

1. Kathryn T. Spoehr  
Professor, Cognitive & Linguistic Sciences  
Professor, Public Policy  
<http://www.cog.brown.edu/~spoehr>

2. 4 Windward Drive  
Barrington, RI 02806

3. Education:

A.B. Brown University, Providence RI. In mathematical psychology, *magna cum laude*, with honors, 1969.

M. A. Stanford University, Stanford, CA. In psychology, 1971.

Ph.D. Stanford University, Stanford, CA. In psychology (human cognition) with university minor in computer science (artificial intelligence), 1973.

4. Professional Appointments (reverse chronological order):

*July 1974 - present*

Assistant/Associate/Full Professor

Cognitive and Linguistic Sciences, 1986-present (Chairperson, 1991-1993)

Psychology, 1974-1991

Public Policy, 2002-present

Brown University, Providence, RI 02912

*August 1999 – August 2001 (Interim 8/99-10/99)*

Executive Vice-President and Provost, Brown University

Providence, RI 02912

*July 1996- May 2000*

Dean of the Faculty, Brown University

Providence, RI 02912

*October 1993- July 1996*

Dean of the Graduate School and Research, Brown University

Providence, RI 02912

*July 1982 – June 1988*

Senior Scientist (Consulting), BBN Laboratories, Cambridge, MA 02238

*July 1982 - June 1985*

Associate Provost for Budget & Planning, Brown University

Providence, RI 02912

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*March 1983 - April 1984*

Acting Director, Office of Institutional Research, Brown University

Providence, RI 02912

*June 1980 - December 1981*

Assistant Director, Personnel & Training Research Group, Office of Naval Research, Arlington, VA

*September 1973 – June 1974*

Assistant Professor Psychology, Douglass College/Rutgers University, New Brunswick, NJ

## 5. Completed Research

### **Book**

Spoehr, K. T., & Lehmkuhle, S. W. (1982). *Visual Information Processing*. San Francisco: W. H. Freeman Co.

### **Articles, and Technical Reports**

Adams, M. J., & Spoehr, K. T. (2008). Framework for the Vocabulary Assessment for the

National Assessment of Adult Literacy (NAAL). <<http://nces.ed.gov/naal/>>

Manly, C. F. & Spoehr, K. T. (2000). Mental Multiplication: Nothing But the Facts? *Memory & Cognition*, 27, 1087-1096.

Anderson, J. A., Spoehr, K. T., & Bennett, D. J. (1994). A study in numerical perversity: Teaching arithmetic to a neural network. In D. S. Levine & M. Aparicio, IV (Eds.), *Neural networks for knowledge representation and inference* (Pp. 311-335). Hillsdale, NJ: Lawrence Erlbaum Associates. [Also published as Brown University Cognitive Science Technical Report 91-03]

Spoehr, K. T. (1994). Enhancing the acquisition of conceptual structures through hypermedia. In McGilly, K. (ed.), *Classroom Lessons: Integrating Cognitive Theory and Classroom Practice* (pp.75-101). Cambridge, MA: Bradford Books.

Spoehr, K. T., & Spoehr, L. W. (1994). Learning to think historically. *Educational Psychologist*, 29, 71-77.

White, B. Y., Frederiksen, J. R., & Spoehr, K. T. (1994). Conceptual models for understanding the behavior of electrical circuits. In Caillot, M. (Ed.), *Learning Electricity and Electronics with Advanced Educational Technology*. New York: Springer Verlag.

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Armstrong, R. B., Lesiewicz, J., Harvey, G., Lee, L. F., Spoehr, K. T., & Zultak, M. (1991). Clinical panel's assessment of photodamaged skin treated with isotretinoin using photographs. *Archives of Dermatology*, 128, 352-356.

Viscuso, S. R., Anderson, J. A., & Spoehr, K. T. (1989). Representing simple arithmetic in neural networks. In G. Tiberghien (Ed.), *Advances in Cognitive Science: Theory and Applications*. New York: Wiley. pp. 141-164. [Also published as Brown University Cognitive Science Technical Report 88-01]

Zeitz, C., & Spoehr, K. T.(1989). Knowledge organization and the acquisition of procedural expertise. *Applied Cognitive Psychology*, 3, 313-336.

Spoehr, K. T., & Zeitz, C. (1988). Knowledge organization and the acquisition of procedural expertise. Cambridge, MA: Bolt Beranek and Newman, Inc., Technical Report No. 6633, October 1987.

Spoehr, K. T., & Viscuso, S. R. (1987). How does a mental model facilitate comprehension of instructions? Cambridge, MA: Bolt Beranek and Newman, Inc., Technical Report No. 6634, October 1987.

Smith, E. E., & Spoehr, K. T. (1985). Basic processes and individual differences in understanding and using instructions. Cambridge, MA: Bolt Beranek and Newman, Inc., Technical Report No. 3029.

- Spoehr, K. T., Morris, M. E., & Smith, E. E. (1984). Comprehension of instructions for operating devices. Cambridge, MA: Bolt Beranek and Newman, Inc., Technical Report No. 5712.
- Spoehr, K. T. (1981). The scientific study of reading. Review of R. J. Spiro, B. C. Bruce, & W. F. Brewer (Eds.), *Theoretical issues in reading comprehension*. *Contemporary Psychology*, 27, 44.
- Spoehr, K. T., & Schuberth, R. E. (1981). Processing words in context. In O. Tzeng & H. Singer (Eds.), *Perception of print: Reading research in experimental psychology*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Spoehr, K. T. (1981). Word recognition in speech and reading: Toward a single theory of language processing. In P. D. Eimas & J. L. Miller (Eds.), *Perspectives on the study of speech*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Schuberth, R. E., Spoehr, K. T., & Lane, D. M. (1980). Effects of stimulus and contextual information on the lexical-decision process. *Memory & Cognition*, 9, 68-77.
- Harris, R. L., Gausepohl, J. A., Lewis, R. J., & Spoehr, K. T. (1979). The suffix effect: Postcategorical attributes in a serial recall paradigm. *Bulletin of the Psychonomic Society*, 13, 35-37.
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- Spoehr, K. T., & Corin, W. (1978). The stimulus suffix effect as a memory coding phenomenon. *Memory & Cognition*, 6, 583-589.
- Schuberth, R. E., Spoehr, K. T., & Haertel, R. J. (1979). Solving anagrams: Category priming and the differential availability of category solutions. *Quarterly Journal of Experimental Psychology*, 31, 599-608.
- Spoehr, K. T. (1978) Phonological encoding in visual word recognition. *Journal of Verbal Learning and Verbal Behavior*, 17, 127-142.
- Spoehr, K. T., & Smith, E. E. (1975). The role of orthographic and phonotactic rules in perceiving letter patterns. *Journal of Experimental Psychology: Human Perception and Performance*, 104, 21-34.
- Smith, E. E., & Spoehr, K. T. (1974). The perception of printed English: A theoretical perspective. In B. H. Kantowitz (Ed.), *Human information processing: Tutorials in performance and cognition*. Potomac, MD: Lawrence Erlbaum Associates.
- Spoehr, K. T., & Smith, E. E. (1974). The role of syllables in perceptual processing. *Cognitive Psychology*, 5, 71-89.
- Millward, R. B., & Spoehr, K. T. (1973). The direct measurement of hypothesis sampling strategies. *Cognitive Psychology*, 4, 1-38.
- Professional papers and invited lectures**
- Spoehr, K., Couturier, L., & Scurry, J. (2003) Renewing the Compact: A Town Meeting on What Society Needs from Higher Education. American Association for Higher Education. Washington, DC, March 2003.
- Spoehr, K. T. (1993). Profiles of hypermedia authors: How students learn by doing. Paper presented at the annual meeting of the American Education Research Association. Atlanta, GA, April 1993.

Spoehr, K. T. (1992). Creating American Studies with Electronic Links. Paper presented at the annual meeting of the American Education Research Association. San Francisco, CA, April 1992.

Spoehr, K. T. (1992). Using hypermedia to clarify conceptual structures: Illustrations from history and literature. Paper presented at the annual meeting of the American Education Research Association. San Francisco, CA, April 1992.

Shapiro, A.M., & Spoehr, K. T. (1992). The effects of corpus organization and learning goals on learning from a hypermedia system. Paper presented at the annual meeting of the American Education Research Association. San Francisco, CA, April 1992.

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Spoehr, K. T., & Shapiro, A. M. (1991). Learning from Hypermedia: Making sense of a multiply-linked database. Paper presented at the annual meeting of the American Education Research Association. Chicago, April 1991.

Frederiksen, J., Spoehr, K. T., & White, B. Representing mental models: Some design concepts. Paper presented at the annual meeting of the American Education Research Association. Boston, MA, April 1990.

Spoehr, K. T., Nyce, J., and Bader, G. Design experiments: Integrating interactive technologies into classrooms. Paper presented at the annual meeting of the American Education Research Association. Boston, MA, April 1990.

Frederiksen, J., Spoehr, K. T., & White, B. Conceptual models for understanding electrical circuits. Paper presented at the annual meeting of the American Education Research Association. Boston, MA, April 1990.

Spoehr, K. T. Hypermedia as an educational resource. Invited lecture presented to the Rhode Island Educational Media Association. Warwick, RI. March 1990.

Spoehr, K. T., & Horvath, J. A. Running a mental model: Evidence from reaction time studies. Paper presented to the annual meeting of Psychonomic Society, Atlanta, GA, November 1989.

Spoehr, K. T. Creating conceptual ACCESS to history and literature. Invited talk at the J. S. McDonnell Foundation meeting on Cognitive Studies in Educational Practice. Pittsburgh, PA, October 1989.

Viscuso, S. R., & Spoehr, K. T. How does a mental model facilitate comprehension of instructions? Paper presented to the annual meeting of Psychonomic Society, New Orleans, LA, November 1986.

Spoehr, K. T., Morris, M. E., & Smith, E. E. Comprehension of instructions for operating devices. Paper presented to the annual meeting of Psychonomic Society, San Diego, CA, November, 1983.

Spoehr, K. T. Creativity and problem solving. Invited lecture at the Fipse Seminar Series, Wheaton College, May 1979.

Spoehr, K. T. Processing words in context. Invited symposium presentation, National Conference on Reading, St. Petersburg, FL, December 1978.

Spoehr, K. T., & Williams, B. E. Retrieving distance and location information from mental maps. Paper presented at the annual meeting of the Psychonomic Society, San Antonio, TX, November 1978.

Spoehr, K. T. Strategy variations in processing words. Paper presented at the annual meeting of the Psychonomic Society, St. Louis, MO, November 1976.

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Spoehr, K. T., & Smith, E. E. Perceptual units and parsing processes in word perception. Paper presented at the annual meeting of the Psychonomic Society, St. Louis, MO, November 1972.

Spoehr, K. T., & Smith, E. E. Units in the perception of written material. Paper presented at the annual meeting of the Western Psychological Association, Portland, OR, April 1972.

Millward, R. B., & Troyer [Spoehr], K. Hypothesis sampling strategies in concept identification. Paper presented at the annual convention of the Psychonomic Society, St. Louis, MO, November 1969.

## 6. Research Grants

### *a. Current*

Teagle Foundation: Project Director, "Using Cognitive Principles to Enhance Graduate and Undergraduate Learning in Independent Research Projects," 2008-2011.

*NSF PIREs Project* (Brown University and The Johns Hopkins University): Program Evaluator, "International Collaboration on Meaning Representations for Natural Language Processing," 2005-present

### *b. Completed*

Vocabulary Assessment:

Co-Principal Investigator, National Center for Educational Statistics, "Vocabulary Addition to the National Assessment of Adult Literacy (NAAL)," 2004 – 2008

Principal Investigator, James S. McDonnell Foundation, "Conceptual Neighborhoods as Tools for Learning and Assessment in Humanities and Social Science," 1991-1995

Project Director, Department of Education Center for Educational Technology (Bank St. College), 1988-1993

Principal Investigator, James S. McDonnell Foundation, "A Concept Network/Hypermedia Approach to Teaching History and English in Secondary Schools," 1988-1991.

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## 7. Service

### **To Higher Education**

2003 – present: Commissioner for the Northeast Association of Schools and Colleges (NEASC), the regional accreditation body for this area.

1998 – present: College of Humanities and Social Sciences Advisory Board (Chairperson), Carnegie-Mellon University (most recent visit and report, May 2004)

### **To the Profession**

Chair, Mentorship Award Committee, Women in Cognitive Science, 2003-2006.

Advisory Board Member, Women in Cognitive Science, 2003-2006.

Visiting external review committee, Hampshire College, March 2004.

Chair, Visiting Committee for the Psychology Department, Washington University (St. Louis), October 2003

Associate Editor, *Memory & Cognition*, 1993-1997  
Editorial Board, *Cognitive Psychology*, 1982-1995  
Reviewer for *Journal of Experimental Psychology: Human Perception and Performance*,  
*Journal of Experimental Psychology: General*, *Journal of Experimental Psychology:*  
*Human Memory and Learning*, *Journal of Memory and Language*, *American*  
*Psychologist*, *Cognition and Instruction*, *Educational Researcher*.  
Council member of the Federation of Behavioral, Social, and Cognitive Sciences, 1983-85

### **To the University**

Faculty Advisory Committee on Computing, 2002-2003  
Computing Advisory Committee, 2003 – 2007  
Faculty Committee on Nominations (Chairperson, 2005-2006)  
Freshman Advisor, 1975-1977, 1983-1984, 1991-93, 1996-present  
Sophomore Advisor, 1991-1993, 1996-present  
Director of Graduate Studies, Cognitive Science, 2008-present  
Co-Academic Advisor, Men's Basketball Team, 2006-present  
Planning & Design Committee, Mind-Brain Building, 2005-present  
Phi Beta Kappa Board (Vice-President, 2005-present)  
NEASC Reaccreditation Steering Committee, 2007-present  
Project ADVANCE Career Development Awards Selection Committee, 2008

### **To the Community**

Meals on Wheels Delivery Volunteer, 2004 - present  
Rhode Island Historical Society, Finance Committee, 2007-present  
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### 8. Academic Honors

#### *Fellowships and Societies*

Phi Beta Kappa

Sigma Xi

Stanford University pre-doctoral fellow

National Science Foundation pre-doctoral fellow.

Fellow of the American Association for the Advancement of Science

Fellow of American Psychological Society

Member of Cognitive Science Society, Psychonomic Society, American Psychological Association

#### *Awards:*

Harriet W. Sheridan Award for Distinguished Contributions to Teaching and Learning, 2007

“Best of WebCT 2004” course website award (for CG48)

#### *Other Professional Activities:*

Member of the *Graduate Education Project* Oversight Committee for the American Association of Universities, 2000-2001

Participant in the *Institute for Educational Management*, Harvard University Graduate School of Education, July 1998.

### 9. Teaching

Director of Graduate Studies (Cognitive Science), 2008-present

Freshman Advisor, 1996-present (6-8 advisees yearly)

Sophomore Advisor, 1996-present (6-8 advisees yearly)

Co-Academic Advisor, Men's Basketball Team, 2006-present

Honors Students: Kimberly Jackson (2006-07)

Graduate Prelim Committees: Ju-Hwa Park (2007-08), Adam Darlow (2008-09), David Buchanan (2008-09)

Graduate 1<sup>st</sup> year project committees: Adam Darlow (2006-07), David Buchanan (2006-07), Jon Ericson (2007-2008)

Graduate Dissertation Committee: Justin Owens (2008)

Courses:

COGS1530 – Laboratory in Cognitive Processes (Fall 2008, enrollment = 9)

COGS1560 – Human Memory and Learning (Spring 2008, enrollment = 11)

COGS1880 – Reasoning and Problem Solving (Spring 2008, enrollment = 3)

COGS1160 – Human Factors (Spring 2006, enrollment = 15; Spring 2007, enrollment = 24)

COGS0090 - Quantitative Methods in Psychology (Fall 2006 enrollment = 70)

COGS0480 – Human Thinking and Problem Solving (FYS) (Spring 2007, enrollment = 16)

10. Last Updated: January 6, 2009