

June 1, 2001

CURRICULUM VITAE
RICHARD M. SHIFFRIN

Biographical Data:

Name: Richard Martin Shiffrin
Birthplace: New Haven, Connecticut, March 13, 1942
Current Address: Psychology Department, Indiana University, Bloomington, IN 47405
Phone: (812) 855-4972 (office)/(812) 336-1041 (home)
Current Positions: Luther Dana Waterman Professor
Professor of Psychology
Director, Cognitive Science Program

Education:

1960-1964: Yale University; B.A. (Mathematics): 1964
1964-1968: Stanford University; Ph.D. (Experimental and Mathematical Psychology): 1968

Academic Positions:

1968-1970: Assistant Professor of Psychology, Indiana University
1970-1971: Visiting Assistant Professor of Psychology, The Rockefeller University
1971-1973: Associate Professor of Psychology, Indiana University
1973-present: Professor of Psychology, Indiana University
1975-1976: Visiting Professor of Psychology, The Rockefeller University
1988, Fall: Visiting Professor of Psychology, University of Queensland, Brisbane, Australia
1994-1995: Visiting Professor of Psychology, University of Amsterdam, The Netherlands

Fellowships , Awards, and Honorary/Elected Positions:

- 1999: Howard Crosby Warren Medal, Society of Experimental Psychologists
1997: Honorary Doctorate, University of Amsterdam
1996: Member, American Academy of Arts and Sciences
1996: Fellow, American Psychological Society
1995: Member, National Academy of Sciences
1996-99: Co-director, Alliance of Distinguished Rank Professors, Indiana University
1994-95: James McKeen Cattell Sabbatical Fellowship
1991-2001: MERIT Award, National Institutes of Mental Health
1991-1994: Co-chair, Distinguished Rank Professors, Indiana University
1991-present Associate Director, Institute for the Study of Human Capabilities, Indiana University
1988-present: Director, Cognitive Science Program, Indiana University
1987: Chairman, Governing Board, Psychonomic Society
1985: Chairman, Society for Mathematical Psychology
1983: Governing Board, Society for Mathematical Psychology
1982: Governing Board of the Psychonomic Society
1981: Society of Experimental Psychologists
1981-1984: Editor, *Journal of Experimental Psychology: Learning, Memory, and Cognition*
1980-present: Luther Dana Waterman Research Professor, Indiana University
1978: Advisory Council for the International Association for the Study of Attention and Performance
1977-present: Fellow of the American Association for the Advancement of Science
1975-1976: John Simon Guggenheim Fellowship
1967-1968: NSF Fellowship, Stanford University
1964-1967: NDEA Fellow in Mathematical Psychology, Stanford University

Grants :

Current:

- 1968-2002: Principal Investigator, PHS Grant 12717: Information Processing, Search and Retrieval
1991-2002: NIMH MERIT Award (about \$120,000/year)
1993-2003: Co-PI, NIMH Training Grant, MH19879, Modeling of Cognition (about \$70,000/year)
1980-present: Luther Dana Waterman Research Award (about \$13,000/year)
1998-2001: Co-PI, National Science Foundation (Education Directorate) Grant, An Undergraduate Curriculum for Cognitive and Information Sciences, DUE -9752299, (\$249,000)
2001-2004 P.I., NIMH MH 63993 Modeling Perception and Memory: Studies in Priming (3 yrs, ~\$190,000/yr)

Previous Awards:

- 1995-1999: NSF, SBR 9512089, Processing Visual Information from Unattended Locations
1996-1999: P.I., Indiana University Strategic Directions Charter Grant, Undergraduate Major in Cognitive Science
1991-1993: Associate Director, AFOSR, 870089
1986-1990: Co-Investigator, AFOSR, 870089; "Institute for the Study of Human Capabilities"
1968-1980: PHS Training Grant in Mathematical Psychology (11219) Assistant Investigator
1977-1978: NSF Grant: "Controlled and automatic information processing"
1969-1972: NIH Biomedical Sciences Support Grants Program (BSSGP) administered by Indiana University Office of Research and Advanced Studies

Courses Taught:

Undergraduate: Introductory Statistics, Advanced Statistics, Bayesian Statistics, Introduction to Mathematical Psychology, Cognitive Psychology, Human Memory

Graduate: Introductory Statistics, Mathematical Psychology, Cognitive Psychology, Perception, Information Processing, Sensory Information Processing, Short-term Memory, Long-term Memory, Attention and Automatism, Parallel Distributed Processing Models

Research Interests:

Learning, memory, sensory coding, information processing, forgetting, information retrieval, attention and automatism, organization and structure of memory, control processes in memory, decision theory, optimal decision making, mathematical and computer models of the various content areas listed above, including parallel distributed models.

Professional and National Service:

Editor, *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 1981-1984.

Associate Editor, *Psychological Review*, 1976-1982; 1989-1997.

Present Masthead Consulting Editor, *Acta Psychologica*, *Journal of Mathematical Psychology*, *Journal of Experimental Psychology: Learning, Memory, and Cognition*

Former Masthead Consulting Editor, *Memory & Cognition*, *Journal of Experimental Psychology: Learning, Memory, and Cognition*, and *Perception & Psychophysics*.

Regular reviewer for journals in the field of cognitive psychology. Reviewer of grants from the National Science Foundation and the Public Health Service.

Public Health Service Committee on evaluation of pre- and post-doctoral fellowship applications.

Co-organizer of Indiana Mathematical and Cognitive Psychology Meetings, 1968-1976.

Co-organizer of VI, VII, VIII, IX, X, XI, and XII Annual Interdisciplinary Conferences, 1980-present.

Governing Boards of the Psychonomic Society, 1982-88, and Society for Mathematical Psychology, 1983-89.

Publication Committee, Psychonomic Society, 1982-88.

National Science Foundation Panel on Human Cognition and Perception, 1989-1992 (and single session service, 1994, and 1996).

Co-Organizer of the 24th Annual Meetings of the Society for Mathematical Psychology, 1991.

Co-Organizer of the 30th Annual Meetings of the Society for Mathematical Psychology, 1997.

Host, as Director of the IU Cognitive Science Program, of the 1992 Annual Meetings of the Cognitive Science Society.

Member, National Research Council Panel on Representing Human Behavior in Military Simulations, 1996-1998.

External Review Committee for the National Science Foundation for the Panel on Cognition and Perception, 1996.

External Review Panel, Psychology Department, University of Maryland, 1997.

Member, Commission on Behavioral and Social Sciences and Education, National Research Council, 1999-2002.

Member, Panel on the Validity of Polygraph Testing, National Research Council, 2001-2002.

Chair, Membership Committee, Section 52, National Academy of Science, 1998-2000

Class V Secretary, National Academy of Science, 1999-2002

Class V Chair, National Academy of Science, 2002-2006.

University Service

Co-Director, Alliance of Distinguished Rank Professors, 1993-2000.

Steering Committee, Alliance of Distinguished Rank Professors, 2000-2002.

Director, Cognitive Science Program, 1981-present.

Committee panels, and posts too numerous to list, 1968-present.

Organizational Memberships:

National Academy of Sciences, American Academy of Arts and Sciences, Society of Experimental Psychologists, American Psychological Society, American Psychological Association, Society for Mathematical Psychology, Psychonomic Society, American Association for the Advancement of Science, Advisory Council for the International Association for the Study of Attention and Performance, Acoustical Society of America, Midwestern Psychological Association, Cognitive Science Society, International Psychological Association, International Association for Applied Psychology.

Presentations at Conferences:

Yearly presentations at Psychonomic Society Meetings (1973-present), Mathematical Psychology Meetings (1968-present). 3 - 6 invited and submitted presentations/ yr at assorted other meetings (1970-present).

Invited Colloquia:

Colloquia given at most major research institutions of higher learning, with the exception of Cornell, Georgia Tech, Emory, University of Florida.

Students [dissertation advisor & date; present position]:

Bruce Durdin, 1974; Researcher, IBM

Wilson Geisler, 1975; Professor, Psychology Dept., and Biomedical Engineering Program; Director, Center for Vision and Image Sciences, University of Texas

Walter Schneider, 1975; Professor of Psychology and Center for the Neural Basis of Cognition, Univ. of Pittsburgh

Bill Burnside, 1975; Captain and Research Scientist, Army Research Institute, Fort Knox

Don McKay, 1975; Senior Scientist, Unisys Center for Advanced Information Technology

Bill Scholz, 1976, Director, Unisys NL Software Architecture

Susan Dumais, 1979; Senior Researcher, Adaptive Systems & Interaction Group, Microsoft Research

Jeroen Raaijmakers, 1980; Professor of Psychology, University of Amsterdam

Dave Foyle, 1981; Senior Scientist, NASA Ames Research Center

Gary Gillund, 1982; Associate Professor and Chair, Department of Psychology, College of Wooster

Tim Feustel, 1982; Scientist, Telcordia Technologies (retired)

Aita Salasoo, 1984; Senior Director Telcordia Technologies.

Scott Gronlund, 1986; Professor of Psychology, University of Oklahoma

Kevin Murnane, 1990; Associate Professor, University of Maryland

Steve Clark, 1991; Professor of Psychology, University of California, Riverside

Mary Czerwinski, 1992; Senior Researcher, Adaptive Systems and Interaction, Microsoft Corporation

Peter Koss-Nobel, 1996; Practitioner, and Computability Specialist, Microsoft Corporation

Rachel Shoup, 1996; Postdoctoral Fellow, Center of Neural Science, University of California - Davis

David Diller, 1999; Research Scientist, BBN Technologies

Mark Steyvers, 2000; Postdoctoral Research Scientist, Stanford University

David Huber, 2000; Postdoctoral Research Scientist, Department of Psychology, University of Colorado

Postdoctoral research advising (present position):

Gerry Gardner, 1972; Professor, University of Michigan, Dearborn
Simon Dennis, 1994; Assistant Professor, University of Queensland
Rene Zeelenberg, 1996; Assistant Professor, University of Amsterdam
Diane Pecher, 1996; Assistant Professor, University of Leiden
Lael Schooler, 1997; Assistant Professor, Psychology Department, Penn State
Denis Cousineau, 1998; Assistant Professor, University of Montreal
Asher Cohen, 1998; Professor, Hebrew University, Israel
Roderick W. Smith, 1998; Research Associate, Department of Psychology, University of Pennsylvania.
Eric Jan Wagenmakers, 2000; Postdoctoral Research Scientist, Psychology Department, Northwestern University
Kenneth J. Malmberg, 2000; Postdoctoral Research Associate, Indiana University

Other research advising:

George Potts, 1971; Ph.D. Committee Member; Professor and Chair, Psychology Department, University of Denver
D. Wesley Grantham, 1975; Ph.D. Comm. Member; Director, Aud. Res. Lab, Bill Wilkerson Center, Vanderbilt University
Steve Edgell, 1975; Ph.D. Committee Member; Professor of Psychological and Brain Sciences, University of Louisville
James Picek, 1975; Ph.D. Committee Member; (no information)
Richard Griggs, 1976; Ph.D. Committee Member; Professor of Psychology, University of Florida
Barb Mynatt, 1977; Ph.D. Committee Member; Professor of Psychology, Bowling Green University
Darrell Butler, 1981; Ph.D. Committee Member; Professor of Psychological Science, Ball State University
Jan Weisenberger, 1981; Ph.D. Committee Member; Professor of Speech and Hearing Science, Ohio State University
Robert H. Gilkey, 1981; Ph.D. Committee Member; Chair, and Associate Professor of Psychology, Wright State
Thomas Hanna, 1982; Ph.D. Committee Member; Researcher, Naval Research Station, Groton CT
Ed Hirt, 1987; Ph.D. Committee Member; Associate professor of Psychology, Indiana University
Paul Luce, 1987, Ph.D. Committee Member; Professor of Psychology, SUNY Buffalo
Paul Evans, 1987, Ph.D. Committee Member; (no information)
Louisa Slowiaczek, 1987, Ph.D. Committee Member; professor of Psychology, Bowdoin College
Maria Sera, 1987, Ph.D. Committee Member; Associate Professor of Psychology, ICD, University of Minnesota
Bruce Berg, 1987, Ph.D. Committee Member; Associate Professor, University of California, Irvine
Beverly Roskos-Ewoldson, 1989, Ph.D. Committee Member; Associate Professor of Psychology, Iowa State University
Hyun-Jung Shin, 1990, Ph.D. Committee Member; Professor of Psychology, Seoul University
Steve McKinley, 1991, Ph.D. Committee Member; Associate Instructor of Mathematics, Indiana University
Steve Goldinger, 1992; Ph.D. Committee Member; Associate professor of Psychology, Arizona State University
Robin Thomas, 1995, Ph.D. Committee Member; Associate Professor of Psychology, Miami University
Tom Palmeri, 1995; Ph.D. Committee Member; Associate Professor of Psychology, Vanderbilt University
Diane Pecher, 1997; PhD, Committee Member; Assistant Professor, University of Leiden
Sonya Sheffert, 1997, Ph.D. Committee; University of Central Michigan
Rene Zeelenberg, 1998, PhD, Committee Member; Assistant Professor, University of Amsterdam

Richard Schweikert, 1972, Chair, Master's thesis; Professor of Psychological Sciences, Purdue University
William B. Whitten, II; 1970s: Undergraduate research assistant; AT&T Research
Marvin Krank, 1970s; Chair, undergraduate honors thesis; Professor of Psychology, and Dean, Okanagan University
James Cook, 1980; Chair, undergraduate honors thesis; Professor of Psychology, UNCC Charlotte
Mark Roth, 1990; Chair, master's thesis (no information)
David Caulton, 1990s; Undergraduate Research Assistant; Researcher, Microsoft Research
Heidi Ziemer, 1990s; Graduate research assistant; Adjunct Assistant Professor of Psychology, Rice University
Nancy Lightfoot, 1993; Graduate Research Assistant.
Larissa K. Samuelson, 1993; Undergraduate Honors Thesis Advisor; <samuelso@indiana.edu>
Kim Marinelli, 1990s; Undergraduate Research Assistant; Researcher, Microsoft Corporation
Kirsten Ruys, 1999; Chair, master's thesis; University of Amsterdam
Keith Lyle, 1999; Undergraduate Research Assistant; Graduate student, Psychology Dept., Yale University
Joseph Stephens, 2000; Undergraduate research Assistant; Graduate student, Psychology Dept. Carnegie Mellon

Publications (listed chronologically):

1. Watson, W. W., Howard, A. J., Miller, N. E., & Shiffrin, R. M. (1963). Isotopic thermal diffusion factors for helium and neon at low temperatures. *Zeitschrift fur Naturforschung, 18a*, 242-245.
2. Shiffrin, R. M., & Logan, F. A. (1965). Performance speed as a function of practice speed. *Journal of Verbal Learning and Verbal Behavior, 4*, 335-338.

3. Atkinson, R. C., & Shiffrin, R. M. (1965). Mathematical models for memory and learning. Technical Report 79, Institute for Mathematical Studies in the Social Sciences, Stanford University. In P. Kimble (Ed.), *Proceedings of the Third Conference on Learning, Remembering, and Forgetting*. New York: The New York Academy of Sciences.
4. Brelsford, J. W., Keller, L., Shiffrin, R. M., & Atkinson, R. C. (1966). Short-term recall of paired-associates as a function of the number of interpolated pairs. *Psychonomic Science*, 4, 73-74.
5. Atkinson, R. C., & Shiffrin, R. M. (1966). Some two-process models for memory (Technical Report 107). Stanford, CA: Stanford University, Institute for Mathematical Studies in the Social Sciences.
6. Phillips, J. L., Shiffrin, R. M., & Atkinson, R. C. (1967). The effects of list length on short-term memory. *Journal of Verbal Learning and Verbal Behavior*, 6, 303-311.
7. Atkinson, R. C., Brelsford, J. W., Jr., & Shiffrin, R. M. (1967). Multiprocess models for memory with applications to a continuous presentation task. *Journal of Mathematical Psychology*, 4, 277-300.
8. Brelsford, J. W., Shiffrin, R. M., & Atkinson, R. C. (1968). Multiple reinforcement effects in short-term memory. *British Journal of Mathematical and Statistical Psychology*, 21, 1-19.
9. Atkinson, R. C., & Shiffrin, R. M. (1968). Human memory: A proposed system and its control processes. In K.W.Spence and J. T. Spence (Eds.), *The Psychology of Learning and Motivation: Advances in Research and Theory* (Vol. 2, pp. 89-195). New York: Academic Press.
10. Shiffrin, R. M., & Atkinson, R. C. (1968). Some speculations on storage and retrieval processes in long-term memory (Technical Report 127). Stanford, CA: Stanford University, Institute for Mathematical Studies in the Social Studies.
11. Shiffrin, R. M. (1968). Search and retrieval processes in long-term memory (Technical Report 137). Stanford, CA: Stanford University, Institute for Mathematical Studies in the Social Sciences.
12. Shiffrin, R. M., & Atkinson, R. C. (1969). Storage and retrieval processes in long-term memory. *Psychological Review*, 79, 179-193.
13. Shiffrin, R. M. (1970). Memory search. In D. A. Norman (Ed.), *Models of Memory* (pp. 375-447). New York: Academic Press.
14. Shiffrin, R. M. (1970). Forgetting, trace erosion or retrieval failure? *Science*, 168, 1601-1603.
15. Potts, G. R., & Shiffrin, R. M. (1970). Repetitions, blank trials, and the von Restorff effect in free recall memory. *Journal of Experimental Psychology*, 86, 128-130.
16. Atkinson, R. C., & Shiffrin, R. M. (1971). The control of short-term memory. *Scientific American*, 224, 82-90.
17. Shaffer, W. O., & Shiffrin, R. M. (1972). Rehearsal and storage of visual information. *Journal of Experimental Psychology*, 92, 292-296.
18. Shiffrin, R. M., & Gardner, G. T. (1972). Visual processing capacity and attentional control. *Journal of Experimental Psychology*, 93, 72-82.
19. Shiffrin, R. M., & Geisler, W. (1973). Visual recognition in a theory of information processing. In R. Solso (Ed.), *The Loyola Symposium: Contemporary Viewpoints in Cognitive Psychology* (pp. 53-101). Washington: Winston.
20. Shiffrin, R. M., Craig, J. C., & Cohen, U. (1973). On the degree of attention and capacity limitations in tactile processing. *Perception & Psychophysics*, 13, 328-336.
21. Shiffrin, R. M., Gardner, G. T., & Allmeyer, D. H. (1973). On the degree of attention and capacity limitations in visual processing. *Perception & Psychophysics*, 14, 231-236.

22. Shiffrin, R. M. (1973). Information persistence in short-term memory. *Journal of Experimental Psychology*, *100*, 39-49.
23. Shiffrin, R. M. (1973). Information processing [Review of *Coding Processes in Human Memory*]. *Science*, *180*, 400.
24. Shiffrin, R. M. (1973). Visual free recall. *Science*, *80*, 980-982.
25. Shiffrin, R. M., & Schneider, W. (1974). An expectancy model for memory search. *Memory & Cognition*, *2*, 616-628.
26. Shiffrin, R. M., & Grantham, D. W. (1974). Can attention be allocated to sensory modalities? *Perception & Psychophysics*, *15*, 460-474.
27. Shiffrin, R. M., Pisoni, D. B., & Casteneda-Mendez, K. (1974). Can attention be divided between the ears? *Cognitive Psychology*, *6*, 190-215.
28. Picek, J. S., Sherman, S. J., & Shiffrin, R. M. (1975). Cognitive organization and storage of social structures. *Journal of Personality and Social Psychology*, *31*, 758-768.
29. Shiffrin, R. M. (1975). The locus and role of attention. In P. M. A. Rabbit & S. Dornic (Eds.), *Attention & Performance V* (pp. 168-193). New York: Academic Press.
30. Shiffrin, R. M. (1975). Short-term store: The basis for a memory system. In F. Restle, R. M. Shiffrin, N. J. Castellan, H. R. Lindman, & D. B. Pisoni (Eds.), *Cognitive Theory* (Vol. 1, pp. 193-218). Hillsdale, NJ: Erlbaum.
31. Restle, F., Shiffrin, R. M., Castellan, N. J., Lindman, H. R., & Pisoni, D. B. (Eds.) (1975). *Cognitive Theory, Vol. 1*. Hillsdale, NJ: Erlbaum.
32. Shiffrin, R. M., McKay, D., & Shaffer, W. O. (1976). Attending to forty-nine spatial positions at once. *Journal of Experimental Psychology: Human Perception and Performance*, *2*, 14-22.
33. Shiffrin, R. M. (1976). Capacity limitations in information processing, attention and memory. In W. K. Estes (Ed.), *Handbook of Learning and Cognitive Processes: Vol. 4. Attention and Memory* (pp. 177-236). Hillsdale, NJ: Erlbaum.
34. Shiffrin, R. M., & Schneider, W. (1977). Toward a unitary model for selective attention, memory scanning, and visual search. In S. Dornic (Ed.), *Attention and Performance VI*, 413-439. Hillsdale, NJ: Erlbaum.
35. Schneider, W., & Shiffrin, R. M. (1977). Automatic and controlled information processing in vision. In LaBerge, D. & Samuels, S. J. (Eds.), *Basic Processes in Reading: Perception and Comprehension*, 127-154. Hillsdale, NJ: Erlbaum.
36. Schneider, W., & Shiffrin, R. M. (1977). Controlled and automatic human information processing: I. Detection, search, and attention. *Psychological Review*, *84*, 1-66.
37. Shiffrin, R. M., & Schneider, W. (1977). Controlled and automatic human information processing: II. Perceptual learning, automatic attending, and a general theory. *Psychological Review*, *84*, 127-190.
38. Shiffrin, R. M. (1977). Attentional control. *Perception & Psychophysics*, *21*, 93-96.
39. Shiffrin, R. M. (1977). Commentary on "Human Memory: A Proposed System and Its Control Processes." In Bower, G. H. (Ed.), *Human Memory: Basic Processes*, 1-8. New York: Academic Press.

40. Shiffrin, R. M., & Cook, J. R. (1978). Short-term forgetting of item and order information. *Journal of Verbal Learning and Verbal Behavior*, 17, 189-218.
41. Shiffrin, R. M., & Raaijmakers, J. (1978). A model for long-term retrieval. Indiana Mathematical Psychology Program Report No. 78-2. (Talk given at Mathematical Psychology Meetings, McMaster University, Hamilton, Ontario, August, 1978).
42. Shiffrin, R. M., & Thompson, M. Moments of transition-additive random variables defined on random processes with a finite number of regenerative states. RMS Technical Report No. 79-1.
43. Shiffrin, R. M., & Thompson, M. Calculation methods for regenerative random processes. RMS Technical Report No. 79-2.
44. Penner, M. J., & Shiffrin, R. M. (1980). Nonlinearities in the coding of intensity within the context of a temporal summation model. *Journal of the Acoustical Society of America*, 67, 617-628.
45. Raaijmakers, J. G. W., & Shiffrin, R. M. (1980). SAM: A theory of probabilistic search of associative memory. In Bower, G. H. (Ed.), *The Psychology of Learning and Motivation*, Vol. 14, 207-262. New York: Academic Press.
46. Raaijmakers, J. G. W., & Shiffrin, R. M. (1981). Search of associative memory. *Psychological Review*, 88, 93-134.
47. Shiffrin, R. M., & Dumais, S. T. (1981). The development of automatism. In Anderson, John (Ed.), *Cognitive Skills and Their Acquisition*, 111-140. Hillsdale, NJ: Erlbaum.
48. Gillund, G., & Shiffrin, R. M. (1981). Free recall of complex pictures and abstract words. *Journal of Verbal Learning and Verbal Behavior*, 20, 575-592.
49. Raaijmakers, J. G. W., & Shiffrin, R. M. (1981). Order effects in recall. In Long, J., & Baddeley, A. (Eds.), *Attention and Performance IX*, 403-415. Hillsdale, NJ: Erlbaum.
50. Shiffrin, R. M., Dumais, S. T., & Schneider, W. (1981). Characteristics of automatism. In Long, J. & Baddeley, A. (Eds.), *Attention and Performance IX*, 223-237.
51. Shiffrin, R. M. (1981). Attention and automatism. In Hunt, B. (Ed.), *Proceedings of the Lake Wilderness Attention Conference*. Office of Naval Research Technical Report.
52. Hanna, T. E., Robinson, D. E., Shiffrin, R. M., & Gilkey, R. H. (1982). Forward masking of diotic and dichotic clicks by noise. *Journal of the Acoustical Society of America*, 72, 1171-1178.
53. Shiffrin, R. M. (1983). Comments and discussion on preparatory processes. In Donchin, E. (Ed.), *Proceedings of the First Carmel Conference on Evoked Potentials*. Hillsdale, NJ: Erlbaum.
54. Feustel, T. C., Shiffrin, R. M., & Salasoo, A. (1983). Episodic and lexical contributions to the repetition effect in word identification. *Journal of Experimental Psychology: General*, 112, 309-347.
55. Schneider, W., Dumais, S. T., & Shiffrin, R. M. (1984). Automatic and controlled processing and attention. In Parasuraman, R., & Davies, D. R. (Eds.), *Varieties of Attention*, 1-27. New York: Academic Press.
56. Gillund, G., & Shiffrin, R. M. (1984). A retrieval model for both recognition and recall. *Psychological Review*, 91, 1-67.
57. Shiffrin, R. M., & Schneider, W. (1984). Automatic and controlled processing revisited. *Psychological Review*, 91, 269-276.
58. Salasoo, A., Shiffrin, R. M., & Feustel, T. C. (1985). Building permanent memory codes: Codification and repetition effects in word identification. *Journal of Experimental Psychology: General*, 114, 50-77.

59. Schneider, W., & Shiffrin, R. M. (1985). Categorization (restructuring) and automatization: Two separable factors. *Psychological Review*, *92*, 424-428.
60. Salasoo, A., Feustel, T. C., & Shiffrin, R. M. (1985). Memory codes and episodes in models of word identification: A reply to Johnston, van Santen, and Hale. *Journal of Experimental Psychology: General*, *114*, 509-513.
61. Gronlund, S. D., & Shiffrin, R. M. (1986). Retrieval strategies in recall of natural categories and categorized-lists. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *12*, 550-561.
62. Clark, S., & Shiffrin, R. M. (1987). Recognition of multiple-item probes. *Memory & Cognition*, *15*, 367-378.
63. Shiffrin, R. M. (1988). Attention. In Atkinson, R. C., Herrnstein, R. J., Lindzey, G., & Luce, R. D. (Eds.), *Stevens' Handbook of Experimental Psychology, 2nd Edition*, 739-811. New York: Wiley.
64. Shiffrin, R. M., & Czerwinski, M. P. (1988). A model of automatic attention attraction when mapping is partially consistent. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *14*, 562-569.
65. Shiffrin, R. M., & Thompson, M. (1988). Moments of transition-additive random variables defined on finite, regenerative random processes. *Journal of Mathematical Psychology*, *32*, 313-340.
66. Shiffrin, R. M., Murnane, K., Gronlund, S., & Roth, M. (1989). On units of storage and retrieval. In Izawa, C. (Ed.), *Current Issues in Cognitive Processes: The Tulane Flowerree Symposium on Cognition*, 25-68. Hillsdale, NJ: Erlbaum.
67. Ratcliff, R., Clark, S., & Shiffrin, R. M. (1990). The list-strength effect: I. Data and discussion. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *16*, 163-178.
68. Shiffrin, R. M., Ratcliff, R., & Clark, S. (1990). The list-strength effect: II. Theoretical mechanisms. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *16*, 179-195.
69. Murnane, K., & Shiffrin, R. M. (1991). Word repetitions in sentence recognition. *Memory & Cognition*, *19* (2), 119-130.
70. Shiffrin, R. M., & Murnane, K. (1991). Composition, distribution, and interference in memory. In Hockley, W. E., & Lewandowsky, S. (Eds.), *Relating Theory and Data: Essays on Human Memory in Honor of Bennet B. Murdock*, 331-346. Hillsdale, NJ: Erlbaum.
71. Healy, A., Kosslyn, S., & Shiffrin, R. M. (Eds.) (1992). *From Learning Theory to Connectionist Theory: Essays in Honor of William K Estes, Volume 1*. Hillsdale, NJ: Erlbaum.
72. Healy, A., Kosslyn, S., & Shiffrin, R. M. (Eds.) (1992). *From Learning Processes to Cognitive Processes: Essays in Honor of William K Estes, Volume 2*. Hillsdale, NJ: Erlbaum.
73. Murnane, K., & Shiffrin, R. M. (1991). Interference and the representation of events in memory. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *17* (5), 855-874.
74. Shiffrin, R. J., & Raaijmakers, J. G. (1992). The SAM retrieval model: A retrospective and prospective. In Healy, A., Kosslyn, S., & Shiffrin, R. M. (Eds.), *From Learning Processes to Cognitive Processes: Essays in Honor of William K Estes, Volume 2*, pp. 69-86. Hillsdale, NJ: Erlbaum.
75. Raaijmakers, J. G., & Shiffrin, R. M. (1992). Models for recall and recognition. *Annual Review of Psychology* *43*:205-234.
76. Shiffrin, R. M., Czerwinski, M. P., & Lightfoot, N. (1993). On the automatization of visual search. In Izawa, C. (Ed.), *Cognitive Psychology Applied*. Hillsdale, NJ: Erlbaum.

77. Clark, S., & Shiffrin, R. M. (1992). Cuing effects and associative information in recognition memory. *Memory and Cognition, Volume 20*, No. 5, pp. 580-598.
78. Czerwinski, M., Lightfoot, N., & Shiffrin, R. M. (1992). Automatization and training in visual search. *American Journal of Psychology*, Vol. 105, No. 22, pp. 271-315.
79. Huber, D. E., Ziemer, H.E., & Shiffrin, R. M. (1992). Does memory activation grow with list strength and/or Length? *Proceedings of the Fourteenth Annual Conference of the Cognitive Science Society*, pp. 147-152. Hillsdale, NJ: Erlbaum.
80. Lightfoot, N. & Shiffrin, R. M. (1992). On the unitization of novel, complex visual stimuli. *Proceedings of the Fourteenth Annual Conference of the Cognitive Science Society*, pp. 277-282. Hillsdale, NJ: Erlbaum.
81. Shiffrin, R. M. (1993). Short-term memory: A brief commentary. *Memory and Cognition, 21* (2), 193-197.
82. Shiffrin, R. M., & Nosofsky, R.A. (1994). Seven plus or minus two: A commentary on capacity limitations. *Psychological Review, 101*, No. 2, 357-361.
83. Shiffrin, R. M., Huber, D., & Marinelli, K. (1995). Effects of category length and strength on familiarity in recognition. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 21*, No. 2, 267-287.
84. Shiffrin, R. M. (1996). Laboratory Experimentation on the Genesis of Expertise. In K. A. Ericsson (Ed.), *The Road to Excellence: The acquisition of Expert Performance in the Arts and Sciences, Sports, and Games*, pp. 337-346. Mahwah, NJ: Erlbaum.
85. Shiffrin, R. M., Diller, D., & Cohen, A., (1996). Processing visual information in an unattended location. In Coles, M., Logan, G., & Kramer, A. (Eds.). *Converging Operations in the Study of Visual Selective Attention*, Chapter 7. pp. 225-245. American Psychological Association: Washington, D.C.
86. Shiffrin, R. M., & Lightfoot, N. (1997). Perceptual learning of alphanumeric-like characters. In R. L. Goldstone, P.G. Schyns, & D. L. Medin (Eds.) *The Psychology of Learning and Motivation*, Volume 36. San Diego: Academic Press. (pp. 45-82).
87. Shiffrin, R. M. (1997). A network model for multiple choice: Accuracy and response times. In A.A.J. Marley (Ed.), *Choice, Decision, and Measurement: Essays in Honor of R. Duncan Luce*, pp. 329-346. Mahwah, NJ: Erlbaum, (1997).
88. Shiffrin, R. M., & Nobel, P.A. (1997). The art of model development and testing. *Behavior Research Methods, Instruments, and Computers, 29*, No. 1, pp. 6-14. Psychonomic Society Publications.
89. Shiffrin, R. M. (1997). Attention, automatism, and consciousness. In J. Cohen & J. Schooler (Eds.), *Scientific Approaches to the Question of Consciousness*, pp. 49-64. Hillsdale, NJ: Erlbaum.
90. Shiffrin, R. M., & Steyvers, M. (1997). A model for recognition memory: REM: Retrieving effectively from memory. *Psychonomic Bulletin and Review, 4*(2), 145-166.
91. Shiffrin, R.M., & Steyvers, M. (1998). The effectiveness of retrieval from memory. In M. Oaksford & N. Chater (Eds.), *Rational Models of Cognition*, pp. 73-95 Oxford, U.K.: Oxford University Press.
92. Zeelenberg, R., Shiffrin, R.M., & Raaijmakers, J.G.W. (1999). Priming in a free association task as a function of association directionality. *Memory & Cognition, 27* (6), 956-961.
93. Shiffrin, R.M. (1999). 30 years of memory. In C. Izawa (Ed.), *On Human Memory: Evolution, Progress, and Reflections on the 30th Anniversary of the Atkinson-Shiffrin Model*. pp. 17-33. Mahwah, NJ: Erlbaum.
94. Wienese, M., La Heij, W., van der Heijden, A. H. C., & Shiffrin, R. M. (2000). Perceptual inertia:

Spatial attention and warning foreperiod? *Psychological Research*, **64**, 93-104.

95. Nobel, P.A., & Shiffrin, R. M. (2001). Retrieval processes in recognition and cued recall. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, **27**, 384-413.
 96. Diller, D. E., Nobel, P.A., & Shiffrin, R. M. (2001). An ARC-REM model for accuracy and response time in recognition and recall. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, **27**, 414-435.
 97. Goldstone, R. L., Lippa, Y., & Shiffrin, R. M. (2001). Altering object representations through category learning. *Cognition*, **78**, 27-43.
 98. Schooler, L., Shiffrin, R. M., & Raaijmakers, J. G. W. (2001) A model for implicit effects in perceptual identification. *Psychological Review*, **108**, 257-272.
 99. Wagenmakers, E. J. M., Zeelenberg, R., Huber, D., Raaijmakers, J. G. W., Shiffrin, R. M., & Schooler, L. (in press) REMI and ROUSE: Quantitative models for long-term and short-term priming in perceptual identification. In Bowers, J. (Ed.), *Rethinking Implicit Memory*. Oxford University Press.
 100. Huber, D. E., Shiffrin, R. M., Lyle, K. B., & Ruys, K. I. (2001). Perception and preference in short-term word priming. *Psychological Review*, **108**, 149-182.
 101. Raaijmakers, J. G. W., & Shiffrin, R. M. (in press). Models of memory. In Medin, D. (ed.) *Stevens Handbook of Psychology* 3rd Edition.
 102. Cousineau, D., Goodman, V. W., & Shiffrin, R. M. (accepted pending revision; submitted Sept., 2000). Extending statistics of extremes to distributions varying on position and scale, and implications for race models. *Journal of Mathematical Psychology*.
 103. Huber, D. E., Shiffrin, R. M., Quach, R., & Lyle, K. B. (submitted). Mechanisms of source confusion and discounting in short-term priming 1: Effects of prime duration and prime recognition. *Memory & Cognition*.
 104. Criss, A. H. & Shiffrin, R. M. (submitted). Context noise and item noise jointly determine recognition memory: A comment on Dennis & Humphreys (in press). *Psychological Review*.
 105. Wagenmakers, E. J. M., Steyvers, M., Raaijmakers, J. G. W., Shiffrin, R. M., van Rijn, H., & Zeelenberg, R. (submitted). A Bayesian model for lexical decision. *Psychological Bulletin & Review*.
 106. Wagenmakers, E. J. M., Zeelenberg, R., Steyvers, M., Shiffrin, R. M., & Raaijmakers, J. G. W. (submitted). Nonword repetition in lexical decision: Evidence for two opposing processes. *Journal of Experimental Psychology: Learning, Memory, and Cognition*.
 107. Malmberg, K. J., & Shiffrin, R. M. (submitted). The 'one-shot' context hypothesis: Effects of study time in explicit and implicit memory. *Psychological Bulletin & Review*.
 108. Huber, D. E., Shiffrin, R. M., Lyle, K. B., & Quach, R. (submitted). Mechanisms of source confusion and discounting in short-term priming 2: Effects of prime similarity and target duration. *Journal of Experimental Psychology, Learning, Memory, & Cognition*.
- In revision:
109. Sheffert, S. M & Shiffrin, R. M. (in revision). Auditory 'registration without learning'. *Memory & Cognition*.
 110. Zeelenberg, R., Pecher, D., Shiffrin, R. M., & Raaijmakers, J. G. W. (under revision for resubmission). Semantic context effects and priming in word association. *Psychological Bulletin & Review*.

111. Cousineau, D., & Shiffrin, R. M. (under revision for resubmission). Multinomial distributions and serial, self-terminating processing. *Psychological Science*.
112. Shoup, R. E., Shiffrin, R. M., & Cohen, A. (Under revision). Cross-dimensional interference in a focused attention task. *The Quarterly Journal of Experimental Psychology. Section A: Human Experimental Psychology*.

In preparation:

113. Diller, D. E., Cohen, A., & Shiffrin, R. M. (Draft completed). Attentional selection and duration judgments. *Psychological Science*.
114. Diller, D. E., Cohen, A., & Shiffrin, R. M. (Draft completed). Visual information processing without attention: Implicit measurements based on attentional capture. *Journal of Experimental Psychology: Human Perception and Performance*.
115. Diller, D. E., Cohen, A., & Shiffrin, R. M. (Draft completed). Attentional causes for priming failures. *Journal of Experimental Psychology: Human Perception and Performance*.
116. Steyvers, M., & Shiffrin, R. M. (Draft completed). Creating Semantic Spaces for Words based on Free Association Norms.
117. Steyvers, M., & Shiffrin, R. M. (in preparation). Predicting Memory Performance with Word Association Spaces.
118. Steyvers, M., & Shiffrin, R. M. (in preparation). Feature Frequency Effects in Recognition Memory.