D W Aha, D Kibler, and M K Albert, "Instance-Based Learning Algorithms," *Machine Learning 6*, pp. 37-66, 1991.

D Alan Allport, "Attention and Control: Have We Been Asking the Wrong Questions? A Critical Review of Twenty-Five Years," *Attention and Performance 14*, D E Meyer and S Kornblum (eds), Cambridge, MA: MIT Press.

Yiannis Aloimonos, editor, Active Vision, Lawrence Erlbaum Associates, Inc., 1993.

R A Andersen, "The Role of the Inferior Parietal Lobule in Spatial Perception and Visual-Motor Integration," *Handbook of Physiology: The Nervous System, Volume 5, Higher Functions of the Brain*, F Plum, V B Mountcastle, and S R Geiger (eds), Bethesda, MD: American Physiological Society, 1987.

R A Andersen, "Visual and Eye Movement Functions of the Posterior Parietal Cortex," *Annual Review of Neuroscience 12*, pp. 377-403, 1989.

Bruce Blumberg, "Action-Selection in Hamsterdam: Lessons from Ethology," *Proceedings of the Third International Conference on the Simulation of Adaptive Behavior*, Brighton, England, 1994.

Lashon Booker, "Classifier Systems that Learn Internal World Models," *Machine Learning Journal*, Volume 1, Number 2,3, 1988.

Donald E Broadbent, *Perception and Communication*, Pergamon Press, London & NY, 1958.

Donald E Broadbent, Decision and Stress, Academic Press, London, 1971.

Rodney Brooks, "A Robust Layered Control System for a Mobile Robot," *IEEE Journal of Robotics and Automation, RA-2*, pp. 14-23, April 1986.

Bruce G Buchanan and Edward A Feigenbaum, Forward, *Knowledge Based Systems in Artificial Intelligence*, Randall Davis and Douglas B Lenat (eds), McGraw-Hill, NY, 1982.

B E Butler and A Currie, "On the Nature of Perceptual Limits in Vision: A New Look at Lateral Masking," *Psychological Research* 48, pp 201-209, 1986.

David Chapman, Vision, Instruction, and Action, MIT TR-1204 (doctoral thesis), April 1990.

Damaris Christensen, "A Bee and How It Sees, That is the Question," *Science News*, 145:11 (March 12 1994), p.166.

Michael T Cox and Ashwin Ram, "An Explicit Representation of Forgetting," *Proceedings* of the Sixth International Conferences on Systems Research, Informatics and Cybernetics, pp. 115-120, Baden-Baden, Germany, August 1992.

Michael T Cox and Ashwin Ram, "Choosing Learning Strategies to Achieve Learning Goals," to appear in *Proceedings of the AAAI Spring Symposium on Goal-Driven Learning*, Marie desJardins and Ashram Ram (eds), Menlo Park, CA, AAAI Press, 1994.

O Creutzfeldt, "Multiple Visual Areas: Multiple Sensorimotor Links," *Models of Visual Cortex*, D Rose and V G Dobson (eds), pp. 54-61, New York: John Wiley, 1985.

Trevor Darrell, Pattie Maes, Bruce Blumberg, and Sandy Pentland, *Situated Vision and Behavior for Interactive Environments*, Technical Note #261, 1994, MIT Media Lab Perceptual Computing Group, Massachusetts Institute of Technology.

Marie desJardins, "Goal-Directed Learning: A Decision-Theoretic Model for Deciding What to Learn Next," *Proceedings of the ML-92 Workshop on Machine Discovery*, pp. 147-151, Ninth International Machine Learning Conference, University of Aberdeen, Scotland.

Daniel C Dennett and Marcel Kinsbourne, "Time and the Observer: The Where and When of Consciousness in the Brain," *Behavioral and Brain Sciences 15*, pp. 183-247, 1992.

T G Dietterich and R S Michalski, "Inductive Learning of Structural Description: Evaluation Criteria and Comparative Review of Selected Method," *Artificial Intelligence 16*, pp. 257-294, 1981.

E A DeYoe and D C Van Essen, "Concurrent Processing Streams in Monkey Visual Cortex," *Trends in Neurosciences 11*, pp. 219-226, 1988.

Gary Drescher, *Made Up Minds: A Constructivist Approach to Artificial Intelligence*, MIT Press, 1991.

Gary Drescher, personal communication, July 6, 1993.

Gary Drescher, personal communication, May 3, 1994.

J Driver and S P Tipper, "On the Nonselectivity of 'Selective Seeing:' Contracts Between Interfence and Priming in Selective Attention," *Journal of Experimental Psychology: Human Perception and Performance 15*, pp. 304-314, 1989.

R Ellis, D Alan Allport, G W Humphreys, and J Collis, "Varieties of Object Constancy," *Quarterly Journal of Experimental Psychology 41A*, pp. 775-796, 1989.

O Etzioni, "Hypothesis Filtering: A Practical Approach to Reliable Learning," *Proceedings of the Fifth International Conference on Machine Learning*, pp. 416-429, Morgan Kaufmann, Ann Arbor, MI, 1988.

J A Feldman, "Four Frames Suffice: A Provisional Model of Vision and Space," *Behavioral and Brain Sciences* 8, pp. 265-289, 1985.

Daniel J Felleman and David C Van Essen, "Distributed Hierarchical Processing in the Primate Cerebral Cortex," *Cerebral Cortex*, Jan/Feb 1991.

Leonard Foner, "Paying Attention to What's Important: Using Focus of Attention to Improve Unsupervised Learning," *Proceedings of the Third International Conference on the Simulation of Adaptive Behavior*, Brighton, England, 1994.

H Gallare and J Minker, Logic and Data Bases, Plenum, NY, 1978.

J Garcia, B K McGowan, and K F Green, "Biological Constraints on Conditioning," *Biological Boundaries of Learning*, edited by M E P Seligman and J L Hager, Appleton-Century-Crofts, New York, 1972, pp. 21-43.

J H Gennari, "Focused Concept Formation," *Proceedings of the Sixth International Workshop on Machine Learning*, pp. 379-382, Morgan Kaufmann, Ithaca, NY, 1989.

A H C Van der Heijden, *Selective Attention in Vision*, Routledge, Chapman, and Hall, Inc, NY, NY, 1992.

John H Holland, "Escaping Brittleness: The Possibilities of General-Purpose Learning Algorithms Appled to Parallel Rule-Based Systems," *Machine Learning: An Artificial Inelligence Approach, Volume 2*, R S Michalski, J G Carbonell, and T M Mitchell (eds), Morgan Kaufmann, Los Altos, CA, 1986.

G E Hinton and L M Parsons, "Scene-Based and Viewer-Centred Representations for Comparing Shapes," *Cognition 30*, pp. 1-35, 1988.

Lawrence Hunter, "Planning to Discover: Applications of Goal-Driven Learning to Molecular Biology," MIT AI Lab Revolving Seminar Series, April 21, 1994.

G A Iba, "A Heuristic Approach to the Discovery of Macro-Operators," *Machine Learning 3*, pp. 285-317, 1989.

J C Johnston and H Pashler, "Close Binding of Identity and Location in Visual Feature Perception," *Journal of Experimental Psychology: Human Perception and Performance 16*, pp. 843-856, 1990.

W A Johnston and V J Dark, "Selective Attention," *Annual review of Psychology 37*, pp. 43-75, 1986.

Bela Julesz, "A Brief Outline of the Texton Theory of Human Vision," *Trends in Neuroscience*, pp. 41-45, February 1984.

Leslie Pack Kaelbling, Learning in Embedded Systems, MIT Press, 1993.

Leslie Pack Kaelbling and David Chapman, "Learning from Delayed Reinforcement in a Complex Domain," Teleos TR-90-11, December 1990.

D Kahneman, Attention and Effort, Englewood Cliffs, NJ: Prentice-Hall, 1973.

D Kahneman and Anne M Treisman, "Changing Views of Attention and Automaticity," *Varieties of Attention*, R Parasuraman and D R Davies (eds), pp. 29-61, New York: Academic Press, 1984.

M R Keller, "Concept Learning in Context," *Proceedings of the Fourth International Workshop on Machine Learning*, pp. 482-487, Morgan Kaufmann, Irvine, CA.

R A Kinchla, "The Measurement of Attention," *Attention and Performance 8*, R S Nickerson (ed), Lawrence Erlbaum Associates, NJ, 1980.

Christof Koch and Shimon Ullman, "Selecting One Among the Many: A Simple Network Implementing Shifts in Selective Visual Attention," *Human Neurobiology 4*, pp. 219-227, 1985. Also MIT AI Memo 770 and CBIP Paper 003, January 1984.

David Leake and Ashwin Ram, "Goal-Driven Learning: Fundamental Issues and Symposium Report," Technical Report 85, Cognitive Science Program, Indiana University, Bloomington, Indiana, January 1993.

A R Luria, E N Pravdina-Vinarskaya, and A L Yarbuss, "Disorders of Ocular Movement in a Case of Simultanagnosia," *Brain 86*, pp. 219-228, 1963.

Pattie Maes, "ALIVE: An Artificial Life Interactive Video Environment," Visual Proceedings, The Art and Interdisciplinary Programs of Siggraph 1993.

Pattie Maes, "Learning Behavior Networks from Experience," *Toward a Practice of Autonomous Systems, Proceedings of the First European Conference on Artificial Life*, edited by F J Varela and P Bourgine, MIT Press/Bradford Books, 1992.

Pattie Maes, "Modeling Adaptive Autonomous Agents," *Artificial Life Journal, Volume 1, Numbers 1/2* (Fall 1993/Winter 1994), Christopher G Langton (ed), MIT Press, Cambridge, MA, 1994.

Scott Markovitch and Paul D Scott, "The Role of Forgetting in Learning," *Proceedings of the Fifth International Conference on Machine Learning*, pp. 459-465, Morgan Kaufmann, Ann Arbor, MI, 1988.

Scott Markovitch and Paul D Scott, "Post-PROLOG: Structured Partially Ordered PRO-LOG," TR CMI-89-018, Center for Machine Intelligence, Ann Arbor, MI, 1989.

David Marr, Vision, San Francisco: Freeman, 1982.

Marvin Minsky, The Society of Mind, Simon and Shuster, 1986.

T M Mitchell, "Generalization as Search," Artificial Intelligence 18, pp. 203-226, 1982.

T M Mitchell, P E Utgoff, and R Banerji, "Learning by Experimentation: Acquiring and Refining Problem-Solving Heuristics," *Machine Learning: An Artificial Intelligence Approach*, R S Michalski, J G Carbonell, and T M Mitchell (eds), Tioga, Palo Alto, CA, 1983.

R Mooney, "The Effect of Rule Use on the Utility of Explanation-Based Learning," *Proceedings of the Eleventh International Joint Conference for Artificial Intelligence*, pp. 725-730, Morgan Kaufmann, Detroit, MI, 1989.

Andrew Moore and Christopher G Atkeson, "Prioritized Sweeping: Reinforcement Learning with Less Data and Less Time," *Machine Learning 13:1*, pp. 103ff, October 1993.

S Minton, *Learning Search Control Knowledge: An Explanation-Based Approach*, Kluwer, Boston, MA, 1988.

L A Morrow and G Ratcliff, "The Disengagement of Covert Attention and the Neglect Syndrome," *Psychobiology 3*, 261-269.

D Mumford, "On the Computational Architecture of the Neocortex: I. The Role of the Thalamo-Cortical Loop," *Biological Cybernetics* 65, pp. 135-145, Springer-Verlag, 1991.

Peter Norvig, Paradigms of Artificial Intelligence Programming: Case Studies in Common Lisp, Morgan Kaufmann, San Mateo, CA, 1992.

Michael I Posner, Charles R R Snyder, and Briand J Davidson, "Attention and Detection of Signals," *Journal of Experimental Psychology: General*, 109:2, pp. 160-174, 1980.

Michael I Posner, A W Inhoff, F J Friedrich, and A Cohen, "Isolating Attentional Systems: A Cognitive-Anatomical Analysis," *Psychobiology* 15, pp. 107-121, 1987.

J R Quinlan, "Induction of Decision Trees," *Machine Learning 1*, pp. 81-106, 1986.

Ashwin Ram, "Incremental Learning of Explanation Patterns and their Indices," *Proceedings of the Seventh International Conference on Machine Learning*, pp. 313-320, Austin, TX, June 1990a.

Ashwin Ram, "Knowledge Goals: A Theory of Interestingness," *Proceedings of the Twelfth Annual Conference of the Cognitive Science Society*, Cambridge, MA, August 1990b.

Ashwin Ram and Michael T Cox, "Introspective Reasoning Using Meta-Explanations for Multistrategy Learning," to appear in *Machine Learning: A Multistrategy Approach, Volume 4*, R S Michalski and G Tecuci (eds), Morgan Kaufman, San Mateo, CA, 1994, and also as Georgia Institute of Technology TR GIT-CC-92/19, Atlanta, Georgia, 1992.

Ashwin Ram and Lawrence Hunter, "The Use of Explicit Goals for Knowledge to Guide Inference and Learning," *Applied Intelligence* 2:1, pp. 47-73, 1992, and also as Georgia Institute of Technology TR GIT-CC-92/04, Atlanta, Georgia, 1992.

Ashwin Ram and David Leake, "A Framework for Goal-Driven Learning," to appear in *Proceedings of the AAAI Spring Symposium on Goal-Driven Learning*, Stanford, CA, March 1994.

Ashwin Ram, S Narayanan, and Michael T Cox, "Learning to Troubleshoot: Multistrategy Learning of Diagnostic Knowledge for a Real-world Problem Solving Task," Georgia Institute of Technology TR GIT-CC-93/67, Atlanta, Georgia, 1993.

Robert Ramstad, A Constructivist Approach to Artificial Intelligence Reexamined (MIT combined Bachelor's and Master's thesis, 1992).

Arthur L Samuels, "Some Studies in Machine Learning Using the Game of Checkers," *IBM Journal 3*, pp. 211-229, 1959.

J F Soechting, S I H Tillery, and M Flanders, "Transformation from Head- to Shoulder-Centered Representation of Target Direction in Arm Movements," *Journal of Cognitive Neuroscience 2*, pp. 32-43, 1990.

G Sperling, S A Wurst, and Z Lu, "Using Repetition Detection to Define and Localize the Processes of Selective Attention," *Attention and Performance 14*, D E Meyer and S Kornblum (eds), MIT Press, Cambridge, MA, 1990.

Bob Sproull, "Counterflow Pipeline Processor Architecture," MIT AI Lab seminar, March 14, 1994.

Craig Stanfill and David Waltz, "Toward Memory-Based Reasoning," *Communications of the ACM*, 29:12, pp. 1213-1228, December 1986.

Rich S Sutton, "Integrated Architectures for Learning, Planning and Reacting Based on Approximating Dynamic Programming," in *Proceedings of the Seventh International Conference in Machine Learning*, Austin, TX, June 1990.

Ming Tan, "Cost-Sensitive Learning of Classification Knowledge and Its Applications in Robotics," *Machine Learning 13*, 1993.

Sabastian B Thrun, "Efficient Exploration in Reinforcement Learning," *Technical report CMU-CS-92-102*, Carnegie Mellon University, Pittsburgh, PA, January 1992.

Sebastian B Thrun, "The Role of Exploration in Learning Control," to appear in *Handbook* of Intelligent Control: Neural, Fuzzy, and Adaptive Approaches, David A White and Donald A Sofge, Van Nostrand Reinhold, Florence, KY, 1994.

Anne M Treisman, "Strategies and Models of Selective Attention," *Psychological Review* 76, pp. 282-299, 1969.

Anne M Treisman, "Features and Objects: The Fourteenth Bartlett Memorial Lecture," *Quarterly Journal of Experimental Psychology 40A*, pp. 201-237, 1988.

Anne M Treisman and Garry Gelade, "A Feature Integration Theory of Attention," *Cognitive Psychology 12*, pp. 97-136, 1980.

Anne M Treisman and Stephen Gormican, "Feature Analysis in Early Vision: Evidence From Search Asymmetries," *Psychological Review*, 95:1, pp. 15-48, 1988.

Shimon Ullman, "Sequence-Seeking and Counter Streams: A Model for Information Processing in the Cortex," MIT AI Lab AI Memo 1311, 1991.

L G Ungerleider and M Mishkin, "Two Cortical Visual Systems," *Analysis of Visual Behavior*, D J Ingle, M A Goodale, and R J W Mansfield (eds), Cambridge, MA: MIT Press, 1982.

Alan R White, Attention, Blackwell: Oxford, England, 1964.

Steven D Whitehead, "Complexity and Cooperation in Q-Learning," *Proceedings of the Eighth International Workshop on Machine Learning*, pp. 363-367, 1991.

Steven D Whitehead, "A Study of Cooperative Mechanisms for Faster Reinforcement Learning," *Technical Report 365*, University of Rochester, Computer Science Department, Rochester, NY, March 1991.

Steven D Whitehead and Dana Ballard, "Active Perception and Reinforcement Learning," submitted to the Seventh International Conference on Machine Learning, Austin, TX, June 1990.

Stewart W. Wilson, "Knowledge Growth in an Artificial Animal," *Proceedings of the First International Conference on Genetic Algorithms and their Applications*, edited by Greffenstette, Lawrence Erlbaum Associates, 1985.

John Woodfill and Ramin Zabih, "An Architecture for Action with Selective Attention," submitted to AAAI-90.