

VITA

GARY LEE BRADSHAW

January 7, 2003

BIOGRAPHICAL INFORMATION

Address: Gary Bradshaw
Department of Psychology
Mississippi State University
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Mississippi State, MS 39762
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Fax: (662) 327-7212

EDUCATION

Carnegie-Mellon University
Ph.D., 1984, Psychology. Herbert A. Simon, Advisor
Learning to recognize speech sounds: A theory and model

University of Missouri
M.A., 1979, Experimental Psychology. Donald H. Kausler, Advisor
B.A., 1974, Psychology.

PRESENT POSITION

Associate Professor
Department of Psychology
Mississippi State University
Mississippi State, MS

RESEARCH INTERESTS

Complex problem solving
Scientific Discovery and Invention
Analogical Transfer
Models of Intelligence
Learning and Transfer
Speech Perception
Decision Making
Distance Learning

PROFESSIONAL EXPERIENCE:

Associate Professor, Department of Psychology, Mississippi State University, August 1999 to present.

Associate Head, Aviation Research Laboratory, University of Illinois, August 1997 to August 1999

Associate Professor, Aviation Research Laboratory, Department of Psychology, Beckman Institute, University of Illinois, August 1993 to August 1999.

Visiting Associate Professor, Beckman Institute/Aviation Research Laboratory, University of Illinois, August 1991 to 1993.

Associate Professor, Department of Psychology, University of Colorado - August 1991 to August 1993.

Navy Summer Faculty Fellow, June 1987 - August 1987, Naval Ocean Systems Center, Kailua, Hawaii.

Assistant Professor, Department of Psychology, University of Colorado - August 1984 to August 1991.

Post Doctoral Research Associate, October 1983 - August 1984, Kewalo Basin Marine Mammal Laboratory, University of Hawaii.

Research Consultant, April 1983 - June 1983, Psychological Institute, Chinese Academy of Sciences, People's Republic of China.

Project Scientist, August 1979 - August 1983, Carnegie-Mellon University.

Research Assistant, January 1979 - May 1979, Dr. E. Thelen, University of Missouri.

Teaching Assistant, January 1977 - May 1979, University of Missouri

Peace Corps Volunteer, June 1974 - August 1976.

PROFESSIONAL AFFILIATIONS AND MEMBERSHIPS:

American Association for Artificial Intelligence	Cognitive Science Society
Acoustical Society of America	Human Factors and Ergonomics Society
American Psychological Society	IEEE
American Aviation Historical Society	Society of Flight Test Engineers

EDITORIAL BOARDS:

New Ideas in Psychology, January 1997 – present

GRANT PANELS:

NSF Course, Curriculum and Laboratory Improvement, July 2001

REVIEWS:

Psychological Review General	Journal of Experimental Psychology:
Artificial Intelligence	Cognitive Science
Memory and Cognition	New Ideas in Psychology
Journal of Memory and Language	IEEE Transactions on Education
American Journal of Psychology	Machine Learning
National Science Foundation	NSERC (Canada)
Organizational Behavior and Human Decision Making	
International Joint Conference on Artificial Intelligence	
IEEE Transactions on Acoustics, Speech, and Signal Processing	
IEEE Transactions on Systems, Man, and Cybernetics	
Air Force (various units including Air Force Office of Scientific Research)	

RESEARCH SUPPORT:

U.S.A.F. Research Contract F30602-81-C-0193 Principal Investigator September 15, 1985 to December 31, 1985	Natural language speech understanding \$50,000
U.S.A.F. Research Contract F30602-81-C-0205 Principal Investigator April 15, 1986 to September 30, 1986	Speaker Independent Speech Recognition \$50,000
NSF Research Grant Integration of Judgment/Decision Making and Artificial Intelligence Co-Principal Investigator May 30, 1987 to November 30, 1987	 \$30,000
U.S. West Research Contract Principal Investigator September 1, 1987 to August 31, 1988	Natural Speech Understanding Systems \$66,000
Colorado Institute for Artificial Intelligence Principal Investigator January 1, 1988 to December 31, 1988	Frequency Representations of Speech Sounds \$30,000

RESEARCH SUPPORT (CONTINUED):

U.S. West Research Contract Principal Investigator September 1, 1988 to August 31, 1989.	Speech Event Detectors \$90,000
Colorado Institute for Artificial Intelligence Principal Investigator January 1, 1989 to August 31, 1989.	Speaker-invariant Coding of Speech Sounds \$23,000
Colorado Institute for Artificial Intelligence Speech Principal Investigator Sept. 1, 1989 to August 31, 1990.	Training Speech Recognition Systems to Imitate \$30,000
Colorado Institute for Artificial Intelligence Principal Investigator Sept. 1, 1990 to August 31, 1991	Comparison of Speech Recognition Systems \$30,000
National Science Foundation Principal Investigator May 15, 1991 to October 31, 1993	Precursors to Solar Flares \$85,000
National Oceanographic and Atmospheric Administration Principal Investigator January 1, 1992 to May 30, 1992	Precursors to Solar Flares \$8,000
University of Illinois Research Board Principal Investigator October 1, 1993 to August 31, 1994	Transforming Sound into Speech \$45,000
Beckman Institute Principal Investigator Grant Period: January 15, 1995 to December 31, 1995	Laboratory for Multimedia Experimentation \$46,000
Innovative Technologies, Inc. Principal Investigator November 1, 1996 to March 15, 1997	Subjective Estimates of Transfer \$50,000
University of Illinois Applications of Learning Technologies in Higher Education Principal Investigator January 1, 1997 to December 31, 1997	Internet Psychology Laboratory \$34,000

RESEARCH SUPPORT (CONTINUED):

University of Illinois Educational Technologies Board	Learning about Operant Conditioning	
Principal Investigator		
Contract Period: August 1997 to December 1997		\$2,000
Federal Aviation Administration	Determining the Effectiveness of a Personal Computer Aviation Training Device (PCATD)	
Co-Principal Investigator	to Meet Recency of Experience Requirement	
Contract Period: November 1997 to September 1999		\$558,000
University of Illinois Liberal Arts and Sciences	Internet Psychology Laboratory	
Principal Investigator		
Grant Period: March 1, 1998 to August 1, 1998		\$7,000
University of Illinois	Internet Psychology Laboratory	
Principal Investigator		
Contract Period: May 1998 to June 1999		\$36,000
University of Illinois Educational Technologies Board	Social Experimentation on the Web	
Co-Principal Investigator		
Contract Period: August 1998 to July 2000		\$6,000
National Aeronautics and Space Administration	Incremental Transfer of Training Effectiveness of Aviation Training Devices	
Co-Principal Investigator		
Contract Period: December 1998 to September 2001		\$338,000
National Science Foundation	Experiential Learning about Psychological Processes	
Principal Investigator		
Contract Period: January 1, 2000 to August 31, 2001		\$75,000
University of Illinois	Incremental Transfer of Training Effectiveness of Aviation Training Devices	
Principal Investigator		
Contract Period: May 21, 2000 to September 30, 2000		\$5,906
University of Illinois	Determining the Effectiveness of a Personal Computer Aviation Training Device to Meet Recency of Experience Requirements	
Principal Investigator		
Contract Period: May 21, 2000 to December 31, 2000		\$11,812
Office of Naval Research	Dynamic measures of spatial ability, executive function, and social intelligence	
Principal Investigator		
Contract Period: October 15, 2000 to September 30, 2003		\$300,000

RESEARCH SUPPORT (CONTINUED):

National Science Foundation	EPSYCH: Interactive simulations and experiments	
Principal Investigator		in Psychology
Grant Period: April 15, 2001 to March 31, 2004		\$304,325
Rural Health, Safety, & Security Institute	Cognitive Studies of Evidence-Based Medicine	
Principal Investigator		
Grant Period: November 16, 2000 to August 30, 2002		\$185,224
National Science Foundation	An Archive of Viki, a Home-Reared Chimpanzee	
Principal Investigator		
Grant Period: April 15, 2001 to March 31, 2002		\$4,967
Office of Naval Research	Integrating Digital Eye Tracking with	
Co-PI	Personnel Optimization Research	
Grant Period: May 1, 2002 to March 31, 2003		\$179,137

UNIVERSITY AND DEPARTMENTAL SERVICE**Mississippi State University**

Psychology Department

Co-Director, Cognitive Science Program (Aug-Dec 1999)

Director, Cognitive Science Program (Jan 2000-present)

Social Psychology Search Committee (2000)

University

Ad-Hoc Committee on Copyright Policy (2002)

University of Illinois

Psychology Department:

Evaluation Committee for Spousal Hire (1993)

Graduate Student Admissions (1994-1995)

Liberal Arts and Sciences

LAS Honors Council (1993-1994)

Faculty Senate (1995-1997)

LAS Honors Council (1995-1997)

University

Partnership Illinois Sector K-12 Subcommittee (1996-1997)

Institute of Aviation

Evaluation Committee for Spousal Hire (1994)

Aviation search committee (1995, 1996, 1997)

Aviation Courses and Curriculum Committee (1994-)

Co-Chair, Aviation Courses and Curriculum Committee (1997-1999)

Advisory Committee (1995-1998)
Executive Committee (1995-1998)
Tenure and Promotions Committee (1995-1999)
Associate Head, Aviation Research Laboratory (1997-1999)

University of Colorado

Department

Executive Committee Computing Laboratory for Instruction and Research
in Psychology (1984-1991)
Cognitive Area Graduate Admissions Chair (1985-1987)
Center for Research in Judgment Policy Search Committee (1987)
Chair, Junior Judgment/Decision Making Search Committee (1989)
Salary Committee (1988-1991) (Co-Chair, 1990-91)
Colloquium Committee (1985-1988) (Chair 1987-88)

Institute of Cognitive Science

ICS Executive Committee (1987-1989)
Computer Science Search Committee (1985)
Computer Science Search Committee (1988)

Arts and Sciences

Physical Science Curriculum Reorganization Committee (1987-1988)

TEACHING

Undergraduate

Existing

- Experimental Psychology
- Cognitive Psychology
- Introductory Statistics
- Engineering Psychology

New courses developed

- Introduction to Cognitive Simulation
- Contemporary Issues
- Decision Making and Errors in Aviation
- Animal Language, Animal Mind

Graduate Seminars

New courses developed

- Production System Models of Thought
- Connectionist Approaches to Thinking
- Scientific Discovery
- Speech Perception and Recognition
- Psychology of Discovery and Invention
- Human/Machine Systems
- The Psychology of Science

STUDENT ADVISING

Undergraduate

- 2 Honors students (University of Illinois)
- 35 Independent Study Students (U of Illinois and U of Colorado)

Graduate

- 3 Ph.D. Psychology Theses
- 1 Ph.D. Computer Science Thesis
- 6 Masters Students, Psychology and Computer Science
- 4 Ph.D. Committees, Psychology, Computer Science, and Philosophy

PUBLICATIONS

Authored multimedia educational sites

To Fly is Everything... (http://hawaii.cogsci.uiuc.edu/invent/air_museum.html)

648 html files; 968 image files; 25 video clips; 72 Mbytes total.

300,000 visitors/8,700 new visitors per month.

Exploratorium *Ten Cool Site*; Britannica Internet Guide *Recommended Site*;

100 Best Aviation Web Sites; Bonus.com *Editor's Choice*

Internet Psychology Laboratory (<http://kahuna.psych.uiuc.edu/ipl>)

578 html files; 480 image files; 6 video clips; 55 java applets; 24.8 Mbytes total.

70,000 visitors/6,000 new visitors per month.

Exploratorium *Ten Cool Site*; New Scientist *Site of the Day*;

Societe Canadienne de Psychologie *Notable Psychology Site*;

American Association for the Advancement of Science *Approved Science Site*;

Websurfer's Biweekly Earth Science Review *Excellent Site Award*

Epsych (<http://epsych.msstate.edu>)

479 html files; 834 image files; 25 video clips; 81 java applets; 100 Mbytes total.

15,000 visitors/2,400 new visitors per month, since January 2000

Books

Langley, P. W., Simon, H. A., Bradshaw, G. L., and Zytkow, J. M. (1987). Scientific Discovery: A Computational Account of the Creative Process, Boston: MIT Press.

Uttal, W.R., Bradshaw, G.L., Dayanand, S., Lovell, R., Shepherd, T., Kakarala, R., Skifsted, K., Davis, N., Genzmer, L., & Tupper, G. (1992). The Swimmer: An Integrated Computational Model of a Perceptual-Motor System. Hillsdale, N.J.: Lawrence Erlbaum Associates.

Chapters in Books

Langley, P., Bradshaw, G. L., and Simon, H. A. (1983). Rediscovering chemistry with the BACON system. In R. Michalski, J. Carbonell, and T. Mitchell (Eds.), Machine Learning: An Artificial Intelligence Approach. Palo Alto, Ca.: Tioga Press.

Langley, P. Zytkow, J., Simon, H. A., and Bradshaw, G. L. (1986). The search for regularity: Four aspects of scientific discovery. R. S. Michalski, J. G. Carbonell, and T. M. Mitchell (Eds.), Machine Learning, An Artificial Intelligence Approach Volume Two. Los Altos, California: Morgan Kaufmann Publishers, Inc.

Langley, P., Simon, H. A., and Bradshaw, G. L. (1987). Heuristics for Empirical Discovery. In L. Bolc (Ed.), Knowledge Based Learning Systems. Berlin: Springer-Verlag.

PUBLICATIONS (CONTINUED)**Chapters in Books (continued)**

- Bradshaw, G., Fozzard, R., & Ceci, L. (1989). A connectionist expert system that actually works. In D. S. Touretzky (Ed.) Advances in Neural Information Processing Systems I. San Mateo, CA.: Morgan Kaufmann Publisher, pp 248-255.
- Bradshaw, G.L. (1992). The airplane and the logic of invention. In R.N. Giere (Ed.) Cognitive Models of Science. Minneapolis, MN: The University of Minnesota Press.
- Langley, P., Simon, H.A., Bradshaw, G.L., and Zytkow, Y. (1993). Scientific discovery. In A. I. Goldman (Ed.), Readings in Philosophy and Cognitive Science (pp. 185-207). Cambridge, MA.: The MIT Press.
- Bradshaw, G.L. (1993). Beyond Animal Language. In H.L. Roitblat, L.M. Herman, & P. Nachtigall (Eds.), Language and Communication: Comparative Perspectives (pp. 25-44). Hillsdale, N.J.: Lawrence Erlbaum Associates.
- Bradshaw, G.L. (1997). Thought and Language. In D. Bernstein (Ed.) Introduction to Psychology, Fourth Edition. Boston, MA: Houghton Mifflin Company
- Bradshaw, G.L. (submitted). What's so hard about rocket science? Secrets the Rocket Boys knew.

Refereed Publications

- Kausler, D. H., Wright, R. E., and Bradshaw, G. L. (1979). Effects of imagery on individual item identifications and frequency judgments in multiple-item recognition learning. Journal of Experimental Psychology: Human Learning and Memory, 5, 135-150.
- Bradshaw, G. L., Langley, P., and Simon, H. A. (1980). BACON.4: The discovery of intrinsic properties. Proceedings of the Third National Conference of the Canadian Society for Computational Studies of Intelligence, 19-25.
- Thelen, E., Bradshaw, G. L., and Ward, J. A. (1981). Spontaneous kicking in month-old infants: Manifestation of a human central locomotor program. Behavioral and Neural Biology, 32, 45-53.
- Langley, P., Bradshaw, G. L., and Simon, H. A. (1981). BACON.5: The discovery of conservation laws. Proceedings of the Seventh International Joint Conference on Artificial Intelligence, 121-126.
- Simon, H. A., Langley, P. W., and Bradshaw, G. L. (1981). Scientific discovery as problem solving. Synthese, 47, 1-27.

PUBLICATIONS (CONTINUED)**Refereed Publications (Cont.)**

- Bradshaw, G. L., and Anderson, J. R. (1982). Elaborative encoding as an explanation of levels of processing. Journal of Verbal Learning and Verbal Behavior, 21, 165-174.
- Bradshaw, G. L., Cole, R. A., and Li, Z. (1982). A comparison of learning techniques in speech recognition. Proceedings of the 1982 International Conference on Acoustics, Speech, and Signal Processing, Paris, France, pp. 554-557, May.
- Langley, P., Bradshaw, G.L., and Simon, H. A. (1983). Rediscovering chemistry with the BACON system, Part 1. Journal of Dialectics of Nature, 5, 37-44.
- Langley, P., Bradshaw, G.L., and Simon, H. A. (1983). Rediscovering chemistry with the BACON system, Part 2. Journal of Dialectics of Nature, 5, 33-40.
- Bradshaw, G. L., Langley, P., and Simon, H. A. (1983). Studying scientific discovery by computer simulation. Science, 222, 971-975.
- Langley, P., Zytkow, J., Bradshaw, G., and Simon, H. A. (1983). Mechanisms for qualitative and quantitative discovery. Proceedings of the International Machine Learning Workshop, 121-132.
- Langley, P., Zytkow, J., Bradshaw, G., and Simon, H. A. (1983). Three facets of scientific discovery. Proceedings of the Eighth International Joint Conference on Artificial Intelligence, 465-468.
- Bradshaw, G. L. (1985). Learning by spanning disjunction. Proceedings of the Third International Machine Learning Workshop, Skytop, Pennsylvania, pp. 5-7, June.
- Bradshaw, G. (1987). Learning about speech sounds: The NEXUS project. Proceedings of the Fourth International Workshop on Machine Learning, Irvine, California, pp. 1-11. June.
- Herman, L.M., Hovancik, J.R., Gory, J.D., and Bradshaw, G.L. (1989). Generalization of visual matching by a bottlenosed dolphin (*Tursiops truncatus*): Evidence for invariance of cognitive performance with visual or auditory materials. Journal of Experimental Psychology: Animal Behavior Processes, 15, 124-136.
- Bradshaw, G.L. & Lienert, M. (1991). The invention of the airplane. Proceedings of the Thirteenth Annual Conference of the Cognitive Science Society, August 7-10, Chicago, Ill., pp 605-610.
- Bradshaw, G.L., & Bell, A. (1992). Towards the performance limits of connectionist feature detectors. International Conference on Spoken Language Processing, Banff, Canada, October 15, 1992.

PUBLICATIONS (CONTINUED)**Refereed Publications (Cont.)**

Bradshaw, G.L., & Shaw, D. (1992). Forecasting solar flares: Experts and AI systems. Organizational Behavior and Human Decision Processes, *53*, 135-157.

Bradshaw, G.L., & Ross, B.H. (1993). Reminding and interpretation during encoding. Proceedings of the Fifteenth Annual Conference of the Cognitive Science Society, June 17-21, Boulder, Co.

Ross, B.H., & Bradshaw, G.L. (1994). Encoding effects of reminders. Memory and Cognition, *22*, 591-605

Bradshaw, G.L. (1998). Patterns of flight testing during the invention of the airplane. Proceedings of the 29th Annual Society of Flight Test Engineers, September 14-17, Reno, Nv.

Taylor, H.L., Bradshaw, G.L., Talleur, D.A., Emanuel, T.W. Jr., Hulin, C.L., Lendrum, L. & Vaughan, J.A. (1999). Effectiveness of Personal Computers to Meet Recency of Experience Requirements. In Jensen, R.S., Cox, B., Callister, J.D., and Lavis, R., (Eds.), Proceedings of the Tenth International Symposium on Aviation Psychology, Volume 2, 1008 -1013, Columbus, OH. The Ohio State University

Lendrum, L., Taylor, H.L., Talleur, D.A., Hulin, C.L., Bradshaw, G.L. and Emanuel, T.W. Jr. (1999). Airborne Flight Data Recorders. In Jensen, R.S., Cox, B., Callister, J.D., and Lavis, R., (Eds.), Proceeding of the Tenth International Symposium of Aviation Psychology, Volume 2, 1003 -1007. Columbus, OH: The Ohio State University.

Taylor, H.L., Talleur, D.A., Bradshaw, G.L., Emanuel, T.W., Hulin, C.L., Rantanen, E.M., & Lendrum, L. (2000). Effectiveness of personal computer aviation training devices to meet recency of experience requirements. HCI Aero 2000.

Talleur, D.A., Taylor, H.L., Rantanen, E., Lendrum, L. Bradshaw, G.L., Emanuel, T.W., & Hulin, C.L. (in press). Effectiveness of a Personal Computer Aviation Training Device (PCATD) for maintaining instrument currency. Proceedings of the Eleventh International Symposium on Aviation Psychology, Columbus, OH: The Ohio State University

Rantanen, E., Talleur, D. A., Taylor, H. L., Bradshaw, G. L., Emanuel, T. W., Jr., Lendrum, L., & Hulin, C. L. (2001). Derivation of pilot performance measures from flight data recorder information. *Proceedings of the 11th International Symposium on Aviation Psychology*. Columbus, OH: The Ohio State University.

Taylor, H. L., Talleur, D. A., Emanuel, T. W., Jr., Rantanen, E., Phillips, S., & Bradshaw, G. (2001). Incremental training effectiveness of personal computers used for instrument training. *Proceedings of the 11th International Symposium on Aviation Psychology*. Columbus, OH: The Ohio State University.

PUBLICATIONS (CONTINUED)**Refereed Publications (Cont.)**

Talleur, D.A., Taylor, H.L., Bradshaw, G.L., Emanuel, T. W., Jr., Rantanen, E. (in press).
Personal Computer Aviation Training Devices: Determining Effectiveness for Maintaining
Instrument Currency. *The International Journal of Aviation Psychology*.

Bradshaw, G.L., McCarley, N., & Steinman, B. (2002). ePsych: Interactive demonstrations and
experiments in psychology. *Behavioral Research Methods, Instruments and Computers*,
34, 231-233.

Bradshaw, G.L. (accepted pending revisions) Heuristics and strategies of invention: Lessons from
the invention of the airplane. *Cognitive Science*.

Manuscripts In Preparation

Bradshaw, G.L., Peace, B., Harris, K., Koch, K., & Stewart, T. What DID the doctor order?
The influence of drug regimen representations on memory and comprehension.

Bradshaw, G.L., Shields, I., & Giesen, M. Input modality and the Stroop effect:

NON-REFEREED CONFERENCE PROCEEDINGS

Langley, P., Bradshaw, G., and Simon, H. A. (1982). Data-driven and expectation-driven
discovery of empirical laws. Proceedings of the Fourth National Conference of the Canadian
Society for Computational Studies of Intelligence, 137-143.

Richards, E.L., and Bradshaw, G.L. (1989). Optical Filtering of Speech Waveforms. Proceedings
of the 1989 Rocky Mountain Conference on Artificial Intelligence, Denver, Colorado, June.

Bradshaw, G.L. & Katz, S. (1990). SPEECHBENCH An X-Windows tool for acoustic
waveforms. Official Proceedings of Speech Tech '90, New York, N.Y., pp. 293-296, April
24-26.

Technical Reports

Bradshaw, G. L. (1985). Learning to recognize speech sounds: A theory and model. CMU
Technical Report CMU-CS-85-136, June.

Bradshaw, G.L., Halwes, T., & Bell, A. (1989). Toward a Natural Speech Understanding
System. Air Force Technical Report RADC-TR-89-208, December.

Bradshaw, G., & Richards, E. (1989) Frequency coding of speech sounds. Colorado Institute for
Artificial Intelligence Technical Report CIAI-TR-89-01, March.

PUBLICATIONS (CONTINUED)**Technical Reports (Continued)**

Bradshaw, G.L., & Richards, B. (1990). Improving speech recognition via two-dimensional spectral smoothing. Colorado Institute for Artificial Intelligence Technical Report CIAI-TR-90-04, February.

Richards, B., & Bradshaw, G.L. (1991). Training Speech Recognition Systems to Imitate Speech. Colorado Institute for Artificial Intelligence Technical Report CIAI-TR-91-01, January.

Bradshaw, G.L., & Shaw, D. (1991). Forecasting Solar Flares: Experts and Artificial Systems. Beckman Institute Technical Report UIUC-BI-CS-91-18, 18 pages.

Bradshaw, G.L., & Bell, A. (1991). Robust Feature Detectors for Speech. Beckman Institute Technical Report UIUC-BI-CS-91-17, 75 pages.

Bradshaw, G., Taylor, H., Lintern, G., & Talleur, D. (1999). *The potential of subjective estimates of transfer* (Technical Report ARL-99-6). Savoy, IL: University of Illinois, Institute of Aviation, Aviation Research Laboratory.

Lendrum, L., Taylor, H.L., Talleur, D.A., Hulin, C.L., Bradshaw, G.L., & Emanuel, T. W., Jr. (2000). IPC Data Logger: A Flight Data Recorder Operation Manual. (Technical Report ARL/00-9/FAA-00-5). Savoy, IL: University of Illinois, Institute of Aviation, Aviation Research Laboratory

Taylor, H.L., Talleur, D.A., Bradshaw, G.L., Emanuel, T.W., Jr., Hulin, C.L., Rantanen, E.M., & Lendrum, L. (2000). Evaluation of a personal computer aviation training device to meet recency of experience requirements. (Technical Report ARL-00-9/FAA-00-6). Savoy, IL: University of Illinois, Institute of Aviation, Aviation Research Laboratory

Taylor, H.L., Talleur, D.A., Bradshaw, G.L., Emanuel, T.W., Jr., Rantanen, E., Hulin, C.L., & Lendrum, L. (2001). Effectiveness of personal computers to meet recency of experience requirements (Technical Report ARL-01-6/FAA-01-1). Savoy, IL: University of Illinois, Institute of Aviation, Aviation Research Laboratory.

Non-refereed Periodicals

Bradshaw, G.L. (1993). Why did the Wright brothers get there first? Part 1. Chemtech, 23(6), 8-13.

Bradshaw, G.L. (1993). Why did the Wright brothers get there first? Part 2. Chemtech, 23(7), 16-22.

Bradshaw, G. L. (1986). Heuristic techniques in speech template acquisition. Speech Technology Man/Machine Voice Communications, 3, 62-67.

PRESENTATIONS:

- Bradshaw, G. L., Cole, R. A., and Reddy, R. (1982) A hybrid-system approach to recognition of acoustically similar items. Journal of the Acoustical Society of America, 71, S6 (Abstract).
- Bradshaw, G.L. (1982). The future of speech technology. Computer Science Department, University of Stuttgart, Stuttgart, Germany, May 11.
- Bradshaw, G.L. (1983). Learning to wreck a nice beach: The NEXUS project. Computer Science Department, McGill University, Montreal, CA, February 15.
- Bradshaw, G.L. (1983). Learning to wreck a nice beach: The NEXUS project. Computer Science Department, Pennsylvania State University, State College, PA, March 10.
- Bradshaw, G.L. (1983). Learning to wreck a nice beach: The NEXUS project. Computer Science Department, Tulane University, New Orleans, March 17.
- Bradshaw, G.L. (1984). Learning to wreck a nice beach: The NEXUS project. Psychology Department, University of Minnesota, Minneapolis, MN, February 15.
- Bradshaw, G.L. (1984). Learning to wreck a nice beach: The NEXUS project. Psychology Department, University of Colorado at Boulder, Boulder, Colorado, February 17.
- Bradshaw, G.L. (1985). The Kewalo dolphin project: Language Comprehension. Meeting on Researching Cognition, University of Colorado, Boulder, January 25.
- Bradshaw, G.L. (1985). The Kewalo dolphin project: Dolphin cognition. Meeting on Researching Cognition, University of Colorado, Boulder, February 8.
- Bradshaw, G.L. (1985). The task at hand: Developing invisible computer tools. American Association for the Advancement of Science -- Southwestern and Rocky Mountain Division, Boulder, April 4.
- Bradshaw, G.L. (1986). Machine learning in a speech recognition system: The NEXUS project. Xerox Palo Alto Research Center, Palo Alto, January 8.
- Bradshaw, G.L. (1986). Exploiting equivalence sets to recognize speech: The NEXUS project. Center for Study of Language and Information, Stanford University, Palo Alto, January 9.
- Bradshaw, G.L. (1986). Learning to wreck a nice beach: The NEXUS Project. Sigma Xi Scientific Research Society, Boulder Chapter, Boulder, February 5.
- Bradshaw, G.L. (1986). Learning to wreck a nice beach: The NEXUS Project. Computer Science Department, University of California at Irvine, Irvine, CA, February 12.
- Bradshaw, G.L. (1986). Learning to wreck a nice beach: The NEXUS Project. Information Science Department, University of Pittsburgh, Pittsburgh, PA, February 20.

PRESENTATIONS (CONTINUED)

- Bradshaw, G.L. (1986). Spoken language recognition: The NEXUS project. First Annual Rocky Mountain Conference on Artificial Intelligence, Boulder, June 13.
- Bradshaw, G.L. (1987). Discovery through heuristic search. American Association for the Advancement of Science, Chicago, February 17.
- Bradshaw, G.L. (1987). Artificial intelligence + teleoperation = "SMART" teleoperation. Naval Ocean Systems Center, Kailua, Hawaii, July 22.
- Bradshaw, G.L. (1988). Computational models of scientific discovery. History and Philosophy of Science, University of Colorado, Boulder, January 28.
- Bradshaw, G.L. (1988). Learning about speech sounds: The NEXUS project. Department of Electrical and Computer Engineering, University of Colorado, Boulder, March 1.
- Bradshaw, G.L. (1988). Learning about speech sounds: The NEXUS project. Computer Science Department, University of Alberta, Edmonton, Thursday, July 14.
- Bradshaw, G.L. (1988). Understanding natural speech. U.S. West Science and Technologies Center, Denver, September 16.
- Bradshaw, G.L. (1988). Natural speech understanding. U.S. West Advanced Technologies, Denver, September 26.
- Bradshaw, G.L. (1988). Predicting solar flares: The THEO and TheoNet projects. Institute of Cognitive Science, University of Colorado, Boulder, October 3.
- Bradshaw, G.L. (1989). Speech as eyes seize it. Colorado Institute for Artificial Intelligence Research Symposium, Denver, February 24.
- Bradshaw, G.L. (1989). Animal language and problem solving. Animal Language Workshop, University of Hawaii, Honolulu, April 10.
- Bradshaw, G.L. (1989). Speaker invariant coding of speech sounds. Colorado Institute for Artificial Intelligence Research Symposium, Denver, October 6.
- Bradshaw, G.L. (1989). Constraint structures in analogical transfer. Conference on Implications of the Cognitive Sciences for the Philosophy of Science, Ann Arbor, October 28.
- Bradshaw, G.L. (1989). Why is speech recognition like an airplane? Xerox Palo Alto Research Center, Palo Alto, November 30.
- Bradshaw, G.L. (1990). The invention of the airplane. Institute of Cognitive Science, University of Colorado, Boulder, February 2.

PRESENTATIONS (CONTINUED)

- Shaw, D., & Bradshaw, G.L. (1990). A comparison of some numerical techniques for solar flare forecasting. National Solar Observatory, Air Force Geophysics Laboratory, Sunspot, New Mexico, March 29.
- Bradshaw, G.L. (1990). Detecting phonetic features using connectoplasm. Boulder Connectionist Research Group, University of Colorado, Boulder, October 9.
- Bradshaw, G.L. (1990). The airplane, the oratograph, and the logic of invention. Department of Psychology, University of Colorado, Boulder, October 15.
- Bradshaw, G.L. (1991). Detecting speech features using connectoplasm. Department of Cognitive and Neural Systems, Boston University, February 8.
- Bradshaw, G.L. (1991). The invention of the airplane. Rocky Mountain Inventors Congress, Denver, Colorado, February 14.
- Bradshaw, G.L. (1991). Detecting speech features using connectoplasm. Institute of Cognitive Science, University of Colorado, Boulder, March 1.
- Bradshaw, G.L. (1991). The invention of the airplane. History and Philosophy of Science, University of Colorado, Boulder, April 11.
- Bradshaw, G.L. (1991). Basic research is a necessity, not a luxury. The Fifteenth Regional Conference on the History and Philosophy of Science, University of Colorado, Boulder, April 19.
- Bradshaw, G.L. (1991). Machine Learning Methods for Natural Perceptual Tasks: A comparison of learning-from-example approaches. Institute of Cognitive Science, University of Colorado, Boulder, April 26.
- Bradshaw, G.L., & Bell, A. (1991). Feature detection using a connectionist network. Journal of the Acoustical Society of America, 81, 1891-1892 (Abstract).
- Bradshaw, G.L. (1991). The invention of the airplane. Cognitive Psychology, University of Illinois, Urbana, September 13.
- Bradshaw, G.L. (1991). Learning about speech. Work in Progress Talk, Artificial Intelligence Group, University of Illinois, Urbana, October 1.
- Bradshaw, G.L. (1991). Detecting speech features. Work in Progress Talk, Artificial Intelligence Group, University of Illinois, Urbana, October 22.
- Bradshaw, G.L. (1991). The invention of the airplane. Society for the Social Studies of Science, Cambridge, November 17.

PRESENTATIONS (CONTINUED)

- Bradshaw, G.L. (1992). Secrets the Wright brothers knew about invention. Beckman Institute Director's Seminar, Urbana, Illinois, January 28.
- Bradshaw, G.L. (1992). Detecting speech features using connectoplasms. Department of Cognitive and Neural Systems, Boston University, Boston, MA, February 6.
- Bradshaw, G.L. (1992). Forecasting solar flares. Social, Organizational and Industrial Differences Brown Bag, Psychology Department, University of Illinois, February 17.
- Bradshaw, G.L. (1992). The invention of the airplane. First Annual Workshop on Creativity and Intelligence, University of Virginia, March 6.
- Bradshaw, G.L. (1992). The invention of the airplane. Aerospace Human Factors Association, Miami, Florida, May 11.
- Bradshaw, G.L. (1992). Secrets the Wright brothers knew about invention. Illini-area chapter of Illinois Pilots Association, Urbana, Illinois, May 19.
- Bradshaw, G.L. (1992). Beyond animal language. Developmental Division Brown Bag, Psychology Department, University of Illinois, September 18.
- BACON: A computer model of scientific discovery. Cognitive Division Brown Bag, Psychology Department, University of Illinois, October 9.
- Bradshaw, G.L., & Bell, A. (1992). Towards the performance limits of connectionist feature detectors. International Conference on Spoken Language Processing, Banff, Canada, October 13.
- Bradshaw, G.L. (1992). Psychology of discovery and invention. Psychology Department, University of Illinois, October 19.
- Bradshaw, G.L. (1992). Modern labors of Sisyphus: The Airplane and Automatic Speech Recognition. Speech Laboratory, University of Indiana, Oct. 30.
- Bradshaw, G.L. (1992). Secrets the Wright brothers knew about invention. The Brunswick Society, St. Louis, Mo. November 14.
- Blix, G., Bradshaw, G.L., & Rendall, L. (1993). What cross-validation doesn't say about real-world generalization. 4th Workshop on Computational Learning Theory and Natural Learning System. Provincetown, MA, September
- Bradshaw, G.L. (1993). Secrets the Wright brothers knew about invention. Department of Mechanical and Industrial Engineering, University of Illinois, September 17.
- Bradshaw, G.L. (1993). Patterns of invention: The telephone and the electric light. Cognitive Division Brown Bag, Psychology Department, University of Illinois, October 22.

PRESENTATIONS (CONTINUED)

- Bradshaw, G.L. (1994). Secrets the Wright brothers knew about invention. Campus Honors Program, University of Illinois, October 4.
- Bradshaw, G.L. (1995). Invention and engineering psychology: A study of connections. Engineering Psychology Brown Bag, University of Illinois, April 4.
- Bradshaw, G.L. (1995). Insight-Out. Cognitive Division Brown Bag, Psychology Department, University of Illinois, April 7.
- Bradshaw, G.L. (1996). Rosencrantz and information processing are dead. Cognitive Division Brown Bag, Psychology Department, University of Illinois, January 12.
- Bradshaw, G.L. (1997). Secrets the Wright brothers knew about invention. Huffman Prairie Chapter, American Aviation Historical Society, Wright State University, August 5.
- Bradshaw, G.L. (1998). The Logic of Invention – Lilienthal and the Wright Brothers. Kolloquium Aus Anlaß Des 150. Geburtstags Otto Lilienthals, Otto-Lilienthal-Museum, Anklam, Germany, May 23.
- Bradshaw, G.L. (1998). Patterns of flight testing during the invention of the airplane. Society of Flight Test Engineers, Reno, Nv, September 17.
- Bradshaw, G.L. (1999). Four steps to flight. Illini-area chapter of Illinois Pilots Association, Urbana, Illinois, January 21.
- Bradshaw, G.L. (1999). Patterns of flight testing during the invention of the airplane, Society of Flight Test Engineers, St. Louis Chapter, February 11.
- Bradshaw, G.L. (1999). Automatic speech recognition: From NEXUS to connectoplasm and beyond. Computer Science Department, University of Oklahoma, March 12.
- Bradshaw, G.L. (1999). Automatic speech recognition: From NEXUS to connectoplasm and beyond. Computer Science Department, Mississippi State University, March 15.
- Bradshaw, G.L. (1999). Secrets the Wright brothers knew about invention. Psychology Department, Mississippi State University, March 16.
- Bradshaw, G.L. (1999). Changing the education equation: Interactive material and experiential learning in the Internet Psychology Laboratory. Information Technology in Education, Mississippi State University, October 14.
- Taylor, H.L., Talleur, D.A., Bradshaw, G.L., Emanuel, T.W., Hulin, C.L., & Lendrum, L. (1999). Effectiveness of personal computer aviation training devices to meet recency of experience requirements. University Aviation Association. Atlanta, GA, Oct 14-16 (Abstract).

PRESENTATIONS (CONTINUED)

- Bradshaw, G.L. (1999). Rosencrantz and information processing are dead. Applied Cognitive Science Seminar, Psychology Department, Mississippi State University, March 17.
- Taylor, H.L., Talleur, D.A., Bradshaw, G.L., Emanuel, T.W., Jr., Hulin, C.L., Rantanen, E.M., & Lendrum, L. (2000). Evaluation of a personal computer aviation training device to meet recency of experience requirements. NAFI-ERAU Conference, Oshkosh, WI, July.
- Taylor, H.L., Talleur, D.A., Emanuel, T.W., Jr., Bradshaw, G.L., Rantanen, E., and Phillips, S. (2000). Incremental transfer of training effectiveness of personal computer aviation training devices (PCATDs). University Aviation Association Fall Education Conference. Mesa, AZ, Oct. 28, (Abstract).
- Talleur, D.A., Taylor, H.L., Bradshaw, G.L., Emanuel, T.W., Jr., Hulin, C.L., Rantanen, E., & Lendrum, L. (2000). Effectiveness of personal computer aviation training devices to meet recency of experience requirements. University Aviation Association Fall Education Conference. Mesa, AZ (Abstract).
- Bradshaw, G.L. (2001). Secrets high school students know about rocket science. Cognitive Studies of Science and Technology Workshop, University of Virginia, March 24-27.
- Bradshaw, G.L., Giesen, M., Leathen, Shields, I., & Steinman, B. (2001). Dynamic measures of spatial ability, social intelligence, and executive function. MAS IV – Military Personnel Research, Memphis, Tennessee, June 4, 2001.
- Bradshaw, G.L. (2001). What's so hard about rocket science? Secrets the Rocket Boys knew. Applied Cognitive Science Research Seminar, Mississippi State University, August 29.
- Bradshaw, G.L. (2001). What's so hard about rocket science? Secrets the rocket boys knew. Imagining Mind/Imagining Science Workshop, University of Illinois, September 28-30.
- Bradshaw, G.L., Steinman, B., & McCarley, N. (2001). Interactive demonstrations and experiments in Psychology. 31st Annual Meeting of the Society for Computers in Psychology, Orlando, Florida, November 15, 2001.
- McCarley, N., Bradshaw, G.L., & Mathies, B. (2001). Using focus groups to evaluate design elements of an interactive web site for psychology students. 31st Annual Meeting of the Society for Computers in Psychology, Orlando, Florida, November 15, 2001.
- Bradshaw, G.L., & Giesen, J. M. (2002). Computer-based behavioral measures of spatial ability, attention, and personality. MAS V -- Military Personnel Research. Memphis, Tennessee, June 5, 2002.
- Bradshaw, G.L., McCarley, N., & Steinman, B. (2002). EPsych: Interactive demonstrations and experiments in psychology. Ninth Annual APS Institute on the Teaching of Psychology, New Orleans, LA, June 6, 2002.

PRESENTATIONS (CONTINUED)

- Shields, I.S., & Bradshaw, G.L. (2002). Practical Measures of Negative Priming and the Cross-Modal Stroop Effect. 53rd Annual Mississippi Psychological Association Convention. Biloxi, MS, September 6, 2002. [Best Graduate/Post-Graduate Poster Presentation]
- Bradshaw, G.L., McCarley, N., & Thorne, B.M. ePsych: Free web-based experiments and demonstrations in psychology. The 25th Annual National Institute on the Teaching of Psychology, St. Petersburg Beach, FL, January 2-5, 2003. [Frank Costin Memorial Award for Excellence.]
- Bradshaw, G.L. Flights of fancy: Airplanes, rockets, AI, and Psychology. Presented to Applied Cognitive Science Group, Rensselaer University, Troy, New York, January 14, 2003.
- Peace, B., Harris, K., Bradshaw, G.L., Koch, K., Stewart, T., Gay, S., Rackley, R., & Wells-Parker, E. Helping people take their medication: The influence of drug regimens. Accepted at Southeastern Psychological Association, March 26-29, 2003.
- Pate, M., Bradshaw, G., Giesen, M., Abernathy, T., Mitchell, K., Bell, C., & Turner, R. Executive Monitoring of Performance in a "Rule Discovery" Task. Accepted at Southeastern Psychological Association, March 26-29, 2003.
- Turner, R., Bradshaw, G.L., Giesen, M., Abernathy, T., Mitchell, K., Bell, C., & Pate, M. Automaticity and Visual Search. Accepted at Southeastern Psychological Association, March 26-29, 2003.
- Shields, I., Bradshaw, G.L., & Giesen, M. Auditory and Visual Processes of Selective Attention. Accepted at Southeastern Psychological Association, March 26-29, 2003.

INVITED PHOTOGRAPHY EXHIBITS:

- Bradshaw, G.L. (1997). Wind and Sand, Wright Brothers Photographs at Kitty Hawk . October 17, The Beckman Institute; October 18-19, The Institute of Aviation.