J. H. (1975). *Adaption in Natural and Artificial Systems*. University of Michigan Press.

Hopfield, J. J. (1982). Neurons with graded response have collective computational properties like those of two-state neurons. *Proceedings of the National Academy of Sciences (USA)*, 79:2554–2558.

Horn, A. (1951). On sentences which are true of direct unions of algebras. *Journal of Symbolic Logic*, 16:14–21.

Horn, B. K. P. (1970). Shape from shading: a method for obtaining the shape of a smooth opaque object from one view. Technical Report 232, MIT Artificial Intelligence Laboratory, Cambridge, Massachusetts.

Horn, B. K. P. (1986). *Robot Vision*. MIT Press, Cambridge, Massachusetts.

Horn, B. K. P. and Brooks, M. J. (1989). *Shape from Shading*. MIT Press, Cambridge, Massachusetts.

Horvitz, E. J., Breese, J. S., and Henrion, M. (1988). Decision theory in expert systems and artificial intelligence. *International Journal of Approximate Reasoning*, 2:247–302.

Horvitz, E. J. and Heckerman, D. (1986). The inconsistent use of measures of certainty in artificial intelligence research. In Kanal, L. N. and Lemmer, J. F., editors, *Uncertainty in Artificial Intelligence*, pages 137–151. Elsevier/North-Holland, Amsterdam, London, New York.

Horvitz, E. J., Heckerman, D. E., and Langlotz, C. P. (1986). A framework for comparing alternative formalisms for plausible reasoning. In *Proceedings of the Fifth National Conference on Artificial Intelligence (AAAI-86)*, volume 1, pages 210–214, Philadelphia, Pennsylvania. Morgan Kaufmann.

Horvitz, E. J., Suermondt, H. J., and Cooper, G. F. (1989). Bounded conditioning: Flexible inference for decisions under scarce resources. In *Proceedings of the Fifth Conference on Uncertainty in Artificial Intelligence (UAI-89)*, pages 182–193, Windsor, Ontario. Morgan Kaufmann.

Howard, R. A. (1960). *Dynamic Programming and Markov Processes*. MIT Press, Cambridge, Massachusetts.

Howard, R. A. (1966). Information value theory. *IEEE Transactions on Systems Science and Cybernetics*, SSC-2:22–26.

Howard, R. A. (1977). Risk preference. In Howard, R. A. and Matheson, J. E., editors, *Readings in Decision Analysis*, pages 429–465. Decision Analysis Group, SRI International, Menlo Park, California.

Howard, R. A. (1989). Microrisks for medical decision analysis. *International Journal of Technology Assessment in Health Care*, 5:357–370.

Howard, R. A. and Matheson, J. E. (1984). Influence diagrams. In Howard, R. A. and Matheson, J. E., editors, *Readings on the Principles and Applications of Decision Analysis*, pages 721–762. Strategic Decisions Group, Menlo Park, California. Article dates from 1981.

Hsu, F.-H., Anantharaman, T. S., Campbell, M. S., and Nowatzyk, A. (1990). A grandmaster chess machine. *Scientific American*, 263(4):44–50.

Hsu, K., Brady, D., and Psaltis, D. (1988). Experimental demonstration of optical neural computers. In Anderson, D. Z., editor, *Neural Information*

Processing Systems, Denver 1987, pages 377–386, Denver, Colorado. American Institute of Physics.

Huang, T., Koller, D., Malik, J., Ogasawara, G., Rao, B., Russell, S., and Weber, J. (1994). Automatic symbolic traffic scene analysis using belief networks. In *Proceedings of the Twelfth National Conference on Artificial Intelligence (AAAI-94)*, pages 966–972, Seattle, Washington. AAAI Press.

Hubel, D. H. (1988). *Eye, Brain, and Vision*. W. H. Freeman, New York.

Huddleston, R. D. (1988). *English Grammar: An Outline*. Cambridge University Press, Cambridge.

Huffman, D. A. (1971). Impossible objects as nonsense sentences. In Meltzer, B. and Michie, D., editors, *Machine Intelligence 6*, pages 295–324. Edinburgh University Press, Edinburgh, Scotland.

Hughes, G. E. and Cresswell, M. J. (1968). *An Introduction to Modal Logic*. Methuen, London.

Hughes, G. E. and Cresswell, M. J. (1984). *A Companion to Modal Logic*. Methuen, London.

Hume, D. (1978). *A Treatise of Human Nature*. Oxford University Press, Oxford, second edition. Edited by L. A. Selby-Bigge and P. H. Nidditch.

Hunt, E. B., Marin, J., and Stone, P. T. (1966). *Experiments in Induction*. Academic Press, New York.

Hunter, G. (1971). *Metalogic: An Introduction to the Metatheory of Standard First-Order Logic*. University of California Press, Berkeley and Los Angeles.

Hunter, L. and States, D. J. (1992). Bayesian classification of protein structure. *IEEE Expert*, 7(4):67–75.

Huttenlocher, D. P. and Ullman, S. (1990). Recognizing solid objects by alignment with an image. *International Journal of Computer Vision*, 5(2):195–212.

Huygens, C. (1657). Ratiociniis in ludo aleae. In van Schooten, F., editor, *Exercitionum Mathematicorum*. Elsevirii, Amsterdam.

Hwang, C. H. and Schubert, L. K. (1993). EL: a formal, yet natural, comprehensive knowledge representation. In *Proceedings of the Eleventh National Conference on Artificial Intelligence (AAAI-93)*, pages 676–682, Washington, D.C. AAAI Press.

Hyatt, R. M., Gower, A. E., and Nelson, H. L. (1986). Cray Blitz. In Beal, D. F., editor, *Advances in Computer Chess 4*, pages 8–18. Pergamon, New York.

Ingerman, P. Z. (1967). Panini-Backus form suggested. *Communications of the Association for Computing Machinery*, 10(3):137.

Jackson, P. (1986). *Introduction to Expert Systems*. Addison-Wesley, Reading, Massachusetts.

Jacobs, P. and Rau, L. (1990). Scisor: A system for extracting information from on-line news. *Communications of the ACM*, 33(11):88–97.

Jaffar, J. and Lassez, J.-L. (1987). Constraint logic programming. In *Proceedings of the Fourteenth ACM Conference on Principles of Programming Languages*, Munich. Association for Computing Machinery.

Jaffar, J., Michaylov, S., Stuckey, P. J., and Yap, R. H. C. (1992a). The CLP(R) language and system. *ACM Transactions on Programming Languages and Systems*, 14(3):339–395.

Jaffar, J., Stuckey, P. J., Michaylov, S., and Yap, R. H. C. (1992b). An abstract machine for CLP(R). *SIGPLAN Notices*, 27(7):128–139.

Jáskowski, S. (1934). On the rules of suppositions in formal logic. *Studia Logica*, 1.

Jeffrey, R. C. (1983). *The Logic of Decision*. University of Chicago Press, Chicago, Illinois, second edition.

Jelinek, F. (1976). Continuous speech recognition by statistical methods. *Proceedings of the IEEE*, 64(4):532–556.

Jelinek, F. (1990). Self-organizing language modeling for speech recognition. In Waibel, A. and Lee, K.-F., editors, *Readings in Speech Recognition*, pages 450–506. Morgan Kaufmann.

Jensen, F. V., Lauritzen, S. L., and Olesen, K. G. (1990). Bayesian updating in causal probabilistic networks by local computations. *Computational Statistics Quarterly*, 5(4):269–282.

Jerison, H. J. (1991). *Brain Size and the Evolution of Mind*. American Museum of Natural History, New York.

Jochem, T., Pomerleau, D., and Thorpe, C. (1993). Maniac: A next generation neurally based autonomous road follower. In *Proceedings of the International Conference on Intelligent Autonomous Systems: IAS–3*.

Johnson, W. W. and Story, W. E. (1879). Notes on the "15" puzzle. *American Journal of Mathematics*, 2:397–404.

Johnson-Laird, P. N. (1988). *The Computer and the Mind: An Introduction to Cognitive Science*. Harvard University Press, Cambridge, Massachusetts.

Johnston, M. D. and Adorf, H.-M. (1992). Scheduling with neural networks: the case of the Hubble space telescope. *Computers & Operations Research*, 19(3–4):209–240.

Jones, N. D., Gomard, C. K., and Sestoft, P. (1993). *Partial Evaluation and Automatic Program Generation*. Prentice-Hall, Englewood Cliffs, New Jersey.

Joshi, A. (1985). Tree-adjoining grammars: How much context sensitivity is required to provide reasonable structural descriptions. In Dowty, D., Karttunen, L., and Zwicky, A., editors, *Natural Language Parsing*. Cambridge University Press.

Joshi, A., Webber, B., and Sag, I. (1981). *Elements of Discourse Understanding*. Cambridge University Press.

Judd, J. S. (1990). *Neural Network Design and the Complexity of Learning*. MIT Press, Cambridge, Massachusetts.

Julesz, B. (1971). *Foundations of Cyclopean Perception*. University of Chicago Press, Chicago, Illinois.

Kaelbling, L. P. (1990). Learning functions in k-DNF from reinforcement. In *Machine Learning: Proceedings of the Seventh International Conference*, pages 162–169, Austin, Texas. Morgan Kaufmann.

Kaelbling, L. P. and Rosenschein, S. J. (1990). Action and planning in embedded agents. *Robotics and Autonomous Systems*, 6(1–2):35–48.

Kahneman, D., Slovic, P., and Tversky, A., editors (1982). *Judgment under Uncertainty: Heuristics and Biases*. Cambridge University Press, Cambridge.

Kaindl, H. (1990). Tree searching algorithms. In Marsland, A. T. and Schaeffer, J., editors, *Computers, Chess, and Cognition*, pages 133–158. Springer-Verlag, Berlin.

Kaindl, H. and Khorsand, A. (1994). Memory-bounded bidirectional search. In *Proceedings of the Twelfth National Conference on Artificial Intelligence (AAAI-94)*, pages 1359–1364, Seattle, Washington. AAAI Press.

Kalman, R. E. (1960). A new approach to linear filtering and prediction problems. *Journal of Basic Engineering*, pages 35–46.

Kambhampati, S. and Nau, D. S. (1993). On the nature and role of modal truth criteria in planning. Technical Report ISR-TR-93-30, University of Maryland, Institute for Systems Research.

Kanal, L. N. and Kumar, V. (1988). *Search in Artificial Intelligence*. Springer-Verlag, Berlin.

Kanal, L. N. and Lemmer, J. F., editors (1986). *Uncertainty in Artificial Intelligence*. Elsevier/North-Holland, Amsterdam, London, New York.

Kandel, E. R., Schwartz, J. H., and Jessell, T. M., editors (1991). *Principles of Neural Science*. Elsevier/North-Holland, Amsterdam, London, New York, third edition.

Kaplan, D. and Montague, R. (1960). A paradox regained. *Notre Dame Journal of Formal Logic*, 1(3):79–90. Reprinted in Thomason (1974).

Karger, D. R., Koller, D., and Phillips, S. J. (1993). Finding the hidden path: time bounds for all-pairs shortest paths. *SIAM Journal on Computing*, 22(6):1199–1217.

Karp, R. M. (1972). Reducibility among combinatorial problems. In Miller, R. E. and Thatcher, J. W., editors, *Complexity of Computer Computations*, pages 85–103. Plenum, New York.

Kasami, T. (1965). An efficient recognition and syntax analysis algorithm for context-free languages. Technical Report AFCRL-65-758, Air Force Cambridge Research Laboratory, Bedford, Massachusetts.

Kautz, H. A. and Selman, B. (1991). Hard problems for simple default logics. *Artificial Intelligence*, 49(1–3):243–279.

Kay, M., Gawron, J. M., and Norvig, P. (1994). *Verbmobil: A Translation System for Face-To-Face Dialog*. CSLI Press, Stanford, California.

Kearns, M. J. (1990). *The Computational Complexity of Machine Learning*. MIT Press, Cambridge, Massachusetts.

Keeney, R. L. (1974). Multiplicative utility functions. *Operations Research*, 22:22–34.

Keeney, R. L. and Raiffa, H. (1976). *Decisions with Multiple Objectives: Preferences and Value Trade-offs*. Wiley, New York.

Kemp, M., editor (1989). *Leonardo on Painting: An Anthology of Writings*. Yale University Press, New Haven, Connecticut.

Kemp, M. (1990). *The Science of Art: Optical Themes in Western Art from Brunelleschi to Seurat*. Yale University Press, New Haven, Connecticut.

Keynes, J. M. (1921). *A Treatise on Probability*. Macmillan, London.

Kierulf, A., Chen, K., and Nievergelt, J. (1990). Smart Game Board and Go Explorer: A study in software and knowledge engineering. *Communications of the Association for Computing Machinery*, 33(2):152–167.

Kietz, J.-U. and Dzeroski, S. (1994). Inductive logic programming and learnability. *SIGART Bulletin*, 5(1):22–32.

Kim, J. H. (1983). *CONVINCE: A Conversational Inference Consolidation Engine*. PhD thesis, Department of Computer Science, University of California at Los Angeles.

Kim, J. H. and Pearl, J. (1983). A computational model for combined causal and diagnostic reasoning in inference systems. In *Proceedings of the Eighth International Joint Conference on Artificial Intelligence (IJCAI-83)*, pages 190–193, Karlsruhe, Germany. Morgan Kaufmann.

Kim, J. H. and Pearl, J. (1987). CONVINCE: A conversational inference consolidation engine. *IEEE Transactions on Systems, Man, and Cybernetics*, 17(2):120–132.

King, R. D., Muggleton, S., Lewis, R. A., and Sternberg, M. J. E. (1992). Drug design by machine learning: the use of inductive logic programming to model the structure activity relationships of trimethoprim analogues binding to dihydrofolate reductase. *Proceedings of the National Academy of Sciences of the United States of America*, 89(23):11322–11326.

King, S., Motet, S., Thoméré, J., and Arlabosse, F. (1993). A visual surveillance system for incident detection. In *AAAI 93 Workshop on AI in Intelligent Vehicle Highway Systems*, pages 30–36, Washington, D.C.

Kirkpatrick, S., Gelatt, C. D., and Vecchi, M. P. (1983). Optimization by simulated annealing. *Science*, 220:671–680.

Kirkpatrick, S. and Selman, B. (1994). Critical behavior in the satisfiability of random Boolean expressions. *Science*, 264(5163):1297–1301.

Kirousis, L. M. and Papadimitriou, C. H. (1988). The complexity of recognizing polyhedral scenes. *Journal of Computer and System Sciences*, 37(1):14–38.

Kister, J., Stein, P., Ulam, S., Walden, W., and Wells, M. (1957). Experiments in chess. *Journal of the Association for Computing Machinery*, 4:174–177.

Kjaerulff, U. (1992). A computational scheme for reasoning in dynamic probabilistic networks. In *Proceedings of the Eighth Conference on Uncertainty in Artificial Intelligence*, pages 121–129.

Knight, K. (1989). Unification: A multidisciplinary survey. *ACM Computing Surveys*, 21(1):93–121.

Knoblock, C. A. (1990). Learning abstraction hierarchies for problem solving. In *Proceedings of the Eighth National Conference on Artificial Intelligence (AAAI-90)*, volume 2, pages 923–928, Boston, Massachusetts. MIT Press.

Knuth, D. (1968). Semantics for context-free languages. *Mathematical Systems Theory 2*, pages 127–145.

Knuth, D. E. (1973). *The Art of Computer Programming*, volume 2: Fundamental Algorithms. Addison-Wesley, Reading, Massachusetts, second edition.

Knuth, D. E. and Bendix, P. B. (1970). Simple word problems in universal algebras. In Leech, J., editor, *Computational Problems in Abstract Algebra*, pages 263–267. Pergamon, New York.

Knuth, D. E. and Moore, R. W. (1975). An analysis of alpha-beta pruning. *Artificial Intelligence*, 6(4):293–326.

Koenderink, J. J. (1990). *Solid Shape*. MIT Press, Cambridge, Massachusetts.

Koenderink, J. J. and van Doorn, A. J. (1975). Invariant properties of the motion parallax field due to the movement of rigid bodies relative to an observer. *Optica Acta*, 22(9):773–791.

Kohn, W. (1991). Declarative control architecture. *Communications of the Association for Computing Machinery*, 34(8):65–79.

Kohonen, T. (1989). *Self-Organization and Associative Memory*. Springer-Verlag, Berlin, third edition.

Koller, D., Weber, J., Huang, T., Malik, J., Ogasawara, G., Rao, B., and Russell, S. (1994). Towards robust automatic traffic scene analysis in real-time. In *Proceedings of the International Conference on Pattern Recognition*, Israel.

Kolmogorov, A. N. (1941). Interpolation und extrapolation von stationaren zufalligen folgen. *Bulletin of the Academy of Sciences of the USSR*, Ser. Math. 5:3–14.

Kolmogorov, A. N. (1950). *Foundations of the Theory of Probability*. Chelsea, New York. English translation of Kolmogorov (1950).

Kolmogorov, A. N. (1963). On tables of random numbers. *Sankhya, the Indian Journal of Statistics*, Series A 25.

Kolmogorov, A. N. (1965). Three approaches to the quantitative definition of information. *Problems in Information Transmission*, 1(1):1–7.

Kolodner, J. (1983). Reconstructive memory: A computer model. *Cognitive Science*, 7:281–328.

Kolodner, J. (1993). *Case-Based Reasoning*. Morgan Kaufmann, San Mateo, California.

Konolige, K. (1982). A first order formalization of knowledge and action for a multi-agent planning system. In Hayes, J. E., Michie, D., and Pao, Y.-H., editors, *Machine Intelligence 10*. Ellis Horwood, Chichester, England.

Koopmans, T. C. (1972). Representation of preference orderings over time. In McGuire, C. B. and Radner, R., editors, *Decision and Organization*. Elsevier/North-Holland, Amsterdam, London, New York.

Korf, R. E. (1985a). Depth-first iterative-deepening: an optimal admissible tree search. *Artificial Intelligence*, 27(1):97–109.

Korf, R. E. (1985b). Iterative-deepening A*: An optimal admissible tree search. In *Proceedings of the Ninth International Joint Conference on Artificial Intelligence (IJCAI-85)*, pages 1034–1036, Los Angeles, California. Morgan Kaufmann.

Korf, R. E. (1988). Optimal path finding algorithms. In Kanal, L. N. and Kumar, V., editors, *Search in Artificial Intelligence*, chapter 7, pages 223–267. Springer-Verlag, Berlin.

Korf, R. E. (1993). Linear-space best-first search. *Artificial Intelligence*, 62(1):41–78.

Kotok, A. (1962). A chess playing program for the IBM 7090. AI Project Memo 41, MIT Computation Center, Cambridge, Massachusetts.

Kowalski, R. (1974). Predicate logic as a programming language. In *Proceedings of the IFIP-74 Congress*, pages 569–574. Elsevier/North-Holland.

Kowalski, R. (1979a). Algorithm = logic + control. *Communications of the Association for Computing Machinery*, 22:424–436.

Kowalski, R. (1979b). *Logic for Problem Solving*. Elsevier/North-Holland, Amsterdam, London, New York.

Kowalski, R. (1988). The early years of logic programming. *Communications of the Association for Computing Machinery*, 31:38–43.

Kowalski, R. and Sergot, M. (1986). A logic-based calculus of events. *New Generation Computing*, 4(1):67–95.

Koza, J. R. (1992). *Genetic Programming: On the Programming of Computers by Means of Natural Selection*. MIT Press, Cambridge, Massachusetts.

Kripke, S. A. (1963). Semantical considerations on modal logic. *Acta Philosophica Fennica*, 16:83–94.

Kruppa, E. (1913). Zur Ermittlung eines Objecktes aus zwei Perspektiven mit innerer Orientierung. *Sitz.-Ber. Akad. Wiss., Wien, Math. Naturw., Kl. Abt. IIa*, 122:1939–1948.

Kuehner, D. (1971). A note on the relation between resolution and Maslov's inverse method. DCL Memo 36, University of Edinburgh.

Kukich, K. (1992). Techniques for automatically correcting words in text. *ACM Computing Surveys*, 24(4):377–439.

Kumar, V. (1991). A general heuristic bottom-up procedure for searching AND/OR graphs. *Information Sciences*, 56(1–3):39–57.

Kumar, V. and Kanal, L. N. (1983). A general branch and bound formulation for understanding and synthesizing and/or tree search procedures. *Artificial Intelligence*, 21:179–198.

Kumar, V. and Kanal, L. N. (1988). The CDP: A unifying formulation for heuristic search, dynamic programming, and branch-and-bound. In Kanal, L. N. and Kumar, V., editors, *Search in Artificial Intelligence*, chapter 1, pages 1–27. Springer-Verlag, Berlin.

Kumar, V., Nau, D. S., and Kanal, L. N. (1988). A general branch-and-bound formulation for AND/OR graph and game tree search. In Kanal, L. N. and Kumar, V., editors, *Search in Artificial Intelligence*, chapter 3, pages 91–130. Springer-Verlag, Berlin.

Kurzweil, R. (1990). *The Age of Intelligent Machines*. MIT Press, Cambridge, Massachusetts.

Kyburg, H. E. (1977). Randomness and the right reference class. *The Journal of Philosophy*, 74(9):501–521.

Kyburg, H. E. (1983). The reference class. *Philosophy of Science*, 50:374–397.

La Mettrie, J. O. d. (1748). *L'homme machine*. E. Luzac, Leyde. Translated into English as La Mettrie (1912).

La Mettrie, J. O. d. (1912). *Man a Machine*. Open Court, La Salle, Illinois. English translation of La Mettrie (1748).

Ladkin, P. (1986a). Primitives and units for time specification. In *Proceedings of the Fifth National Conference on Artificial Intelligence (AAAI-86)*, volume 1, pages 354–359, Philadelphia, Pennsylvania. Morgan Kaufmann.

Ladkin, P. (1986b). Time representation: a taxonomy of interval relations. In *Proceedings of the Fifth National Conference on Artificial Intelligence (AAAI-86)*, volume 1, pages 360–366, Philadelphia, Pennsylvania. Morgan Kaufmann.

Laird, J. E., Newell, A., and Rosenbloom, P. S. (1987). SOAR: an architecture for general intelligence. *Artificial Intelligence*, 33(1):1–64.

Laird, J. E., Rosenbloom, P. S., and Newell, A. (1986). Chunking in Soar: the anatomy of a general learning mechanism. *Machine Learning*, 1:11–46.

Laird, J. E., Yager, E. S., Hucka, M., and Tuck, M. (1991). Robo-Soar: an integration of external interaction, planning, and learning using Soar. *Robotics and Autonomous Systems*, 8(1–2):113–129.

Lakoff, G. (1987). *Women, Fire, and Dangerous Things: What Categories Reveal About the Mind*. University of Chicago Press, Chicago, Illinois.

Lakoff, G. and Johnson, M. (1980). *Metaphors We Live By*. University of Chicago Press, Chicago, Illinois.

Langley, P., Simon, H. A., Bradshaw, G. L., and Zytkow, J. M. (1987). *Scientific Discovery: Computational Explorations of the Creative Processes*. MIT Press, Cambridge, Massachusetts.

Lassez, J.-L., Maher, M. J., and Marriott, K. (1988). Unification revisited. In Minker, J., editor, *Foundations of Deductive Databases and Logic Programming*, pages 587–625. Morgan Kaufmann, San Mateo, California.

Latombe, J.-C. (1991). *Robot Motion Planning*. Kluwer, Dordrecht, The Netherlands.

Lauritzen, S. L. (1991). The EM algorithm for graphical association models with missing data. Technical Report TR-91-05, Department of Statistics, Aalborg University.

Lauritzen, S. L. and Spiegelhalter, D. J. (1988). Local computations with probabilities on graphical structures and their application to expert systems. *Journal of the Royal Statistical Society*, B 50(2):157–224.

Lauritzen, S. L. and Wermuth, N. (1989). Graphical models for associations between variables, some of which are qualitative and some quantitative. *Annals of Statistics*, 17:31–57.

Lawler, E. L. and Wood, D. E. (1966). Branch-and-bound methods: A survey. *Operations Research*, 14(4):699–719.

Le Cun, Y., Jackel, L. D., Boser, B., and Denker, J. S. (1989). Handwritten digit recognition: applications of neural network chips and automatic learning. *IEEE Communications Magazine*, 27(11):41–46.

Lee, K.-F. (1989). *Automatic Speech Recognition: The Development of the SPHINX System*. Kluwer, Dordrecht, The Netherlands.

Lee, K.-F. and Mahajan, S. (1988). A pattern classification approach to evaluation function learning. *Artificial Intelligence*, 36(1):1–26.

Lefkovitz, D. (1960). A strategic pattern recognition program for the game Go. Technical Note 60-243, Wright Air Development Division, University of Pennsylvania, The Moore School of Electrical Engineering.

Lenat, D. B. (1983). EURISKO: a program that learns new heuristics and domain concepts: the nature of heuristics, III: program design and results. *Artificial Intelligence*, 21(1–2):61–98.

Lenat, D. B. and Brown, J. S. (1984). Why AM and EURISKO appear to work. *Artificial Intelligence*, 23(3):269–294.

Lenat, D. B. and Feigenbaum, E. A. (1991). On the thresholds of knowledge. *Artificial Intelligence*, 47(1–3):185–250.

Lenat, D. B. and Guha, R. V. (1990). *Building Large Knowledge-Based Systems: Representation and Inference in the CYC Project*. Addison-Wesley, Reading, Massachusetts.

Leonard, H. S. and Goodman, N. (1940). The calculus of individuals and its uses. *Journal of Symbolic Logic*, 5(2):45–55.

Leonard, J. J. and Durrant-Whyte, H. F. (1992). *Directed sonar sensing for mobile robot navigation*. Kluwer, Dordrecht, The Netherlands.

Leśniewski, S. (1916). Podstawy ogólnej teorii mnogości. Moscow.

Levesque, H. J. and Brachman, R. J. (1987). Expressiveness and tractability in knowledge representation and reasoning. *Computational Intelligence*, 3(2):78–93.

Levy, D. N. L. (1983). *Computer Gamesmanship: The Complete Guide to Creating and Structuring Intelligent Games Programs*. Simon and Schuster, New York.

Levy, D. N. L., editor (1988a). *Computer Chess Compendium*. Springer-Verlag, Berlin.

Levy, D. N. L., editor (1988b). *Computer Games*. Springer-Verlag, Berlin. Two volumes.

Lewis, D. K. (1966). An argument for the identity theory. *The Journal of Philosophy*, 63(1):17–25.

Lewis, D. K. (1972). General semantics. In Davidson, D. and Harman, G., editors, *Semantics of Natural Language*, pages 169–218. D. Reidel, Dordrecht, The Netherlands.

Lewis, D. K. (1980). Mad pain and Martian pain. In Block, N., editor, *Readings in Philosophy of Psychology*, volume 1, pages 216–222. Harvard University Press, Cambridge, Massachusetts.

Li, M. and Vitanyi, P. M. B. (1993). *An Introduction to Kolmogorov Complexity and Its Applications*. Springer-Verlag, Berlin.

Lifschitz, V. (1986). On the semantics of STRIPS. In Georgeff, M. P. and Lansky, A. L., editors, *Reasoning about Actions and Plans: Proceedings of the 1986 Workshop*, pages 1–9, Timberline, Oregon. Morgan Kaufmann.

Lifschitz, V. (1989). Between circumscription and autoepistemic logic. In Brachman, R. J. and Levesque, H. J., editors, *Proceedings of the First International Conference on Principles of Knowledge Representation and Reasoning*, pages 235–244, Toronto, Ontario. Morgan Kaufmann.

Lighthill, J. (1973). Artificial intelligence: A general survey. In Lighthill, J., Sutherland, N. S., Needham, R. M., Longuet-Higgins, H. C., and Michie, D., editors, *Artificial Intelligence: A Paper Symposium*. Science Research Council of Great Britain, London.

Lin, S. (1965). Computer solutions of the travelling salesman problem. *Bell Systems Technical Journal*, 44(10):2245–2269.

Linden, T. A. (1991). Representing software designs as partially developed plans. In Lowry, M. R. and McCartney, R. D., editors, *Automating Software Design*, pages 603–625. MIT Press, Cambridge, Massachusetts.

Lindsay, R. K. (1963). Inferential memory as the basis of machines which understand natural language. In Feigenbaum, E. A. and Feldman, J., editors, *Computers and Thought*, pages 217–236. McGraw-Hill, New York.

Lindsay, R. K., Buchanan, B. G., Feigenbaum, E. A., and Lederberg, J. (1980). *Applications of Artificial Intelligence for Organic Chemistry: The DENDRAL Project*. McGraw-Hill, New York.

Lloyd, J. W. (1987). *Foundations of Logic Programming*. Springer-Verlag, Berlin.

Locke, W. N. and Booth, A. D. (1955). *Machine Translation of Languages: Fourteen Essays*. MIT Press, Cambridge, Massachusetts.

Longuet-Higgins, H. C. (1981). A computer algorithm for reconstructing a scene from two projections. *Nature*, 293:133–135.

Lovejoy, W. S. (1991). A survey of algorithmic methods for partially observed Markov decision processes. *Annals of Operations Research*, 28(1–4):47–66.

Loveland, D. W. (1968). Mechanical theorem proving by model elimination. *Journal of the Association for Computing Machinery*, 15(2):236–251.

Loveland, D. W. (1984). Automated theorem-proving: A quarter-century review. *Contemporary Mathematics*, 29:1–45.

Lowe, D. G. (1987). Three-dimensional object recognition from single two-dimensional images. *Artificial Intelligence*, 31:355–395.

Löwenheim, L. (1915). Über möglichkeiten im Relativkalkül. *Mathematische Annalen*, 76:447–470. Reprinted in English translation in van Heijenoort (1967).

Lowerre, B. T. and Reddy, R. (1980). The HARPY speech recognition system. In Lea, W. A., editor, *Trends in Speech Recognition*, chapter 15. Prentice-Hall, Englewood Cliffs, New Jersey.

Lowry, M. R. and McCartney, R. D. (1991). *Automating Software Design*. MIT Press, Cambridge, Massachusetts.

Loyd, S. (1959). *Mathematical Puzzles of Sam Loyd: Selected and Edited by Martin Gardner*. Dover, New York.

Lozano-Pérez, T., Mason, M., and Taylor, R. (1984). Automatic synthesis of fine-motion strategies for robots. *International Journal of Robotics Research*, 3(1):3–24.

Lucas, J. R. (1961). Minds, machines, and Gödel. *Philosophy*, 36.

Luger, G. F. and Stubblefield, W. A. (1993). *Artificial Intelligence: Structures and Strategies for Complex Problem Solving*. Benjamin/Cummings, Redwood City, California, second edition.

Mackworth, A. K. (1973). Interpreting pictures of polyhedral scenes. *Artificial Intelligence*, 4:121–137.

Maes, P., Darrell, T., Blumberg, B., and Pentland, A. (1994). ALIVE: Artificial Life Interactive Video Environment. In *Proceedings of the Twelfth National Conference on Artificial Intelligence (AAAI-94)*, page 1506, Seattle, Washington. AAAI Press.

Magerman, D. (1993). *Natural Language Parsing as Statistical Pattern Recognition*. PhD thesis, Stanford University.

Mahanti, A. and Daniels, C. J. (1993). A SIMD approach to parallel heuristic search. *Artificial Intelligence*, 60(2):243–282.

Malik, J. (1987). Interpreting line drawings of curved objects. *International Journal of Computer Vision*, 1(1):73–103.

Malik, J. and Rosenholtz, R. (1994). Recovering surface curvature and orientation from texture distortion: a least squares algorithm and sensitivity analysis. In Eklundh, J.-O., editor, *Proceedings of the Third European Conf. on Computer Vision*, pages 353–364, Stockholm. Springer-Verlag. Published as Lecture Notes in Computer Science 800.

Manin, Y. I. (1977). *A Course in Mathematical Logic*. Springer-Verlag, Berlin.

Mann, W. C. and Thompson, S. A. (1983). Relational propositions in discourse. Technical Report RR-83-115, Information Sciences Institute.

Manna, Z. and Waldinger, R. (1971). Toward automatic program synthesis. *Communications of the Association for Computing Machinery*, 14(3):151–165.

Manna, Z. and Waldinger, R. (1985). *The Logical Basis for Computer Programming: Volume 1: Deductive Reasoning*. Addison-Wesley, Reading, Massachusetts.

Manna, Z. and Waldinger, R. (1986). Special relations in automated deduction. *Journal of the Association for Computing Machinery*, 33(1):1–59.

Manna, Z. and Waldinger, R. (1992). Fundamentals of deductive program synthesis. *IEEE Transactions on Software Engineering*, 18(8):674–704.

Marchand, M., Golea, M., and Ruján, P. (1990). A convergence theorem for sequential learning in two-layer perceptrons. *Europhysics Letters*, 11:487–492.

Markov, A. A. (1913). An example of statistical investigation in the text of "Eugene Onegin" illustrating coupling of "tests" in chains. *Proceedings of the Academy of Sciences of St. Petersburg*, 7.

Marr, D. (1982). *Vision: A Computational Investigation into the Human Representation and Processing of Visual Information*. W. H. Freeman, New York.

Marsland, A. T. and Schaeffer, J., editors (1990). *Computers, Chess, and Cognition*. Springer-Verlag, Berlin.

Martelli, A. and Montanari, U. (1973). Additive AND/OR graphs. In *Proceedings of the Third International Joint Conference on Artificial Intelligence (IJCAI-73)*, pages 1–11, Stanford, California. IJCAII.

Martelli, A. and Montanari, U. (1976). Unification in linear time and space: A structured presentation. Internal Report B 76-16, Istituto di Elaborazione della Informazione, Pisa, Italy.

Martelli, A. and Montanari, U. (1978). Optimizing decision trees through heuristically guided search. *Communications of the Association for Computing Machinery*, 21:1025–1039.

Martin, C. D. (1993). The myth of the awesome thinking machine. *Communications of the Association for Computing Machinery*, 36(4):120–133.

Martin, J. H. (1990). *A Computational Model of Metaphor Interpretation*. Academic Press.

Maslov, S. Y. (1964). An inverse method for establishing deducibility in classical predicate calculus. *Doklady Akademii nauk SSSR*, 159:17–20.

Maslov, S. Y. (1967). An inverse method for establishing deducibility of nonprenex formulas of the predicate calculus. *Doklady Akademii nauk SSSR*, 172:22–25.

Maslov, S. Y. (1971). Relationship between tactics of the inverse method and the resolution method. *Seminars in Mathematics, V. A. Steklov Mathematical Institute, Leningrad, Consultants Bureau, New York-London*, 16:69–73.

Mason, M. T. (1993). Kicking the sensing habit. *AI Magazine*, 14(1):58–59.

Mates, B. (1953). *Stoic Logic*. University of California Press, Berkeley and Los Angeles.

Maxwell, J. and Kaplan, R. (1993). The interface between phrasal and functional constraints. *Computational Linguistics*, 19(4):571–590.

Mays, E., Apte, C., Griesmer, J., and Kastner, J. (1987). Organizing knowledge in a complex financial domain. *IEEE Expert*, 2(3):61–70.

McAllester, D. and Rosenblitt, D. (1991). Systematic nonlinear planning. In *Proceedings of the Ninth National Conference on Artificial Intelligence (AAAI-91)*, volume 2, pages 634–639, Anaheim, California. AAAI Press.

McAllester, D. A. (1980). An outlook on truth maintenance. AI Memo 551, MIT AI Laboratory, Cambridge, Massachusetts.

McAllester, D. A. (1988). Conspiracy numbers for min-max search. *Artificial Intelligence*, 35(3):287–310.

McAllester, D. A. (1989). *Ontic: A Knowledge Representation System for Mathematics*. MIT Press, Cambridge, Massachusetts.

McAllester, D. A. and Givan, R. (1992). Natural language syntax and first-order inference. *Artificial Intelligence*, 56(1):1–20.

McCarthy, J. (1958). Programs with common sense. In *Proceedings of the Symposium on Mechanisation of Thought Processes*, volume 1, pages 77–84, London. Her Majesty's Stationery Office.

McCarthy, J. (1963). Situations, actions, and causal laws. Memo 2, Stanford University Artificial Intelligence Project, Stanford, California. Reprinted as part of McCarthy (1968).

McCarthy, J. (1968). Programs with common sense. In Minsky, M. L., editor, *Semantic Information Processing*, pages 403–418. MIT Press, Cambridge, Massachusetts.

McCarthy, J. (1977). Epistemological problems in artificial intelligence. In *Proceedings of the Fifth International Joint Conference on Artificial Intelligence (IJCAI-77)*, Cambridge, Massachusetts. IJCAII.

McCarthy, J. (1978). History of LISP. In Wexelblat, R. L., editor, *History of Programming Languages: Proceedings of the ACM SIGPLAN Conference*, pages 173–197. Academic Press. Published in 1981; 1978 is date of conference.

McCarthy, J. (1980). Circumscription: a form of non-monotonic reasoning. *Artificial Intelligence*, 13(1–2):27–39.

McCarthy, J. and Hayes, P. J. (1969). Some philosophical problems from the standpoint of artificial intelligence. In Meltzer, B., Michie, D., and Swann, M., editors, *Machine Intelligence 4*, pages 463–502. Edinburgh University Press, Edinburgh, Scotland.

McCawley, J. D. (1993). *Everything That Linguists Have Always Wanted to Know About Logic But Were Ashamed to Ask*. University of Chicago Press, Chicago, Illinois, second edition.

McCorduck, P. (1979). *Machines Who Think: A Personal Inquiry into the History and Prospects of Artificial Intelligence*. W. H. Freeman, New York.

McCulloch, W. S. and Pitts, W. (1943). A logical calculus of the ideas immanent in nervous activity. *Bulletin of Mathematical Biophysics*, 5:115–137.

McCune, W. W. (1992). Automated discovery of new axiomatizations of the left group and right group calculi. *Journal of Automated Reasoning*, 9(1):1–24.

McDermott, D. (1976). Artificial intelligence meets natural stupidity. *SIGART Newsletter*, 57.

McDermott, D. (1978a). Planning and acting. *Cognitive Science*, 2(2):71–109.

McDermott, D. (1978b). Tarskian semantics, or, no notation without denotation! *Cognitive Science*, 2(3).

McDermott, D. (1987). A critique of pure reason. *Computational Intelligence*, 3(3):151–237. Includes responses by a number of commentators and final rebuttal by the author.

McDermott, D. (1991). Regression planning. *International Journal of Intelligent Systems*, 6:357–416.

McDermott, D. and Doyle, J. (1980). Non-monotonic logic I. *Artificial Intelligence*, 13(1–2):41–72.

McDermott, J. (1982). R1: A rule-based configurer of computer systems. *Artificial Intelligence*, 19(1):39–88.

Mead, C. (1989). *Analog VLSI and Neural Systems*. Addison-Wesley, Reading, Massachusetts.

Megiddo, N. and Wigderson, A. (1986). On play by means of computing machines. In Halpern, J. Y., editor, *Theoretical Aspects of Reasoning about Knowledge: Proceedings of the 1986 Conference (TARK-86)*, pages 259–274, Monterey, California. IBM and AAAI, Morgan Kaufmann.

Melćuk, I. A. and Polguere, A. (1988). A formal lexicon in the meaning-text theory (or how to do lexica with words). *Computational Linguistics*, 13(3–4):261–275.

Mero, L. (1984). A heuristic search algorithm with modifiable estimate. *Artificial Intelligence*, 23(1):13–27.

Metropolis, N., Rosenbluth, A., Rosenbluth, M., Teller, A., and Teller, E. (1953). Equations of state calculations by fast computing machines. *Journal of Chemical Physics*, 21:1087–1091.

Mézard, M. and Nadal, J.-P. (1989). Learning in feedforward layered networks: The tiling algorithm. *Journal of Physics*, 22:2191–2204.

Michalski, R. S., Carbonell, J. G., and Mitchell, T. M., editors (1983). *Machine Learning: An Artificial Intelligence Approach*, volume 1. Morgan Kaufmann, San Mateo, California.

Michalski, R. S., Carbonell, J. G., and Mitchell, T. M., editors (1986). *Machine Learning: An Artificial Intelligence Approach*, volume 2. Morgan Kaufmann, San Mateo, California.

Michie, D. (1966). Game-playing and game-learning automata. In Fox, L., editor, *Advances in Programming and Non-Numerical Computation*, pages 183–200. Pergamon, New York.

Michie, D. (1972). Machine intelligence at Edinburgh. *Management Informatics*, 2(1):7–12.

Michie, D. (1982). The state of the art in machine learning. In *Introductory Readings in Expert Systems*, pages 209–229. Gordon and Breach, New York.

Michie, D. (1986). Current developments in expert systems. In *Proc. 2nd Australian Conference on Applications of Expert Systems*, pages 163–182, Sydney, Australia.

Michie, D. and Chambers, R. A. (1968). BOXES: An experiment in adaptive control. In Dale, E. and Michie, D., editors, *Machine Intelligence 2*, pages 125–133. Elsevier/North-Holland, Amsterdam, London, New York.

Michie, D., Spiegelhalter, D. J., and Taylor, C. C., editors (1994). *Machine Learning, Neural and Statistical Classification*. Ellis Horwood, Chichester, England.

Miles, F. A. (1969). *Excitable Cells*. William Heinemann Medical Books, London.

Mill, J. S. (1843). *A System of Logic, Ratiocinative and Inductive: Being a Connected View of the Principles of Evidence, and Methods of Scientific Investigation*. J. W. Parker, London.

Mill, J. S. (1863). *Utilitarianism*. Parker, Son and Bourn, London.

Miller, A. C., Merkhofer, M. M., Howard, R. A., Matheson, J. E., and Rice, T. R. (1976). Development of automated aids for decision analysis. Technical report, SRI International, Menlo Park, California.

Miller, G. F., Todd, P. M., and Hegde, S. U. (1989). Designing neural networks using genetic algorithms. In Schaffer, J. D., editor, *Proceedings of the Third International Conference on Genetic Algorithms*, pages 379–384, Arlington, Virginia. Morgan Kaufmann.

Milne, A. A. (1926). *Winnie-the-Pooh*. Methuen, London. With decorations by Ernest H. Shepard.

Minker, J., editor (1988). *Foundations of Deductive Databases and Logic Programming*. Morgan Kaufmann, San Mateo, California.

Minsky, M. L. (1954). *Neural Nets and the Brain-Model Problem*. PhD thesis, Princeton University.

Minsky, M. L., editor (1968). *Semantic Information Processing*. MIT Press, Cambridge, Massachusetts.

Minsky, M. L. (1975). A framework for representing knowledge. In Winston, P. H., editor, *The Psychology of Computer Vision*, pages 211–277. McGraw-Hill, New York. Originally appeared as an MIT Artificial Intelligence Laboratory memo; the present version is abridged, but is the most widely cited. Another, later abridged version appeared in Haugeland (1981).

Minsky, M. L. and Papert, S. (1969). *Perceptrons: An Introduction to Computational Geometry*. MIT Press, Cambridge, Massachusetts, first edition.

Minsky, M. L. and Papert, S. (1988). *Perceptrons: An Introduction to Computational Geometry*. MIT Press, Cambridge, Massachusetts, expanded edition.

Minton, S. (1984). Constraint-based generalization: Learning game-playing plans from single examples. In *Proceedings of the National Conference on Artificial Intelligence (AAAI-84)*, pages 251–254, Austin, TX. Morgan Kaufmann.

Minton, S. (1988). Quantitative results concerning the utility of explanation- based learning. In *Proceedings of the Seventh National Conference on Artificial Intelligence (AAAI-88)*, St. Paul, Minnesota. Morgan Kaufmann.

Minton, S., Johnston, M. D., Philips, A. B., and Laird, P. (1992). Minimizing conflicts: a heuristic repair method for constraint satisfaction and scheduling problems. *Artificial Intelligence*, 58(1–3):161–205.

Mitchell, T., Keller, R., and Kedar-Cabelli, S. (1986). Explanation-based generalization: A unifying view. *Machine Learning*, 1:47–80.

Mitchell, T. M. (1977). Version spaces: a candidate elimination approach to rule learning. In *Proceedings of the Fifth International Joint Conference on Artificial Intelligence (IJCAI-77)*, pages 305–310, Cambridge, Massachusetts. IJCAII.

Mitchell, T. M. (1980). The need for biases in learning generalizations. Technical Report CBM-TR-117, Department of Computer Science, Rutgers University, New Brunswick, New Jersey.

Mitchell, T. M. (1982). Generalization as search. *Artificial Intelligence*, 18(2):203–226.

Mitchell, T. M. (1990). Becoming increasingly reactive (mobile robots). In *Proceedings of the Eighth National Conference on Artificial Intelligence (AAAI-90)*, volume 2, pages 1051–1058, Boston, Massachusetts. MIT Press.

Mitchell, T. M., Utgoff, P. E., and Banerji, R. (1983). Learning by experimentation: acquiring and refining problem-solving heuristics. In Michalski, R. S., Carbonell, J. G., and Mitchell, T. M., editors, *Machine Learning: An Artificial Intelligence Approach*, pages 163–190. Morgan Kaufmann, San Mateo, California.

Montague, R. (1970). English as a formal language. In *Linguaggi nella Società e nella Tecnica*, pages 189–224. Edizioni di Comunità, Milan. Reprinted in (Thomason, 1974, pp. 188–221).

Montague, R. (1973). The proper treatment of quantification in ordinary English. In Hintikka, K. J. J., Moravcsik, J. M. E., and Suppes, P., editors, *Approaches to Natural Language*. D. Reidel, Dordrecht, The Netherlands.

Moore, A. W. and Atkeson, C. G. (1993). Prioritized sweeping—reinforcement learning with less data and less time. *Machine Learning*, 13:103–130.

Moore, J. and Newell, A. (1973). How can Merlin understand? In Gregg, L., editor, *Knowledge and Cognition*. Lawrence Erlbaum Associates, Potomac, Maryland.

Moore, R. C. (1980). Reasoning about knowledge and action. Artificial Intelligence Center Technical Note 191, SRI International, Menlo Park, California.

Moore, R. C. (1985a). A formal theory of knowledge and action. In Hobbs, J. R. and Moore, R. C., editors, *Formal Theories of the Commonsense World*, pages 319–358. Ablex, Norwood, New Jersey.

Moore, R. C. (1985b). Semantical considerations on nonmonotonic logic. *Artificial Intelligence*, 25(1):75–94.

Moore, R. C. (1993). Autoepistemic logic revisited. *Artificial Intelligence*, 59(1–2):27–30.

Moravec, H. (1988). *Mind Children: The Future of Robot and Human Intelligence*. Harvard University Press, Cambridge, Massachusetts.

Morgenstern, L. (1987). Knowledge preconditions for actions and plans. In *Proceedings of the Tenth International Joint Conference on Artificial Intelligence (IJCAI-87)*, pages 867–874, Milan, Italy. Morgan Kaufmann.

Morrison, P. and Morrison, E., editors (1961). *Charles Babbage and His Calculating Engines: Selected Writings by Charles Babbage and Others*. Dover, New York.

Mostow, J. and Prieditis, A. E. (1989). Discovering admissible heuristics by abstracting and optimizing: a transformational approach. In *Proceedings of the Eleventh International Joint Conference on Artificial Intelligence (IJCAI-89)*, volume 1, pages 701–707, Detroit, Michigan. Morgan Kaufmann.

Motzkin, T. S. and Schoenberg, I. J. (1954). The relaxation method for linear inequalities. *Canadian Journal of Mathematics*, 6(3):393–404.

Mourelatos, A. P. D. (1978). Events, processes, and states. *Linguistics and Philosophy*, 2:415–434.

Moussouris, J., Holloway, J., and Greenblatt, R. (1979). CHEOPS: A chess-oriented processing system. In Hayes, J. E., Michie, D., and Mikulich, L. I., editors, *Machine Intelligence 9*, pages 351–360. Ellis Horwood, Chichester, England.

Muggleton, S. (1991). Inductive logic programming. *New Generation Computing*, 8:295–318.

Muggleton, S. (1992). *Inductive Logic Programming*. Academic Press, New York.

Muggleton, S. and Buntine, W. (1988). Machine invention of first-order predicates by inverting resolution. In *MLC-88*.

Muggleton, S. and Cao, F. (1990). Efficient induction of logic programs. In *Proceedings of the Workshop on Algorithmic Learning Theory*, Tokyo.

Muggleton, S., King, R. D., and Sternberg, M. J. E. (1992). Protein secondary structure prediction using logic-based machine learning. *Protein Engineering*, 5(7):647–657.

Mundy, J. and Zisserman, A., editors (1992). *Geometric Invariance in Computer Vision*. MIT Press, Cambridge, Massachusetts.

Nagel, T. (1974). What is it like to be a bat? *Philosophical Review*, 83:435–450.

Nalwa, V. S. (1993). *A Guided Tour of Computer Vision*. Addison-Wesley, Reading, Massachusetts.

Nau, D. S. (1980). Pathology on game trees: A summary of results. In *Proceedings of the First Annual National Conference on Artificial Intelligence (AAAI-80)*, pages 102–104, Stanford, California. AAAI.

Nau, D. S. (1983). Pathology on game trees revisited, and an alternative to minimaxing. *Artificial Intelligence*, 21(1–2):221–244.

Nau, D. S., Kumar, V., and Kanal, L. N. (1984). General branch and bound, and its relation to A* and AO*. *Artificial Intelligence*, 23:29–58.

Naur, P. (1963). Revised report on the algorithmic language Algol 60. *Communications of the Association for Computing Machinery*, 6(1):1–17.

Neal, R. M. (1991). Connectionist learning of belief networks. *Artificial Intelligence*, 56:71–113.

Neapolitan, R. E. (1990). *Probabilistic Reasoning in Expert Systems: Theory and Algorithms*. Wiley, New York.

Netto, E. (1901). *Lehrbuch der Combinatorik*. B. G. Teubner, Leipzig.

Newell, A. (1982). The knowledge level. *Artificial Intelligence*, 18(1):82–127.

Newell, A. (1990). *Unified Theories of Cognition*. Harvard University Press, Cambridge, Massachusetts.

Newell, A. and Ernst, G. (1965). The search for generality. In Kalenich, W. A., editor, *Information Processing 1965: Proceedings of IFIP Congress 1965*, volume 1, pages 17–24. Spartan.

Newell, A. and Shaw, J. C. (1957). Programming the logic theory machine. In *Proceedings of the 1957 Western Joint Computer Conference*, pages 230–240. IRE.

Newell, A., Shaw, J. C., and Simon, H. A. (1957). Empirical explorations with the logic theory machine. *Proceedings of the Western Joint Computer Conference*, 15:218–239. Reprinted in Feigenbaum and Feldman (1963).

Newell, A., Shaw, J. C., and Simon, H. A. (1958). Chess playing programs and the problem of complexity. *IBM Journal of Research and Development*, 4(2):320–335. Reprinted in Feigenbaum and Feldman (1963).

Newell, A. and Simon, H. A. (1961). GPS, a program that simulates human thought. In Billing, H., editor, *Lernende Automaten*, pages 109–124. R. Oldenbourg, Munich, Germany. Reprinted in (Feigenbaum and Feldman, 1963, pp. 279–293).

Newell, A. and Simon, H. A. (1972). *Human Problem Solving*. Prentice-Hall, Englewood Cliffs, New Jersey.

Neyman, A. (1985). Bounded complexity justifies cooperation in the finitely repeated prisoners' dilemma. *Economics Letters*, 19:227–229.

Nicholson, A. E. and Brady, J. M. (1992). The data association problem when monitoring robot vehicles using dynamic belief networks. In *ECAI 92: 10th European Conference on Artificial Intelligence Proceedings*, pages 689–693, Vienna, Austria. Wiley.

Nilsson, N. J. (1965). *Learning Machines: Foundations of Trainable Pattern-Classifying Systems*. McGraw-Hill, New York.

Nilsson, N. J. (1971). *Problem-Solving Methods in Artificial Intelligence*. McGraw-Hill, New York.

Nilsson, N. J. (1980). *Principles of Artificial Intelligence*. Morgan Kaufmann, San Mateo, California.

Nilsson, N. J. (1984). Shakey the robot. Technical Note 323, SRI International, Menlo Park, California.

Nilsson, N. J. (1990). *The Mathematical Foundations of Learning Machines*. Morgan Kaufmann, San Mateo, California. Introduction by Terrence J. Sejnowski and Halbert White.

Nitta, K., Taki, K., and Ichiyoshi, N. (1992). Experimental parallel inference software. In *Fifth Generation Computer Systems 1992*, volume 1, pages 166–190, Tokyo. IOS Press.

Norvig, P. (1988). Multiple simultaneous interpretations of ambiguous sentences. In *Proceedings of the 10th Annual Conference of the Cognitive Science Society*.

Norvig, P. (1992). *Paradigms of Artificial Intelligence Programming: Case Studies in Common Lisp*. Morgan Kaufmann, San Mateo, California.

Nowick, S. M., Dean, M. E., Dill, D. L., and Horowitz, M. (1993). The design of a high-performance cache controller: a case study in asynchronous synthesis. *Integration: The VLSI Journal*, 15(3):241–262.

Nunberg, G. (1979). The non-uniqueness of semantic solutions: Polysemy. *Language and Philosophy*, 3(2):143–184.

Nussbaum, M. C. (1978). *Aristotle's* De Motu Animalium. Princeton University Press, Princeton, New Jersey.

O'Keefe, R. (1990). *The Craft of Prolog*. MIT Press, Cambridge, Massachusetts.

Olawsky, D. and Gini, M. (1990). Deferred planning and sensor use. In Sycara, K. P., editor, *Proceedings, DARPA Workshop on Innovative Approaches to Planning, Scheduling, and Control*, San Diego, California. Defense Advanced Research Projects Agency (DARPA), Morgan Kaufmann.

Olesen, K. G. (1993). Causal probabilistic networks with both discrete and continuous variables. *IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)*, 15(3):275–279.

Oliver, R. M. and Smith, J. Q., editors (1990). *Influence Diagrams, Belief Nets and Decision Analysis*. Wiley, New York.

Olson, C. F. (1994). Time and space efficient pose clustering. In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*, pages 251–258, Seattle, Washington.

Ortony, A., editor (1979). *Metaphor and Thought*. Cambridge University Press, Cambridge.

Osherson, D. N., Stob, M., and Weinstein, S. (1986). *Systems That Learn: An Introduction to Learning Theory for Cognitive and Computer Scientists*. MIT Press, Cambridge, Massachusetts.

Paige, R. and Henglein, F. (1987). Mechanical translation of set theoretic problem specifications into efficient RAM code—a case study. *Journal of Symbolic Computation*, 4:207–232.

Palay, A. J. (1985). *Searching with Probabilities*. Pitman, London.

Palmieri, G. and Sanna, R. (1960). Automatic probabilistic programmer/analyzer for pattern recognition. *Methodos*, 12(48):331–357.

Papadimitriou, C. H. and Yannakakis, M. (1994). On complexity as bounded rationality. In *Symposium on Theory of Computation (STOC-94)*.

Parker, D. B. (1985). Learning logic. Technical Report TR-47, Center for Computational Research in Economics and Management Science, Massachusetts Institute of Technology, Cambridge, Massachusetts.

Partridge, D. (1991). *A New Guide to Artificial Intelligence*. Ablex, Norwood, New Jersey.

Paterson, M. S. and Wegman, M. N. (1978). Linear unification. *Journal of Computer and System Sciences*, 16:158–167.

Patrick, B. G., Almulla, M., and Newborn, M. M. (1992). An upper bound on the time complexity of iterative-deepening-A*. *Annals of Mathematics and Artificial Intelligence*, 5(2–4):265–278.

Paul, R. P. (1981). *Robot Manipulators: Mathematics, Programming, and Control*. MIT Press, Cambridge, Massachusetts.

Peano, G. (1889). *Arithmetices principia, nova methodo exposita*. Fratres Bocca, Turin.

Pearl, J. (1982a). Reverend Bayes on inference engines: A distributed hierarchical approach. In *Proceedings of the National Conference on Artificial Intelligence (AAAI-82)*, pages 133–136, Pittsburgh, Pennsylvania. Morgan Kaufmann.

Pearl, J. (1982b). The solution for the branching factor of the alpha-beta pruning algorithm and its optimality. *Communications of the Association for Computing Machinery*, 25(8):559–564.

Pearl, J. (1984). *Heuristics: Intelligent Search Strategies for Computer Problem Solving*. Addison-Wesley, Reading, Massachusetts.

Pearl, J. (1986). Fusion, propagation, and structuring in belief networks. *Artificial Intelligence*, 29:241–288.

Pearl, J. (1987). Evidential reasoning using stochastic simulation of causal models. *Artificial Intelligence*, 32:247–257.

Pearl, J. (1988). *Probabilistic Reasoning in Intelligent Systems: Networks of Plausible Inference*. Morgan Kaufmann, San Mateo, California.

Pednault, E. P. D. (1986). Formulating multiagent, dynamic-world problems in the classical planning framework. In Georgeff, M. P. and Lansky, A. L., editors, *Reasoning about Actions and Plans: Proceedings of the 1986 Workshop*, pages 47–82, Timberline, Oregon. Morgan Kaufmann.

Peirce, C. S. (1870). Description of a notation for the logic of relatives, resulting from an amplification of the conceptions of Boole's calculus of logic. *Memoirs of the American academy of arts and sciences*, 9:317–378.

Peirce, C. S. (1883). A theory of probable inference. Note B. The logic of relatives. In *Studies in logic by members of the Johns Hopkins University*, pages 187–203, Boston.

Peirce, C. S. (1902). Logic as semiotic: the theory of signs. Unpublished manuscript; reprinted in (Buchler, 1955, pp. 98–119).

Penberthy, J. S. and Weld, D. S. (1992). UCPOP: A sound, complete, partial order planner for ADL. In *Proceedings of KR-92*, pages 103–114.

Peng, J. and Williams, R. J. (1993). Efficient learning and planning within the Dyna framework. *Adaptive Behavior*, 2:437–454.

Penrose, R. (1990). The emperor's new mind: concerning computers, minds, and the laws of physics. *Behavioral and Brain Sciences*, 13(4):643–654.

Peot, M. and Smith, D. (1992). Conditional nonlinear planning. In Hendler, J., editor, *Proceedings of the First International Conference on AI Planning Systems*, pages 189–197, College Park, Maryland. Morgan Kaufmann.

Pereira, F. (1983). Logic for natural language analysis. Technical Note 275, SRI International.

Pereira, F. C. N. and Shieber, S. M. (1987). *Prolog and Natural-Language Analysis*. Center for the Study of Language and Information (CSLI), Stanford, California.

Pereira, F. C. N. and Warren, D. H. D. (1980). Definite clause grammars for language analysis: a survey of the formalism and a comparison with augmented transition networks. *Artificial Intelligence*, 13:231–278.

Peterson, C., Redfield, S., Keeler, J. D., and Hartman, E. (1990). An optoelectronic architecture for multilayer learning in a single photorefractive crystal. *Neural Computation*, 2:25–34.

Pinker, S. (1989). *Learnability and Cognition*. MIT Press, Cambridge, MA.

Place, U. T. (1956). Is consciousness a brain process? *British Journal of Psychology*, 47:44–50.

Plotkin, G. D. (1971). *Automatic Methods of Inductive Inference*. PhD thesis, Edinburgh University.

Pnueli, A. (1977). The temporal logic of programs. In *Proceedings of the 18th IEEE Symposium on the Foundations of Computer Science (FOCS-77)*, pages 46–57, Providence, Rhode Island. IEEE, IEEE Computer Society Press.

Pohl, I. (1969). Bi-directional and heuristic search in path problems. Technical Report 104, SLAC (Stanford Linear Accelerator Center, Stanford, California.

Pohl, I. (1970). First results on the effect of error in heuristic search. In Meltzer, B. and Michie, D., editors, *Machine Intelligence 5*, pages 219–236. Elsevier/North-Holland, Amsterdam, London, New York.

Pohl, I. (1971). Bi-directional search. In Meltzer, B. and Michie, D., editors, *Machine Intelligence 6*, pages 127–140. Edinburgh University Press, Edinburgh, Scotland.

Pohl, I. (1973). The avoidance of (relative) catastrophe, heuristic competence, genuine dynamic weighting and computational issues in heuristic problem solving. In *Proceedings of the Third International Joint Conference on Artificial Intelligence (IJCAI-73)*, pages 20–23, Stanford, California. IJCAII.

Pohl, I. (1977). Practical and theoretical considerations in heuristic search algorithms. In Elcock, E. W. and Michie, D., editors, *Machine Intelligence 8*, pages 55–72. Ellis Horwood, Chichester, England.

Pollard, C. and Sag, I. A. (1994). *Head-Driven Phrase Structure Grammar*. University of Chicago Press, Chicago, Illinois.

Pólya, G. (1957). *How to Solve It: A New Aspect of Mathematical Method*. Doubleday, Garden City, New York, second edition.

Pomerleau, D. A. (1993). *Neural Network Perception for Mobile Robot Guidance*. Kluwer, Dordrecht, The Netherlands.

Popper, K. R. (1959). *The Logic of Scientific Discovery*. Basic Books, New York.

Popper, K. R. (1962). *Conjectures and Refutations: The Growth of Scientific Knowledge*. Basic Books, New York.

Post, E. L. (1921). Introduction to a general theory of elementary propositions. *American Journal of Mathematics*, 43:163–185.

Pradhan, M., Provan, G. M., Middleton, B., and Henrion, M. (1994). Knowledge engineering for large belief networks. In *Proceedings of Uncertainty in Artificial Intelligence*, Seattle, Washington. Morgan Kaufmann.

Pratt, V. R. (1976). Semantical considerations on Floyd-Hoare logic. In *Proceedings of the 17th IEEE Symposium on the Foundations of Computer Science*, pages 109–121.

Prawitz, D. (1960). An improved proof procedure. *Theoria*, 26:102–139.

Prawitz, D. (1965). *Natural Deduction: A Proof Theoretical Study*. Almquist and Wiksell, Stockholm.

Prieditis, A. E. (1993). Machine discovery of effective admissible heuristics. *Machine Learning*, 12(1–3):117–141.

Prinz, D. G. (1952). Robot chess. *Research*, 5:261–266.

Prior, A. N. (1967). *Past, Present, and Future*. Oxford University Press, Oxford.

Pullum, G. K. (1991). *The Great Eskimo Vocabulary Hoax (and Other Irreverent Essays on the Study of Language)*. University of Chicago Press, Chicago, Illinois.

Purdom, P. (1983). Search rearrangement backtracking and polynomial average time. *Artificial Intelligence*, 21:117–133.

Putnam, H. (1960). Minds and machines. In Hook, S., editor, *Dimensions of Mind*, pages 138–164. Macmillan, London.

Putnam, H. (1963). 'Degree of confirmation' and inductive logic. In Schilpp, P. A., editor, *The Philosophy of Rudolf Carnap*. Open Court, La Salle, Illinois.

Putnam, H. (1967). The nature of mental states. In Capitan, W. H. and Merrill, D. D., editors, *Art, Mind, and Religion*, pages 37–48. University of Pittsburgh Press, Pittsburgh, Pennsylvania.Original title was "Psychological predicates"; title changed in later reprints at the request of the author.

Pylyshyn, Z. W. (1974). Minds, machines and phenomenology: Some reflections on Dreyfus' "What Computers Can't Do". *International Journal of Cognitive Psychology*, 3(1):57–77.

Pylyshyn, Z. W. (1984). *Computation and Cognition: Toward a Foundation for Cognitive Science*. MIT Press, Cambridge, Massachusetts.

Quillian, M. R. (1961). A design for an understanding machine. Paper presented at a colloquium: Semantic Problems in Natural Language, King's College, Cambridge, England.

Quillian, M. R. (1968). Semantic memory. In Minsky, M. L., editor, *Semantic Information Processing*, pages 216–270. MIT Press, Cambridge, Massachusetts.

Quine, W. V. (1953). Two dogmas of empiricism. In *From a Logical Point of View*, pages 20–46. Harper and Row, New York.

Quine, W. V. (1960). *Word and Object*. MIT Press, Cambridge, Massachusetts.

Quine, W. V. (1982). *Methods of Logic*. Harvard University Press, Cambridge, Massachusetts, fourth edition.

Quinlan, E. and O'Brien, S. (1992). Sublanguage: characteristics and selection guidelines for MT. In *AI and Cognitive Science '92: Proceedings of Annual Irish Conference on Artificial Intelligence and Cognitive Science '92*, pages 342–345, Limerick, Ireland. Springer-Verlag.

Quinlan, J. R. (1979). Discovering rules from large collections of examples: a case study. In Michie, D., editor, *Expert Systems in the Microelectronic Age*. Edinburgh University Press, Edinburgh, Scotland.

Quinlan, J. R. (1986). Induction of decision trees. *Machine Learning*, 1:81–106.

Quinlan, J. R. (1990). Learning logical definitions from relations. *Machine Learning*, 5(3):239–266.

Quinlan, J. R. (1993a). *C4.5: Programs for Machine Learning*. Morgan Kaufmann, San Mateo, California.

Quinlan, J. R. (1993b). Combining instance-based and model-based learning. In *Proceedings of the Tenth International Conference on Machine Learning*, pages 236–243, Amherst, Massachusetts. Morgan Kaufmann.

Quinlan, J. R. and Cameron-Jones, R. M. (1993). FOIL: a midterm report. In Brazdil, P. B., editor, *European Conference on Machine Learning Proceedings (ECML-93)*, pages 3–20, Vienna. Springer-Verlag.

Quirk, R., Greenbaum, S., Leech, G., and Svartvik, J. (1985). *A Comprehensive Grammar of the English Language*. Longman, New York.

Rabiner, L. R. (1990). A tutorial on hidden Markov models and selected applications in speech recognition. *Proceedings of the IEEE*. Reprinted in Waibel and Lee (1990).

Rabiner, L. R. and Juang, B.-H. (1993). *Fundamentals of Speech Recognition*. Prentice-Hall.

Raibert, M. H. (1986). *Legged Robots That Balance*. MIT Press, Cambridge, Massachusetts.

Ramsey, F. P. (1931). Truth and probability. In Braithwaite, R. B., editor, *The Foundations of Mathematics and Other Logical Essays*. Harcourt Brace Jovanovich, New York.

Raphael, B. (1968). SIR: Semantic information retrieval. In Minsky, M. L., editor, *Semantic Information Processing*, pages 33–134. MIT Press, Cambridge, Massachusetts.

Raphael, B. (1976). *The Thinking Computer: Mind Inside Matter*. W. H. Freeman, New York.

Ratner, D. and Warmuth, M. (1986). Finding a shortest solution for the $n \times n$ extension of the 15-puzzle is intractable. In *Proceedings of the Fifth National Conference on Artificial Intelligence (AAAI-86)*, volume 1, pages 168–172, Philadelphia, Pennsylvania. Morgan Kaufmann.

Reichardt, J. (1978). *Robots: Fact, Fiction, and Prediction*. Penguin Books, New York.

Reichenbach, H. (1949). *The Theory of Probability: An Inquiry into the Logical and Mathematical Foundations of the Calculus of Probability*. University of California Press, Berkeley and Los Angeles, second edition.

Reif, J. H. (1979). Complexity of the mover's problem and generalizations. In *Proceedings of the 20th IEEE Symposium on Foundations of Computer Science*, pages 421–427, San Juan, Puerto Rico. IEEE, IEEE Computer Society Press.

Reiter, R. (1980). A logic for default reasoning. *Artificial Intelligence*, 13(1–2):81–132.

Reiter, R. (1991). The frame problem in the situation calculus: a simple solution (sometimes) and a completeness result for goal regression. In Lifschitz, V., editor, *Artificial Intelligence and Mathematical Theory of Computation: Papers in Honor of John McCarthy*, pages 359–380. Academic Press, New York.

Reitman, W. and Wilcox, B. (1979). The structure and performance of the INTERIM.2 Go program. In *Proceedings of the Sixth International Joint Conference on Artificial Intelligence (IJCAI-79)*, pages 711–719, Tokyo. IJCAII.

Remus, H. (1962). Simulation of a learning machine for playing Go. In *Proceedings IFIP Congress*, pages 428–432. Elsevier/North-Holland.

Rényi, A. (1970). *Probability Theory*. Elsevier/North-Holland, Amsterdam, London, New York.

Rescher, N. and Urquhart, A. (1971). *Temporal Logic*. Springer-Verlag, Berlin.

Resnik, P. (1993). Semantic classes and syntactic ambiguity. *Proceedings of the ARPA Workshop on Human Language Technology*, Princeton, New Jersey.

Rich, E. and Knight, K. (1991). *Artificial Intelligence*. McGraw-Hill, New York, second edition.

Rieger, C. (1976). An organization of knowledge for problem solving and language comprehension. *Artificial Intelligence*, 7:89–127.

Ringle, M. (1979). *Philosophical Perspectives in Artificial Intelligence*. Humanities Press, Atlantic Highlands, New Jersey.

Rissanen, J. (1984). Universal coding, information, prediction, and estimation. *IEEE Transactions on Information Theory*, IT-30(4):629–636.

Ritchie, G. D. and Hanna, F. K. (1984). AM: a case study in AI methodology. *Artificial Intelligence*, 23(3):249–268.

Rivest, R. L. (1987). Learning decision lists. *Machine Learning*, 2(3):229–246.

Roach, J. W., Sundararajan, R., and Watson, L. T. (1990). Replacing unification by constraint satisfaction to improve logic program expressiveness. *Journal of Automated Reasoning*, 6(1):51–75.

Roberts, D. D. (1973). *The Existential Graphs of Charles S. Peirce*. Mouton, The Hague and Paris.

Roberts, L. G. (1963). Machine perception of three-dimensional solids. Technical Report 315, MIT Lincoln Laboratory. Ph.D. dissertation.

Robinson, J. A. (1965). A machine-oriented logic based on the resolution principle. *Journal of the Association for Computing Machinery*, 12:23–41.

Rock, I. (1984). *Perception*. W. H. Freeman, New York.

Rorty, R. (1965). Mind-body identity, privacy, and categories. *Review of Metaphysics*, 19(1):24–54.

Rosenblatt, F. (1957). The perceptron: A perceiving and recognizing automaton. Report 85-460-1, Project PARA, Cornell Aeronautical Laboratory, Ithaca, New York.

Rosenblatt, F. (1960). On the convergence of reinforcement procedures in simple perceptrons. Report VG-1196-G-4, Cornell Aeronautical Laboratory, Ithaca, New York.

Rosenblatt, F. (1962). *Principles of Neurodynamics*. Spartan, Chicago.

Rosenschein, J. S. and Genesereth, M. R. (1987). Communication and cooperation among logic-based agents. In Friesen, O. and Golshani, F., editors, *Sixth Annual International Phoenix Conference on Computers and Communications: 1987 Conference Proceedings*, pages 594–600. IEEE Computer Society Press.

Rosenschein, S. J. (1985). Formal theories of knowledge in AI and robotics. *New Generation Computing*, 3(4):345–357.

Rosenthal, D. M., editor (1971). *Materialism and the Mind-Body Problem*. Prentice-Hall, Englewood Cliffs, New Jersey.

Ross, S. M. (1988). *A First Course in Probability*. Macmillan, London, third edition.

Rothwell, C. A., Zisserman, A., Mundy, J. L., and Forsyth, D. A. (1993). Efficient model library access by projectively invariant indexing functions. In *Proceedings 1992 IEEE Computer Society Conference on Computer Vision and Pattern Recognition*, pages 109–114, Champaign, Illinois. IEEE Computer Society Press.

Roussel, P. (1975). Prolog: Manuel de référence et d'utilisation. Technical report, Groupe d'Intelligence Artificielle, Université d'Aix-Marseille.

Rouveirol, C. and Puget, J.-F. (1989). A simple and general solution for inverting resolution. In *Proceedings of the European Working Session on Learning*, pages 201–210, Porto, Portugal. Pitman.

Rowe, N. C. (1988). *Artificial intelligence through Prolog*. Prentice-Hall, Englewood Cliffs, New Jersey.

Rumelhart, D. E., Hinton, G. E., and Williams, R. J. (1986). Learning internal representations by error propagation. In Rumelhart, D. E. and McClelland, J. L., editors, *Parallel Distributed Processing*, volume 1, chapter 8, pages 318–362. MIT Press, Cambridge, Massachusetts.

Rumelhart, D. E. and McClelland, J. L., editors (1986). *Parallel Distributed Processing*. MIT Press, Cambridge, Massachusetts. In two volumes.

Ruspini, E. H., Lowrance, J. D., and Strat, T. M. (1992). Understanding evidential reasoning. *International Journal of Approximate Reasoning*, 6(3):401–424.

Russell, J. G. B. (1990). Is screening for abdominal aortic aneurysm worthwhile? *Clinical Radiology*, 41:182–184.

Russell, S. J. (1985). The compleat guide to MRS. Report STAN-CS-85-1080, Computer Science Department, Stanford University.

Russell, S. J. (1986). Preliminary steps toward the automation of induction. In *Proceedings of the Fifth National Conference on Artificial Intelligence (AAAI-86)*, Philadelphia, Pennsylvania. Morgan Kaufmann.

Russell, S. J. (1988). Tree-structured bias. In *Proceedings of the Seventh National Conference on Artificial Intelligence (AAAI-88)*, volume 2, pages 641–645, St. Paul, Minnesota. Morgan Kaufmann.

Russell, S. J. (1992). Efficient memory-bounded search methods. In *ECAI 92: 10th European Conference on Artificial Intelligence Proceedings*, pages 1–5, Vienna, Austria. Wiley.

Russell, S. J., Binder, J., and Koller, D. (1994). Adaptive probabilistic networks. Technical Report UCB/CSD-94-824, Computer Science Division, University of California at Berkeley.

Russell, S. J. and Grosof, B. (1987). A declarative approach to bias in concept learning. In *Proceedings of the Sixth National Conference on Artificial Intelligence (AAAI-87)*, Seattle, Washington. Morgan Kaufmann.

Russell, S. J. and Subramanian, D. (1993). Provably bounded optimal agents. In *Proceedings of the Thirteenth International Joint Conference on Artificial Intelligence (IJCAI-93)*, Chambery, France. Morgan Kaufmann.

Russell, S. J. and Wefald, E. H. (1989). On optimal game-tree search using rational meta-reasoning. In *Proceedings of the Eleventh International Joint Conference on Artificial Intelligence (IJCAI-89)*, pages 334–340, Detroit, Michigan. Morgan Kaufmann.

Russell, S. J. and Wefald, E. H. (1991). *Do the Right Thing: Studies in Limited Rationality*. MIT Press, Cambridge, Massachusetts.

Ryder, J. L. (1971). Heuristic analysis of large trees as generated in the game of Go. Memo AIM-155, Stanford Artificial Intelligence Project, Computer Science Department, Stanford University, Stanford, California.

Sacerdoti, E. D. (1974). Planning in a hierarchy of abstraction spaces. *Artificial Intelligence*, 5(2):115–135.

Sacerdoti, E. D. (1975). The nonlinear nature of plans. In *Proceedings of the Fourth International Joint Conference on Artificial Intelligence (IJCAI-75)*, pages 206–214, Tbilisi, Georgia. IJCAII.

Sacerdoti, E. D. (1977). *A Structure for Plans and Behavior*. Elsevier/North-Holland, Amsterdam, London, New York.

Sacerdoti, E. D., Fikes, R. E., Reboh, R., Sagalowicz, D., Waldinger, R. J., and Wilber, B. M. (1976). QLISP—a language for the interactive development of complex systems. In *Proceedings of the AFIPS National Computer Conference*, pages 349–356.

Sachs, J. S. (1967). Recognition memory for syntactic and semantic aspects of connected discourse. *Perception and Psychophysics*, 2:437–442.

Sacks, E. and Joskowicz, L. (1993). Automated modeling and kinematic simulation of mechanisms. *Computer Aided Design*, 25(2):106–118.

Sager, N. (1981). *Natural Language Information Processing: A Computer Grammar of English and Its Applications*. Addison-Wesley, Reading, Massachusetts.

Salton, G. (1989). *Automatic Text Processing*. Addison-Wesley.

Sammut, C., Hurst, S., Kedzier, D., and Michie, D. (1992). Learning to fly. In *Proceedings of the Ninth International Conference on Machine Learning*, Aberdeen. Morgan Kaufmann.

Samuel, A. L. (1959). Some studies in machine learning using the game of checkers. *IBM Journal of Research and Development*, 3(3):210–229.

Samuel, A. L. (1967). Some studies in machine learning using the game of checkers II—Recent progress. *IBM Journal of Research and Development*, 11(6):601–617.

Samuelsson, C. and Rayner, M. (1991). Quantitative evaluation of explanation-based learning as an optimization tool for a large-scale natural language system. In *Proceedings of the Twelfth International Joint Conference on Artificial Intelligence (IJCAI-91)*, pages 609–615, Sydney. Morgan Kaufmann.

Saraswat, V. A. (1993). *Concurrent constraint programming*. MIT Press, Cambridge, Massachusetts.

Savage, L. J. (1954). *The Foundations of Statistics*. Wiley, New York.

Sayre, K. (1993). Three more flaws in the computational model. Paper presented at the APA (Central Division) Annual Conference, Chicago, Illinois.

Schabes, Y., Abeille, A., and Joshi, A. K. (1988). Parsing strategies with 'lexicalized' grammars: application to tree adjoining grammars. In Vargha, D., editor, *Proceedings of the 12th International Conference on Computational Linguistics (COLING)*, volume 2, pages 578–583, Budapest, Hungary. John von Neumann Society for Computer Science.

Schaeffer, J., Culberson, J., Treloar, N., and Knight, B. (1992). A world championship caliber checkers program. *Artificial Intelligence*, 53(2–3):273–289.

Schalkoff, R. J. (1990). *Artificial Intelligence: An Engineering Approach*. McGraw-Hill, New York.

Schank, R. C. and Abelson, R. P. (1977). *Scripts, Plans, Goals, and Understanding*. Lawrence Erlbaum Associates, Potomac, Maryland.

Schank, R. C. and Riesbeck, C. K. (1981). *Inside Computer Understanding: Five Programs Plus Miniatures*. Lawrence Erlbaum Associates, Potomac, Maryland.

Scherl, R. B. and Levesque, H. J. (1993). The frame problem and knowledge-producing actions. In *Proceedings of the Eleventh National Conference on Artificial Intelligence (AAAI-93)*, pages 689–695, Washington, D.C. AAAI Press.

Schmolze, J. G. and Lipkis, T. A. (1983). Classification in the KL-ONE representation system. In *Proceedings of the Eighth International Joint Conference on Artificial Intelligence (IJCAI-83)*, Karlsruhe, Germany. Morgan Kaufmann.

Schofield, P. D. A. (1967). Complete solution of the eight puzzle. In Dale, E. and Michie, D., editors, *Machine Intelligence 2*, pages 125–133. Elsevier/North-Holland, Amsterdam, London, New York.

Schönfinkel, M. (1924). Über die Bausteine der mathematischen Logik. *Mathematische Annalen*, 92:305–316. Translated into English and republished as "On the building blocks of mathematical logic" in (van Heijenoort, 1967, pp. 355–366).

Schoppers, M. J. (1987). Universal plans for reactive robots in unpredictable environments. In *Proceedings of the Tenth International Joint Conference on Artificial Intelligence (IJCAI-87)*, pages 1039–1046, Milan, Italy. Morgan Kaufmann.

Schoppers, M. J. (1989). In defense of reaction plans as caches. *AI Magazine*, 10(4):51–60.

Schröder, E. (1877). *Der Operationskreis des Logikkalküls*. B. G. Teubner, Leipzig.

Schwuttke, U. M. (1992). Artificial intelligence for real-time monitoring and control. In *Proceedings of the IEEE International Symposium on Industrial Electronics*, volume 1, pages 290–294, Xian, China.

Scriven, M. (1953). The mechanical concept of mind. *Mind*, 62:230–240.

Searle, J. R. (1969). *Speech Acts: An Essay in the Philosophy of Language*. Cambridge University Press, Cambridge.

Searle, J. R. (1980). Minds, brains, and programs. *Behavioral and Brain Sciences*, 3:417–457.

Searle, J. R. (1984). *Minds, Brains and Science*. Harvard University Press, Cambridge, Massachusetts.

Searle, J. R. (1992). *The Rediscovery of the Mind*. MIT Press, Cambridge, Massachusetts.

Sejnowski, T. J. and Rosenberg, C. R. (1987). Parallel networks that learn to pronounce English text. *Complex Systems*, 1:145–168.

Selfridge, O. G. (1959). Pandemonium: A paradigm for learning. In Blake, D. V. and Uttley, A. M., editors, *Proceedings of the Symposium on Mechanization of Thought Processes*, pages 511–529, Teddington, United Kingdom. National Physical Laboratory, Her Majesty's Stationery Office.

Selfridge, O. G. and Neisser, U. (1960). Pattern recognition by machine. *Scientific American*, 203:60–68. Reprinted in Feigenbaum and Feldman (1963).

Sells, P. (1985). *Lectures on Contemporary Syntactic Theories: An Introduction to Government-Binding Theory, Generalized Phrase Structure Grammar, and Lexical-Functional Grammar*. Center for the Study of Language and Information (CSLI), Stanford, California.

Selman, B., Levesque, H., and Mitchell, D. (1992). A new method for solving hard satisfiability problems. In *Proceedings of the Tenth National Conference on Artificial Intelligence (AAAI-92)*, pages 440–446, San Jose, California. AAAI Press.

Selman, B. and Levesque, H. J. (1993). The complexity of path-based defeasible inheritance. *Artificial Intelligence*, 62(2):303–339.

Shachter, R. D. (1986). Evaluating influence diagrams. *Operations Research*, 34:871–882.

Shachter, R. D., D'Ambrosio, B., and Del Favero, B. A. (1990). Symbolic probabilistic inference in belief networks. In *Proceedings of the Eighth National Conference on Artificial Intelligence (AAAI-90)*, pages 126–131, Boston, Massachusetts. MIT Press.

Shachter, R. D. and Peot, M. A. (1989). Simulation approaches to general probabilistic inference on belief networks. In *Proceedings of the Fifth Conference on Uncertainty in Artificial Intelligence (UAI-89)*, Windsor, Ontario. Morgan Kaufmann.

Shachter, R. S. and Kenley, C. R. (1989). Gaussian influence diagrams. *Management Science*, 35(5):527–550.

Shafer, G. (1976). *A Mathematical Theory of Evidence*. Princeton University Press, Princeton, New Jersey.

Shafer, G. and Pearl, J., editors (1990). *Readings in Uncertain Reasoning*. Morgan Kaufmann, San Mateo, California.

Shankar, N. (1986). *Proof-Checking Metamathematics*. PhD thesis, Computer Science Department, University of Texas at Austin.

Shannon, C. E. (1950). Programming a computer for playing chess. *Philosophical Magazine*, 41(4):256–275.

Shannon, C. E. and Weaver, W. (1949). *The Mathematical Theory of Communication*. University of Illinois Press, Urbana.

Shapiro, E. (1981). An algorithm that infers theories from facts. In *Proceedings of the Seventh International Joint Conference on Artificial Intelligence (IJCAI-81)*, Vancouver, British Columbia. Morgan Kaufmann.

Shapiro, E. Y. (1983). A subset of Concurrent Prolog and its interpreter. ICOT Technical Report TR-003, Institute for New Generation Computing Technology, Tokyo.

Shapiro, S. C. (1979). The SNePS semantic network processing system. In Findler, N. V., editor, *Associative Networks: Representation and Use of Knowledge by Computers*, pages 179–203. Academic Press, New York.

Shapiro, S. C. (1992). *Encyclopedia of Artificial Intelligence*. Wiley, New York, second edition. Two volumes.

Sharples, M., Hogg, D., Hutchinson, C., Torrance, S., and Young, D. (1989). *Computers and Thought: A Practical Introduction to Artificial Intelligence*. MIT Press, Cambridge, Massachusetts.

Shavlik, J. and Dietterich, T., editors (1990). *Readings in Machine Learning*. Morgan Kaufmann, San Mateo, California.

Shenoy, P. P. (1989). A valuation-based language for expert systems. *International Journal of Approximate Reasoning*, 3(5):383–411.

Shieber, S. M. (1986). *An Introduction to Unification-Based Approaches to Grammar*. Center for the Study of Language and Information (CSLI), Stanford, California.

Shirayanagi, K. (1990). Knowledge representation and its refinement in Go programs. In Marsland, A. T. and Schaeffer, J., editors, *Computers, Chess, and Cognition*, pages 287–300. Springer-Verlag, Berlin.

Shoham, Y. (1987). Temporal logics in AI: semantical and ontological considerations. *Artificial Intelligence*, 33(1):89–104.

Shoham, Y. (1988). *Reasoning about Change: Time and Causation from the Standpoint of Artificial Intelligence*. MIT Press, Cambridge, Massachusetts.

Shoham, Y. and McDermott, D. (1988). Problems in formal temporal reasoning. *Artificial Intelligence*, 36(1):49–61.

Shortliffe, E. H. (1976). *Computer-Based Medical Consultations: MYCIN*. Elsevier/North-Holland, Amsterdam, London, New York.

Shwe, M. and Cooper, G. (1991). An empirical analysis of likelihood-weighting simulation on a large, multiply connected medical belief network. *Computers and Biomedical Research*, 1991(5):453–475.

Siekmann, J. and Wrightson, G., editors (1983). *Automation of Reasoning*. Springer-Verlag, Berlin. Two volumes.

Sietsma, J. and Dow, R. J. F. (1988). Neural net pruning—why and how. In *IEEE International Conference on Neural Networks*, pages 325–333, San Diego. IEEE.

Siklossy, L. and Dreussi, J. (1973). An efficient robot planner which generates its own procedures. In *Proceedings of the Third International Joint Conference on Artificial Intelligence (IJCAI-73)*, pages 423–430, Stanford, California. IJCAII.

Simmons, R., Krotkov, E., Whittaker, W., and Albrecht, B. (1992). Progress towards robotic exploration of extreme terrain. *Applied Intelligence: The International Journal of Artificial Intelligence, Neural Networks, and Complex Problem-Solving Technologies*, 2(2):163–180.

Simon, H. A. (1958). Rational choice and the structure of the environment. In *Models of Bounded Rationality*, volume 2. MIT Press, Cambridge, Massachusetts.

Simon, H. A. (1963). Experiments with a heuristic compiler. *Journal of the Association for Computing Machinery*, 10:493–506.

Simon, H. A. (1981). *The Sciences of the Artificial*. MIT Press, Cambridge, Massachusetts, second edition.

Simon, H. A. and Newell, A. (1958). Heuristic problem solving: The next advance in operations research. *Operations Research*, 6:1–10. Based on a talk given in 1957.

Simon, H. A. and Newell, A. (1961). Computer simulation of human thinking and problem solving. *Datamation*, pages 35–37.

Siskind, J. M. (1994). Lexical acquisition in the presence of noise and homonymy. In *Proceedings of AAAI-94*.

Skinner, B. F. (1953). *Science and Human Behavior*. Macmillan, London.

Skolem, T. (1920). Logisch-kombinatorische Untersuchungen über die Erfüllbarkeit oder Beweisbarkeit mathematischer Sätze nebst einem Theoreme über die dichte Mengen. *Videnskapsselskapets skrifter, I. Matematisk-naturvidenskabelig klasse*, 4.

Skolem, T. (1928). Über die mathematische Logik. *Norsk matematisk tidsskrift*, 10:125–142.

Slagle, J. R. (1963a). A heuristic program that solves symbolic integration problems in freshman calculus. *Journal of the Association for Computing Machinery*, 10(4). Reprinted in Feigenbaum and Feldman (1963).

Slagle, J. R. (1963b). Game trees, *m* & *n* minimaxing, and the *m* & *n* alpha-beta procedure. Artificial Intelligence Group Report 3, University of California, Lawrence Radiation Laboratory, Livermore, California.

Slagle, J. R. (1971). *Artificial Intelligence: The Heuristic Programming Approach*. McGraw-Hill, New York.

Slagle, J. R. and Dixon, J. K. (1969). Experiments with some programs that search game trees. *Journal of the Association for Computing Machinery*, 16(2):189–207.

Slate, D. J. and Atkin, L. R. (1977). CHESS 4.5—The Northwestern University chess program. In Frey, P. W., editor, *Chess Skill in Man and Machine*, pages 82–118. Springer-Verlag, Berlin.

Slater, E. (1950). Statistics for the chess computer and the factor of mobility. In *Symposium on Information Theory*, pages 150–152, London. Ministry of Supply.

Sloman, A. (1978). *The Computer Revolution in Philosophy*. Harvester Press, Hassocks, Sussex.

Sloman, A. (1985). POPLOG, a multi-purpose multi-language program development environment. In *Artificial Intelligence—Industrial and Commercial Applications. First International Conference*, pages 45–63, London. Queensdale.

Smallwood, R. D. and Sondik, E. J. (1973). The optimal control of partially observable Markov processes over a finite horizon. *Operations Research*, 21:1071–1088.

Smith, D. E. (1989). Controlling backward inference. *Artificial Intelligence*, 39(2):145–208.

Smith, D. E., Genesereth, M. R., and Ginsberg, M. L. (1986). Controlling recursive inference. *Artificial Intelligence*, 30(3):343–389.

Smith, D. R. (1990). KIDS: a semiautomatic program development system. *IEEE Transactions on Software Engineering*, 16(9):1024–1043.

Soderland, S. and Weld, D. (1991). Evaluating nonlinear planning. Technical Report TR-91-02-03, University of Washington Department of Computer Science and Engineering, Seattle, Washington.

Solomonoff, R. J. (1964). A formal theory of inductive inference. *Information and Control*, 7:1–22, 224–254.

Sondik, E. J. (1971). *The Optimal Control of Partially Observable Markov Decision Processes*. PhD thesis, Stanford University, Stanford, California.

Spiegelhalter, D., Dawid, P., Lauritzen, S., and Cowell, R. (1993). Bayesian analysis in expert systems. *Statistical Science*, 8:219–282.

Spiegelhalter, D. J. (1986). Probabilistic reasoning in predictive expert systems. In Kanal, L. N. and Lemmer, J. F., editors, *Uncertainty in Artificial Intelligence*, pages 47–67. Elsevier/North-Holland, Amsterdam, London, New York.

Spirtes, P., Glymour, C., and Scheines, R. (1993). *Causation, prediction, and search*. Springer-Verlag, Berlin.

Srivas, M. and Bickford, M. (1990). Formal verification of a pipelined microprocessor. *IEEE Software*, 7(5):52–64.

Steele, G. (1990). *Common LISP: The Language*. Digital Press, Bedford, Massachusetts, second edition.

Stefik, M. J. (1981a). Planning and meta-planning. *Artificial Intelligence*, 16:141–169.

Stefik, M. J. (1981b). Planning with constraints. *Artificial Intelligence*, 16:111–140.

Sterling, L. and Shapiro, E. (1986). *The Art of Prolog*. MIT Press, Cambridge, Massachusetts.

Stevens, K. A. (1981). The information content of texture gradients. *Biological Cybernetics*, 42:95–105.

Stickel, M. E. (1985). Automated deduction by theory resolution. *Journal of Automated Reasoning*, 1(4):333–355.

Stickel, M. E. (1988). A Prolog Technology Theorem Prover: implementation by an extended Prolog compiler. *Journal of Automated Reasoning*, 4:353–380.

Stockman, G. (1979). A minimax algorithm better than alpha-beta? *Artificial Intelligence*, 12(2):179–196.

Stolcke, A. (1993). An efficient probabilistic context-free parsing algorithm that computes prefix probabilities. Report TR-93-065, ICSI, Berkeley.

Stone, H. S. and Stone, J. (1986). Efficient search techniques: an empirical study of the *n*-queens problem. Technical Report RC 12057, IBM Thomas J. Watson Research Center, Yorktown Heights, New York.

Stonebraker, M. (1992). The integration of rule systems and database systems. *IEEE Transactions on Knowledge and Data Engineering*, 4(5):415–423.

Strachey, C. S. (1952). Logical or non-mathematical programmes. In *Proceedings of the Association for Computing Machinery (ACM)*, pages 46–49, Ontario, Canada.

Subramanian, D. (1993). Artificial intelligence and conceptual design. In *Proceedings of the Thirteenth International Joint Conference on Artificial Intelligence (IJCAI-93)*, pages 800–809, Chambery, France. Morgan Kaufmann.

Subramanian, D. and Feldman, R. (1990). The utility of EBL in recursive domain theories. In *Proceedings of the Eighth National Conference on Artificial Intelligence (AAAI-90)*, volume 2, pages 942–949, Boston, Massachusetts. MIT Press.

Subramanian, D. and Wang, E. (1994). Constraint-based kinematic synthesis. In *Proceedings of the International Conference on Qualitative Reasoning*. AAAI Press.

Sugihara, K. (1984). A necessary and sufficient condition for a picture to represent a polyhedral scene. *IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)*, 6(5):578–586.

Sussman, G. J. (1975). *A Computer Model of Skill Acquisition*. Elsevier/North-Holland, Amsterdam, London, New York.

Sussman, G. J. and McDermott, D. V. (1972). From PLANNER to CONNIVER—a genetic approach. In *Proceedings of the 1972 AFIPS Joint Computer Conference*, pages 1171–1179.

Sussman, G. J. and Winograd, T. (1970). MICRO-PLANNER Reference Manual. AI Memo 203, MIT AI Lab, Cambridge, Massachusetts.

Sutton, R. S. (1988). Learning to predict by the methods of temporal differences. *Machine Learning*, 3:9–44.

Swade, D. D. (1993). Redeeming Charles Babbage's mechanical computer. *Scientific American*, 268(2):86–91.

Tadepalli, P. (1993). Learning from queries and examples with tree-structured bias. In *Proceedings of the Tenth International Conference on Machine Learning*, Amherst, Massachusetts. Morgan Kaufmann.

Tait, P. G. (1880). Note on the theory of the "15 puzzle". *Proceedings of the Royal Society of Edinburgh*, 10:664–665.

Taki, K. (1992). Parallel inference machine PIM. In *Fifth Generation Computer Systems 1992*, volume 1, pages 50–72, Tokyo. IOS Press.

Tambe, M., Newell, A., and Rosenbloom, P. S. (1990). The problem of expensive chunks and its solution by restricting expressiveness. *Machine Learning*, 5:299–348.

Tanimoto, S. (1990). *The Elements of Artificial Intelligence Using Common LISP*. Computer Science Press, Rockville, Maryland.

Tarjan, R. E. (1983). *Data Structures and Network Algorithms*. CBMS-NSF Regional Conference Series in Applied Mathematics. SIAM (Society for Industrial and Applied Mathematics, Philadelphia, Pennsylvania.

Tarski, A. (1935). Die Wahrheitsbegriff in den formalisierten Sprachen. *Studia Philosophica*, 1:261–405.

Tarski, A. (1956). *Logic, Semantics, Metamathematics: Papers from 1923 to 1938*. Oxford University Press, Oxford.

Tash, J. K. and Russell, S. J. (1994). Control strategies for a stochastic planner. In *Proceedings of the Twelfth National Conference on Artificial Intelligence (AAAI-94)*, Seattle, Washington. AAAI Press.

Tate, A. (1975a). Interacting goals and their use. In *Proceedings of the Fourth International Joint Conference on Artificial Intelligence (IJCAI-75)*, pages 215–218, Tbilisi, Georgia. IJCAII.

Tate, A. (1975b). *Using Goal Structure to Direct Search in a Problem Solver*. PhD thesis, University of Edinburgh, Edinburgh, Scotland.

Tate, A. (1977). Generating project networks. In *Proceedings of the Fifth International Joint Conference on Artificial Intelligence (IJCAI-77)*, pages 888–893, Cambridge, Massachusetts. IJCAII.

Tate, A. and Whiter, A. M. (1984). Planning with multiple resource constraints and an application to a naval planning problem. In *Proceedings of the First Conference on AI Applications*, pages 410–416, Denver, Colorado.

Tatman, J. A. and Shachter, R. D. (1990). Dynamic programming and influence diagrams. *IEEE Transactions on Systems, Man and Cybernetics*, 20(2):365–379.

Taylor, R. J. (1989). Review of ernst (1961). In Khatib, O., Craig, J. J., and Lozano-Pérez, T., editors, *The Robotics Review 1*, pages 121–127. MIT Press, Cambridge, Massachusetts.

Tenenberg, J. (1988). Abstraction in planning. Technical Report TR250, University of Rochester, Rochester, New York.

Tennant, H. R., Ross, K. M., Saenz, R. M., and Thompson, C. W. (1983). Menu-based natural language understanding. In *21st Annual Meeting of the Association for Computational Linguistics: Proceedings of the Conference*, pages 151–158, Cambridge, Massachusetts.

Tesauro, G. (1992). Practical issues in temporal difference learning. *Machine Learning*, 8(3–4):257–277.

Tesauro, G. and Sejnowski, T. J. (1989). A parallel network that learns to play backgammon. *Artificial Intelligence*, 39(3):357–390.

Thomason, R. H., editor (1974). *Formal Philosophy: Selected Papers of Richard Montague*. Yale University Press, New Haven, Connecticut.

Thorne, J., Bratley, P., and Dewar, H. (1968). The syntactic analysis of English by machine. In Michie, D., editor, *Machine Intelligence 3*, pages 281–310. Elsevier/North-Holland, Amsterdam, London, New York.

Todd, B. S., Stamper, R., and Macpherson, P. (1993). A probabilistic rule-based expert system. *International Journal of Bio-Medical Computing*, 33(2):129–148.

Tomasi, C. and Kanade, T. (1992). Shape and motion from image streams under orthography: a factorization method. *International Journal of Computer Vision*, 9:137–154.

Touretzky, D. S. (1986). *The Mathematics of Inheritance Systems*. Pitman and Morgan Kaufmann, London and San Mateo, California.

Touretzky, D. S., editor (1989). *Advances in Neural Information Processing Systems 1*. Morgan Kaufmann, San Mateo, California.

Turing, A. M. (1936). On computable numbers, with an application to the Entscheidungsproblem. *Proceedings of the London Mathematical Society, 2nd series*, 42:230–265. Correction published in Vol. 43, pages 544–546.

Turing, A. M. (1950). Computing machinery and intelligence. *Mind*, 59:433—460.

Turing, A. M., Strachey, C., Bates, M. A., and Bowden, B. V. (1953). Digital computers applied to games. In Bowden, B. V., editor, *Faster Than Thought*, pages 286–310. Pitman, London. Turing is believed to be sole author of the section of this paper that deals with chess.

Tversky, A. and Kahneman, D. (1982). Causal schemata in judgements under uncertainty. In Kahneman, D., Slovic, P., and Tversky, A., editors, *Judgement Under Uncertainty: Heuristics and Biases*. Cambridge University Press, Cambridge.

Ueda, K. (1985). Guarded Horn clauses. ICOT Technical Report TR-103, Institute for New Generation Computing Technology, Tokyo.

Ullman, J. D. (1989). *Principles of Database and Knowledge-Base Bystems.* Computer Science Press, Rockville, Maryland.

Ullman, S. (1979). *The Interpretation of Visual Motion*. MIT Press, Cambridge, Massachusetts.

Valiant, L. (1984). A theory of the learnable. *Communications of the Association for Computing Machinery*, 27:1134–1142.

van Benthem, J. (1983). *The Logic of Time*. D. Reidel, Dordrecht, The Netherlands.

van Benthem, J. (1985). *A Manual of Intensional Logic*. Center for the Study of Language and Information (CSLI), Stanford, California.

van Harmelen, F. and Bundy, A. (1988). Explanation-based generalisation = partial evaluation. *Artificial Intelligence*, 36(3):401–412.

van Heijenoort, J., editor (1967). *From Frege to Gödel: A Source Book in Mathematical Logic, 1879–1931*. Harvard University Press, Cambridge, Massachusetts.

Van Roy, P. L. (1990). Can logic programming execute as fast as imperative programming? Report UCB/CSD 90/600, Computer Science Division, University of California, Berkeley. Ph.D. dissertation.

VanLehn, K. (1978). Determining the scope of English quantifiers. Technical Report AI-TR-483, MIT AI Lab.

Vapnik, V. N. and Chervonenkis, A. Y. (1971). On the uniform convergence of relative frequencies of events to their probabilities. *Theory of Probability and Its Applications*, 16:264–280.

Vasconcellos, M. and León, M. (1985). SPANAM and ENGSPAN: machine translation at the Pan American Health Organization. *Computational Linguistics*, 11(2–3):122–136.

Veloso, M. and Carbonell, J. (1993). Derivational analogy in PRODIGY: automating case acquisition, storage, and utilization. *Machine Learning*, 10:249–278.

Vendler, Z. (1967). *Linguistics and Philosophy*. Cornell University Press, Ithaca, New York.

Vendler, Z. (1968). *Adjectives and Nominalizations*. Mouton, The Hague and Paris.

Vere, S. A. (1983). Planning in time: windows and durations for activities and goals. *IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)*, 5:246–267.

von Mises, R. (1928). *Wahrscheinlichkeit, Statistik und Wahrheit*. J. Springer, Berlin. Translated into English as von Mises (1957).

von Mises, R. (1957). *Probability, Statistics, and Truth*. Allen and Unwin, London.

Von Neumann, J. (1958). *The Computer and the Brain*. Yale University Press, New Haven, Connecticut.

Von Neumann, J. and Morgenstern, O. (1944). *Theory of games and economic behavior*. Princeton University Press, Princeton, New Jersey, first edition.

von Winterfeldt, D. and Edwards, W. (1986). *Decision Analysis and Behavioral Research*. Cambridge University Press, Cambridge.

Voorhees, E. M. (1993). Using WordNet to disambiguate word senses for text retrieval. In *Sixteenth Annual International ACM SIGIR Conference on Research and Development in Information Retrieval*, pages 171–80, Pittsburgh, Pennsylvania. Association for Computing Machinery.

Waibel, A. and Lee, K.-F. (1990). *Readings in Speech Recognition*. Morgan Kaufmann, San Mateo, California.

Waldinger, R. (1975). Achieving several goals simultaneously. In Elcock, E. W. and Michie, D., editors, *Machine Intelligence 8*, pages 94–138. Ellis Horwood, Chichester, England.

Waltz, D. (1975). Understanding line drawings of scenes with shadows. In Winston, P. H., editor, *The Psychology of Computer Vision*. McGraw-Hill, New York.

Wand, M. (1980). Continuation-based program transformation strategies. *Journal of the ACM*, 27(1):174–180.

Wang, H. (1960). Toward mechanical mathematics. *IBM Journal of Research and Development*, 4:2–22.

Wanner, E. and Gleitman, L., editors (1982). *Language Acquisition: The State of the Art*. Cambridge University Press.

Warren, D. H. D. (1974). WARPLAN: a system for generating plans. Department of Computational Logic Memo 76, University of Edinburgh, Edinburgh, Scotland.

Warren, D. H. D. (1976). Generating conditional plans and programs. In *Proceedings of the AISB Summer Conference*, pages 344–354.

Warren, D. H. D. (1983). An abstract Prolog instruction set. Technical Note 309, SRI International, Menlo Park, California.

Warren, D. H. D., Pereira, L. M., and Pereira, F. (1977). PROLOG: The language and its implementation compared with LISP. *SIGPLAN Notices*, 12(8):109–115.

Wasserman, P. D. and Oetzel, R. M., editors (1990). *NeuralSource: The Bibliographic Guide to Artificial Neural Networks*. Van Nostrand Reinhold, New York.

Watkins, C. J. (1989). *Models of Delayed Reinforcement Learning*. PhD thesis, Psychology Department, Cambridge University, Cambridge, United Kingdom.

Watson, C. S. (1991). Speech-perception aids for hearing-impaired people: current status and needed research. *Journal of the Acoustical Society of America*, 90(2):637–685.

Webber, B. L. (1983). So what can we talk about now. In Brady, M. and Berwick, R., editors, *Computational Models of Discourse*. MIT Press. Reprinted in Grosz *et al.* (1986).

Webber, B. L. (1988). Tense as discourse anaphora. *Computational Linguistics*, 14(2):61–73.

Webber, B. L. and Nilsson, N. J. (1981). *Readings in Artificial Intelligence*. Morgan Kaufmann, San Mateo, California.

Weiss, S. M. and Kulikowski, C. A. (1991). *Computer Systems That Learn: Classification and Prediction Methods from Statistics, Neural Nets, Machine Learning, and Expert Systems*. Morgan Kaufmann, San Mateo, California.

Weizenbaum, J. (1965). ELIZA—a computer program for the study of natural language communication between man and machine. *Communications of the Association for Computing Machinery*, 9(1):36–45.

Weizenbaum, J. (1976). *Computer Power and Human Reason*. W. H. Freeman, New York.

Weld, D. and Etzioni, O. (1994). The first law of robotics: A call to arms. In *Proceedings of the Twelfth National Conference on Artificial Intelligence (AAAI-94)*, Seattle, Washington. AAAI Press.

Weld, D. S. (1994). An introduction to least commitment planning. *AI Magazine*. To appear.

Weld, D. S. and de Kleer, J. (1990). *Readings in Qualitative Reasoning about Physical Systems*. Morgan Kaufmann, San Mateo, California.

Wellman, M. and Doyle, J. (1992). Modular utility representation for decision-theoretic planning. In *Proceedings, First International Conference on AI Planning Systems*, College Park, Maryland. Morgan Kaufmann.

Wellman, M. P. (1985). Reasoning about preference models. Technical Report MIT/LCS/TR-340, Laboratory for Computer Science, MIT, Cambridge, Massachusetts. M.S. thesis.

Wellman, M. P. (1988). *Formulation of Tradeoffs in Planning under Uncertainty*. PhD thesis, Massachusetts Institute of Technology, Cambridge, Massachusetts.

Wellman, M. P. (1990). Fundamental concepts of qualitative probabilistic networks. *Artificial Intelligence*, 44(3):257–303.

Werbos, P. (1974). *Beyond Regression: New Tools for Prediction and Analysis in the Behavioral Sciences*. PhD thesis, Harvard University, Cambridge, Massachusetts.

Wheatstone, C. (1838). On some remarkable, and hitherto unresolved, phenomena of binocular vision. *Philosophical Transactions of the Royal Society of London*, 2:371–394.

Whitehead, A. N. (1911). *An Introduction to Mathematics*. Williams and Northgate, London.

Whitehead, A. N. and Russell, B. (1910). *Principia Mathematica*. Cambridge University Press, Cambridge.

Whorf, B. (1956). *Language, Thought, and Reality*. MIT Press, Cambridge, Massachusetts.

Widrow, B. (1962). Generalization and information storage in networks of adaline "neurons". In Yovits, M. C., Jacobi, G. T., and Goldstein, G. D., editors, *Self-Organizing Systems 1962*, pages 435–461, Chicago, Illinois. Spartan.

Widrow, B. and Hoff, M. E. (1960). Adaptive switching circuits. In *1960 IRE WESCON Convention Record*, pages 96–104, New York.

Wiener, N. (1942). The extrapolation, interpolation, and smoothing of stationary time series. OSRD 370, Report to the Services 19, Research Project DIC-6037, MIT.

Wiener, N. (1948). *Cybernetics*. Wiley, New York.

Wilensky, R. (1983). *Planning and Understanding*. Addison-Wesley.

Wilensky, R. (1990). Computability, consciousness, and algorithms. *Behavioral and Brain Sciences*, 13(4):690–691. Peer commentary on Penrose (1990).

Wilkins, D. E. (1980). Using patterns and plans in chess. *Artificial Intelligence*, 14(2):165–203.

Wilkins, D. E. (1986). Hierarchical planning: definition and implementation. In *ECAI '86: Seventh European Conference on Artificial Intelligence*, volume 1, pages 466–478, Brighton, United Kingdom.

Wilkins, D. E. (1988). *Practical Planning: Extending the AI Planning Paradigm*. Morgan Kaufmann, San Mateo, California.

Wilkins, D. E. (1990). Can AI planners solve practical problems? *Computational Intelligence*, 6(4):232–246.

Wilks, Y. (1975). An intelligent analyzer and understander of English. *Communications of the ACM*, 18(5):264–274. Reprinted in Grosz *et al.* (1986).

Wilson, R. H. and Schweikard, A. (1992). Assembling polyhedra with single translations. In *IEEE Conference on Robotics and Automation*, pages 2392–2397.

Winograd, S. and Cowan, J. D. (1963). *Reliable Computation in the Presence of Noise*. MIT Press, Cambridge, Massachusetts.

Winograd, T. (1972). Understanding natural language. *Cognitive Psychology*, 3(1). Reprinted as a book by Academic Press.

Winograd, T. and Flores, F. (1986). *Understanding Computers and Cognition*. Ablex, Norwood, New Jersey.

Winston, P. H. (1970). Learning structural descriptions from examples. Technical Report MAC-TR-76, Department of Electrical Engineering and Computer Science, Massachusetts Institute of Technology, Cambridge, Massachusetts. PhD dissertation.

Winston, P. H. (1992). *Artificial Intelligence*. Addison-Wesley, Reading, Massachusetts, third edition.

Wittgenstein, L. (1922). *Tractatus Logico-Philosophicus*. Routledge and Kegan Paul, London, second edition. Reprinted 1971, edited by D. F. Pears and B. F. McGuinness. This edition of the English translation also contains Wittgenstein's original German text on facing pages, as well as Bertrand Russell's introduction to the 1922 edition.

Wittgenstein, L. (1953). *Philosophical Investigations*. Macmillan, London.

Woehr, J. (1994). Lotfi visions, part 2. *Dr. Dobbs Journal*, 217.

Wojciechowski, W. S. and Wojcik, A. S. (1983). Automated design of multiple-valued logic circuits by automated theorem proving techniques. *IEEE Transactions on Computers*, C-32(9):785–798.

Wojcik, A. S. (1983). Formal design verification of digital systems. In *ACM IEEE 20th Design Automation Conference Proceedings*, pages 228–234, Miami Beach, Florida. IEEE.

Woods, W. (1972). Progress in natural language understanding: An application to lunar geology. In *AFIPS Conference Proceedings*, Vol. 42.

Woods, W. (1978). Semantics and quantification in natural language question answering. In *Advances in Computers*. Academic Press. Reprinted in Grosz *et al.* (1986).

Woods, W. A. (1970). Transition network grammars for natural language analysis. *Communications of the Association for Computing Machinery*, 13(10):591–606.

Woods, W. A. (1973). Progress in natural language understanding: An application to lunar geology. In *AFIPS Conference Proceedings*, volume 42, pages 441–450.

Woods, W. A. (1975). What's in a link: Foundations for semantic networks. In Bobrow, D. G. and Collins, A. M., editors, *Representation and Understanding: Studies in Cognitive Science*, pages 35–82. Academic Press, New York.

Wos, L., Carson, D., and Robinson, G. (1964). The unit preference strategy in theorem proving. In *Proceedings of the Fall Joint Computer Conference*, pages 615–621.

Wos, L., Carson, D., and Robinson, G. (1965). Efficiency and completeness of the set-of-support strategy in theorem proving. *Journal of the Association for Computing Machinery*, 12:536–541.

Wos, L., Overbeek, R., Lusk, E., and Boyle, J. (1992). *Automated Reasoning: Introduction and Applications*. McGraw-Hill, New York, second edition.

Wos, L., Robinson, G., Carson, D., and Shalla, L. (1967). The concept of demodulation in theorem proving. *Journal of the Association for Computing Machinery*, 14:698–704.

Wos, L. and Robinson, G. A. (1968). Paramodulation and set of support. In *Proceedings of the IRIA Symposium on Automatic Demonstration*, pages 276–310. Springer-Verlag.

Wos, L. and Winker, S. (1983). Open questions solved with the assistance of AURA. In Bledsoe, W. W. and Loveland, D. W., editors, *Automated Theorem Proving: After 25 Years: Proceedings of the Special Session of the 89th Annual Meeting of the American Mathematical Society*, pages 71–88, Denver, Colorado. American Mathematical Society.

Wright, S. (1921). Correlation and causation. *Journal of Agricultural Research*, 20:557–585.

Wright, S. (1934). The method of path coefficients. *Annals of Mathematical Statistics*, 5:161–215.

Wu, D. (1993). Estimating probability distributions over hypotheses with variable unification. In *Proceedings of the Thirteenth International Joint Conference on Artificial Intelligence (IJCAI-93)*, pages 790–795, Chambery, France. Morgan Kaufmann.

Yang, Q. (1990). Formalizing planning knowledge for hierarchical planning. *Computational Intelligence*, 6:12–24.

Yarowsky, D. (1992). Word-sense disambiguation using statistical models of Roget's categories trained on large corpora. In *Proceedings of COLING-92*, pages 454–460, Nantes, France.

Yip, K. M.-K. (1991). *KAM: A System for Intelligently Guiding Numerical Experimentation by Computer*. MIT Press, Cambridge, Massachusetts.

Yoshikawa, T. (1990). *Foundations of Robotics: Analysis and Control*. MIT Press, Cambridge, Massachusetts.

Younger, D. H. (1967). Recognition and parsing of context-free languages in time n^3. *Information and Control*, 10(2):189–208.

Zadeh, L. A. (1965). Fuzzy sets. *Information and Control*, 8:338–353.

Zadeh, L. A. (1978). Fuzzy sets as a basis for a theory of possibility. *Fuzzy Sets and Systems*, 1:3–28.

Zermelo, E. (1976). An application of set theory to the theory of chess-playing. *Firbush News*, 6:37–42. English translation of German paper given at the 5th International Congress of Mathematics, Cambridge, England, in 1912.

Zilberstein, S. (1993). *Operational Rationality through Compilation of Anytime Algorithms*. PhD thesis, University of California, Berkeley, California.

Zimmermann, H.-J. (1991). *Fuzzy Set Theory—And Its Applications*. Kluwer, Dordrecht, The Netherlands, second revised edition.

Zobrist, A. L. (1970). *Feature Extraction and Representation for Pattern Recognition and the Game of Go*. PhD thesis, University of Wisconsin.

Zue, V., Seneff, S., Polifroni, J., Phillips, M., Pao, C., Goddeau, D., Glass, J., and Brill, E. (1994). Pegasus: A spoken language interface for on-line air travel planning. In *ARPA Workshop on Human Language Technology*.

Zuse, K. (1945). The Plankalkül. Report 175, Gesellschaft für Mathematik und Datenverarbeitung, Bonn. Technical report version republished in 1989.