

CURRICULUM VITAE

Harriet Salatas Waters

August, 2021

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Date of birth: October 27, 1949

Citizenship: United States

Marital Status: Married (two children)

Education:

University of Minnesota, Institute of Child Development, Ph.D. 1976.
University of Colorado, Boulder, M.A. 1973 (Experimental Psychology).
SUNY Stony Brook, B.A., 1971 (Psychology).

Employment History:

Professor Emerita, Department of Psychology
State University of New York at Stony Brook.

Professor, Department of Psychology
State University of New York at Stony Brook.

Associate Professor, Department of Psychology
State University of New York at Stony Brook.

Assistant Professor, Department of Psychology,
State University of New York at Stony Brook, 1978-1982.

Assistant Professor, Department of Psychology,
University of British Columbia, Vancouver, B.C., Canada, 1976-1978.

Honors:

2021 – *Bowlby-Ainsworth Award* - For insights into the cognitive structure of attachment representations, clarifying the Internal Working Models concept, and measuring script-like attachment representations across the lifespan.

Administrative Postitions:

Associate Chairperson for Graduate Studies, Department of Psychology,
State University of New York at Stony Brook, 1996 – 1998, 1999 – 2001

Memberships in Professional Organizations:

Society for Research in Child Development
American Educational Research Association
Division C (Learning and Instruction)
Cognitive Development Society
Piagetian Society

Review and Editorial Activities:

Child Development
Developmental Psychology
Journal of Experimental Child Psychology
Cognitive Development
Social Development
Journal of Verbal Learning and Verbal Behavior
Journal of Educational Psychology
Developmental Review
Merrill-Palmer Quarterly
International Journal of Behavioral Development
The European Journal of Cognitive Psychology
Social Psychology

Journal of Reading Behavior
National Science Foundation

Guest Reviewer, Society for Research in Child Development, conference meetings.
Guest Reviewer, American Educational Research Association, conference meetings.

Research Support:

NIH (NICHD) 1R01HD069442-01 H. Waters (co-PI), Glenn Roisman (PI, U of Illinois) additional co-PI's (Brian Vaughn – Auburn, Kelly Bost – U of Illinois, Cathryn Booth-LaForce - U of Washington). Total: \$478,439 (8/11 – 5/13). Stony Brook: \$46,824. Antecedents of secure base script knowledge: Infancy to adolescence.

H. Waters (PI), co-investigators, J. Crowell & E. Waters. \$338,100 (1/01 – continuing). How is early social experience represented in the mind?: Script-based assessment of secure base representations in children and adults. Cox-Steiner Foundation.

NIMH (MH4435, 2/96-1/01. Co-PI's: J. Crowell, M.D. & E. Waters; Co-Investigator 1999-2001: H. Waters). Adult Attachment models: Development after marriage. \$1,964,000 direct costs.

Teaching Experience:

Graduate Courses and Seminars:

Proseminar on Developmental Research Methods

Seminar on Experimental Design for Developmental Research

Seminar on Metaphor. (Co-taught with the Philosophy and Linguistics Departments)

Seminar on Concepts. (Co-taught with the Philosophy Department)

Seminar on Cognitive Development

Seminar on Memory Development

Seminar on Problem Solving

Undergraduate Courses, Seminars, and Labs

Seminar on Cognition and Computers

Learning and Instruction

Children's Learning

Introductory Child Psychology
Human Development: Educational Contexts
Human Learning
Cognitive Development
Problem Solving

Current Research

Schema development and elaboration in children's repeated production of prose passages.
Relationships between verbalized knowledge, strategy use, and performance in young children.
Development of problem solving skills during the preschool years.
Mental representation of children's and adults' relationship representations
Co-construction processes and the elaboration of social scripts.

Publications

1. Salatas, H., & Bourne, L.E., Jr. (1974). Learning conceptual rules: III. Processes contributing to rule difficulty. Memory and Cognition, 2, 549-553.
2. Salatas, H., & Bourne, L.E., Jr. (1976). Memory for stimulus and response in attribute identification. American Journal of Psychology, 89, 219-229.
3. Salatas, H., & Flavell, J.H. Perspective-taking: The development of two components of knowledge. Child Development, 1976, 47, 103-109.
4. Salatas, H., & Flavell, J.H. (1976). Behavioral and metamnemonic indicators of strategic behavior under remember instructions in first grade. Child Development, 47, 81-89.
5. Waters, H.S., & Waters, E. (1976). Semantic processing in children's free recall: Evidence for the importance of attentional factors and encoding variability. Journal of Experimental Psychology: Human Learning and Memory, 2, 370-380.
6. Salatas, H., & Flavell, J.H. (1976). Retrieval of recently learned information: Development of strategies and control skills. Child Development, 47, 941-948.
7. Waters, H.S. (1978). Superordinate-subordinate structure in semantic memory: The roles of comprehension and retrieval processes. Journal of Verbal Learning and Verbal Behavior, 17, 587-597.

8. Waters, H.S., & Waters, E. (1979). Semantic processing in children's free recall: The effects of context and meaningfulness on encoding variability. Child Development, 50, 735-746.
9. Waters, H.S. (1980). "Class News:" A single subject longitudinal study of prose production and schema formation. Journal of Verbal Learning and Verbal Behavior, 19, 152-167.
10. Waters, H.S. (1981). Organizational strategies in memory for prose: A developmental analysis. Journal of Experimental Child Psychology, 32, 223-246.
11. Waters, H.S. (1981). Can we develop without grand theories? Review of Alfred L. Baldwin's Theories of Child Development, Contemporary Psychology, 26, 950-951.
12. Waters, H.S., & Tinsley, V. (1982). The development of verbal self-regulation. In S. Kuczaj (Ed.), Language Development: Language, Cognition, and Culture. Hillsdale, N.J.: Erlbaum.
13. Tinsley, V., & Waters, H.S. (1982). The development of verbal control over motor behavior: A replication and extension of Luria's findings. Child Development, 53, 746-753.
14. Waters, H.S. (1982). Memory development during adolescence: Relationships between metamemory, strategy use, and performance. Journal of Experimental Child Psychology, 33, 183-195.
15. Waters, H.S. & Andreassen, C. (1983). Children's use of memory strategies under instruction. In J.R. Levin and M. Pressley (Eds.), Cognitive Strategy Research: Psychological Foundations. Springer-Verlag.
16. Waters, H.S. (1983). Superordinate-subordinate structure in prose passages and the importance of propositions. Journal of Experimental Psychology: Learning, Memory, and Cognition, 9, 294-299.
17. Waters, H.S. & Lomenick, T.L. (1983). Levels of organization in descriptive passages: Production, comprehension, and recall. Journal of Experimental Child Psychology, 35, 391-408.
18. Waters, H.S., & McAlister, R. (1983). Encoding variability and organization in free recall. Journal of Experimental Child Psychology, 36, 380-395.
19. Jacobsen, T.L., & Waters, H.S. (1985). Spatial perspective taking: Coordination of left-right and near-far spatial dimensions. Journal of Experimental Child Psychology, 39, 72-84.
20. Cantor, D.S., Andreassen, C., & Waters, H.S. (1985). Organization in visual episodic memory: Relationships between verbalized knowledge, strategy use, and performance. Journal of Experimental Child Psychology, 40, 218-232.

21. Waters, H.S. & Tinsley, V. (1985). Evaluating the discriminant and convergent validity of developmental constructs: Another look at the concept of egocentrism. Psychological Bulletin, 97, 483-496.
22. Cox, D. & Waters, H.S. (1986). Sex differences in the use of organizational strategies: A developmental analysis. Journal of Experimental Child Psychology, 41, 18-37.
23. Waters, H.S. (1987). Art thou egocentric? Let me count the ways. Review of Maureen Cox's The child's point of view: The development of cognition and language. Contemporary Psychology, 32, 573-574.
24. Waters, H.S. & Hou, F. (1987). Children's production and recall of narrative passages. Journal of Experimental Child Psychology, 44, 348-363.
25. Andreassen, C. & Waters, H.S. (1989). Organization during study: Relationships between metamemory, strategy use, and performance. Journal of Educational Psychology, 81, 190-195.
26. Waters, H.S. & Schreiber, L. (1991). Sex differences in the use of elaborative strategies: A developmental analysis. Journal of Experimental Child Psychology, 52, 319-335.
27. Waters, H.S., Hou, F., & Lee, Y. (1993). Organization and elaboration in children's repeated productions of prose. Journal of Experimental Child Psychology, 55, 31-55.
28. Waters, H.S., & Lee, Y. (1994). Typicality effects in narrative production, comprehension, and recall. In H. van Oostendorp and R. Zwaan (Eds.), Naturalistic text comprehension (part of series *Advances in discourse processes* edited by Roy Freedle). Ablex.
29. Oppenheim, D., & Waters, H.S. (1995). Narrative processes and attachment representations: Issues of development and assessment. In E. Waters, B. Vaughn, G. Posada, & K. Kondo-Ikemura (eds.), Constructs, cultures, and caregiving: New growing points in attachment theory and research. Monographs of the Society for Research in Child Development, 60 (2-3), 197-215.
30. Holmes, J.B., Waters, H.S., & Rajaram, S. (1998). The phenomenology of false memory: Episodic content and confidence. Journal of Experimental Psychology: Learning, Memory, and Cognition, 24, 1026-1040.
31. Waters, H.S., Rodrigues, L.M., & Ridgeway, D. (1998). Cognitive underpinnings of narrative attachment assessment. Journal of Experimental Child Psychology, 71, 211-234.
32. Waters, H.S. (2000). Memory strategy development: Do we need yet another deficiency? Child Development, 71, 1004-1012.
33. Rubman, C.N., & Waters, H.S. (2000). A B Seeing: The role of constructive processes in children's comprehension monitoring. Journal of Educational Psychology, 92, 503-514.

34. Veríssimo, M., Monteiro, L., Vaughn, B.E., Santos, A. J., & Waters, H. (2005). Coordenação entre o modelo interno dinâmico da mãe e o comportamento de base seguro dos seus filhos. Análise Psicológica, 2(XXIII):7-17.
35. Vaughn, B.E., Coppola, G., Cassidy, J., Bost, K.K., Verissimo, M., & Waters, H.S. (2006). Script-like attachment representations and behavior in families and across cultures: Studies of parental secure base narratives. Attachment and Human Development (Special issue), 8, 179-184.
36. Waters, H.S., & Waters, E. (2006). The Attachment Working Models Concept: Among Other Things, We Build Script-like Representations of Secure Base Experiences. Attachment and Human Development (Special issue), 8, 185-197.
37. Dykas, M.J., Woodhouse, S.S., Cassidy, J., & Waters, H.S. (2006). Narrative Assessment of Attachment Representations: Links between Secure Base Scripts and Adolescent Attachment. Attachment and Human Development (Special issue), 8, 221-240.
38. Vaughn, B.E., Coppola, G., Verissimo, M., Monteiro, L., Santos, A.J., Posada, G., Carbonell, O.A., Plata, S.J., Waters, H.S., Bost, K.K., McBride, B., Shin, N., & Korth, B. (2007). Coordination between organization of mothers' secure base knowledge and children's secure base behavior at home in three social-cultural groups. International Journal of Behavioral Development, 31, 65-76.
39. Waters, H.S., & Schneider, W. (Eds.) (2010). Metacognition, Strategy Use, and Instruction. Guilford Press.
40. Waters, H.S., & Waters, T.E.A. (2010). Bird experts: A study of child and adult knowledge utilization. In H.S. Waters & W. Schneider (Eds.), Metacognition, Strategy Use, and Instruction. Guilford Press.
41. Waters, H.S., & Kunnmann, T.W. (2010). Metacognition and strategy discovery in early childhood. In H.S. Waters & W. Schneider (Eds.), Metacognition, Strategy Use, and Instruction. Guilford Press.
42. Waters, H.S., & Schneider, W. (2010). Common themes and future challenges. In H.S. Waters & W. Schneider (Eds.), Metacognition, Strategy Use, and Instruction. Guilford Press.
43. Chen, C.K., Waters, H.S., Hartman, M., Zimmerman, S., Miklowitz, D.J. & Waters, E. (2013). The relationship between secure base script knowledge and expressed emotion among adult children caring for parents with dementia. Attachment and Human Development (Special Issue), 15, 332-348.
44. Steele, R.D., Waters, T.E.A., Bost, K.K., Vaughn, B.E., Truitt, W., Waters, H.S., Booth-LaForce, C., & Roisman, G.I. (2014). Caregiving antecedents of secure base script knowledge in the NICHD Study of Early Child Care and Youth Development. Developmental Psychology, 50, 2526-2538.

45. Waters, T.E.A., Bosmans, G., Vandevivere, E., Dujardin, A., & Waters, H.S. (2015). Secure base representations in middle childhood across two Western cultures: Associations with parental attachment representations and maternal reports of behavior problems. Developmental Psychology, *51*, 1013-1025.
46. Vaughn, B.E., Waters, T.E.A., Steele, R.D., Roisman, G.I., Bost, K.K., Truitt, W., Waters, H.S., Booth-LaForce, C. (2016). Multiple domains of parental secure base support during childhood and adolescence: Contributions to adolescents' representations of attachment as a secure base script. Attachment and Human Development, *18*, 317-336.
47. Posada, G. & Waters, H.S. (Eds.) (2018). The mother-child attachment partnership in early childhood: Secure base behavioral and representational processes. Monographs of the Society for Research in Child Development, *83(4)*, Serial No.331.
48. Waters, H.S., Steiner, M.A., Zaman, W., Apetroaia, A., & Crowell, J.A. (2018). Co-construction of attachment representations and affect-regulating cognitions: The role of maternal attachment security. In G. Posada & H. S. Waters (Eds.), The mother-child attachment partnership in early childhood: Secure base behavioral and representational processes. Monographs of the Society for Research in Child Development, *83(4)*, 60-73.
49. Apetroaia, A., & Waters, H.S. (2018). Intergenerational transmission of secure base script knowledge: The role of maternal co-construction skills. In G. Posada & H.S. Waters (Eds.), The mother-child attachment partnership in early childhood: Secure base behavioral and representational processes. Monographs of the Society for Research in Child Development, *83(4)*, 91-105.
50. Waters, H.S., Corcoran, D.M., & Waters, T.E.A. (2018). Maternal secure base script knowledge and judgements of mother-child interactions. In G. Posada & H.S. Waters (Eds.), The mother-child attachment partnership in early childhood: Secure base behavioral and representational processes. Monographs of the Society for Research in Child Development, *83(4)*, 106-120.
51. Waters, H.S. (2019). Commentary: The link between attachment and social competence in early childhood. Attachment and Human Development (Special issue on "Secure Base Scripts and Social Competence in Preschool Children"), *21 (3)*, 307-311.
52. Waters, H.S., Waters, T.E.A., & Waters, E. (2021). From internal working models to script-like attachment representations. In R.A. Thompson, J.A. Simpson, & L. Berlin (Eds.), Attachment: The Fundamental Questions. Guilford Press, NY (pp.111-119).
53. Waters, E., Vaughn, B.E., & Waters, H.S. (Eds.) (2021). Measuring Attachment: Psychometrics of Behavior, Mental Representations, and Biological Processes. Guilford Press.
54. Waters, H.S., & Waters, E. (2021). Script-like Representations of Early Secure Base Experience. To appear in E. Waters, B.E. Vaughn, & H.S. Waters (Eds.), Measuring

Attachment: Psychometrics of Behavior, Mental Representations, and Biological Processes. Guilford Press.

Colloquia and Conference Presentations

1. Waters, H.S., & Andreassen, C. Relationships between metamemory, strategy use and performance in childhood. Paper presented at the meeting of the American Educational Research Association, New Orleans, Louisiana, 1984.
2. Waters, H.S., & Hou, F. Levels of organization in children's production of narratives. Paper presented at the meeting of the American Educational Research Association, New Orleans, Louisiana, 1984.
3. Waters, H.S. Sex differences in the use of elaborative strategies: A developmental analysis. Paper presented at the meeting of the American Educational Research Association, Chicago, Illinois, 1985.
4. Hou, F., & Waters, H.S. Organization and elaboration in children's repeated production of prose passages. Paper presented at the meeting of the Society for Research in Child Development, 1985.
5. Waters, H.S., Zapulla, L., & Hou, F. Effects of repeated production on children's organization of prose passages. Paper presented at the meeting of the American Educational Research Association, San Francisco, California, 1986.
6. Waters, H.S. Discussant's comments. Experimental research on elaboration. Symposium presented at the meeting of the American Psychological Association. Washington, D.C. August, 1986.
7. Waters, H.S. Typicality of passage content in narrative production. Paper presented at the biennial meeting of the Society for Research in Child Development. Baltimore, MD, 1987.
8. Waters, H.S. Expertise in children and adults. Paper presented at the biennial meeting of the Society for Research in Child Development. Kansas City, Missouri, 1989.
9. Waters, H.S. Problem-solving at two: A year-long naturalistic study of two children. Paper presented at the biennial meeting of the Society for Research in Child Development. Kansas City, Missouri, 1989.
10. Waters, H.S. Development of revision skills. Paper presented at the annual meeting of the American Educational Research Association. Boston, 1990.
11. Waters, H.S., & Lee, Y. Typicality effects in prose production and recall. Paper presented at the annual Winter Text Conference. Jackson Hole, Wyoming, 1991.

12. Waters, H.S. Problem-solving from two to five: A naturalistic study of two children. Paper presented at the biennial meeting of the Society for Research in Child Development. Seattle, Washington, 1991.
13. Andreassen, C., Kelly, H., & Waters, H.S. The development of planning skills in children two to five. Paper presented at the biennial meeting of the Society for Research in Child Development. Seattle, Washington, 1991.
14. Waters, H.S., & Lobato, D. Typicality effects in narrative production and recall: A developmental analysis. Paper presented at the annual meeting of the American Educational Research Association. San Francisco, California, 1992.
15. Waters, H.S. Typicality effects in narrative production, comprehension, and recall. Paper presented at the annual Winter Text Conference. Jackson Hole, Wyoming, 1992.
16. Waters, H.S. Developmental aspects of prose production. Paper presented at the annual Winter Text Conference. Jackson Hole, Wyoming, 1993.
17. Lee, Y., Levy, J., & Waters, H.S. Children's memory of a play: Narrative recall in a naturalistic setting. Poster presented at the biennial meeting of the Society for Research in Child Development. New Orleans, Louisiana, 1993.
18. Waters, H.S. Children's memory: The interplay between knowledge, strategy use, and metacognition. Invited address presented at the 23rd annual meeting of the Southeastern Workers in Memory, at the annual Southeastern Psychological Association meeting. Atlanta, Georgia, 1993.
19. Rubman, C., & Waters, H.S. Metacognitive prompting in problem-solving. Paper presented at the annual meeting of the Eastern Psychological Association. Arlington, Virginia, 1993.
20. Schreiber, L., & Waters, H.S. Development of question-asking. Poster presented at the annual meeting of the American Psychological Society. Chicago, Illinois, 1993.
21. Kim, K., Rubman, C.S., & Waters, H.S. Spontaneous verbalizations during problem-solving: Self-monitoring or communication? Poster presented at the International Conference on the Psychology of Language and Communication. Glasgow, Scotland, 1993.
22. Waters, H.S., & Kunnmann, T.W. Children's strategy use: In search of intentionality. Paper presented at the annual meeting of the Psychonomic Society. Washington, D.C., 1993.
23. Schreiber, L., & Waters, H.S. The development of question-asking: The effects of modeling and experience. Poster presented at the Head Start Conference, 1993.
24. Waters, H.S. Content elaboration in narrative production. Paper presented at the annual Winter Text Conference. Jackson Hole, Wyoming, 1994.

25. Kim, K., & Waters, H.S. Young children's problem-solving: The role of representation and evaluation skills. Poster presented at the annual meeting of the American Educational Research Conference. New Orleans, Louisiana, 1994.
26. Kunnmann, T.W., & Waters, H.S. Training perspectives in teaching learning strategies. Paper presented at the annual meeting of the New England Educational Research Organization. Rockport, Maine, 1994.
27. Holmes, J.B., & Waters, H.S. "Theory of mind": Origins in problem-solving. Paper presented at the annual Piagetian Society Conference. Chicago, Illinois, 1994.
28. Rubman, C. N., & Waters, H.S. The role of metacognitive prompting in children's problem solving. Poster presented at the annual meeting of the American Psychological Society. Washington, D.C., 1994.
29. Kunnmann, T.W., & Waters, H.S. Strategy acquisition: The role of cognitive load and developmental level. Poster presented at the annual meeting of the American Psychological Society. Washington, D.C., 1994.
30. Kunnmann, T.W., & Waters, H.S. Effects of cognitive load on strategy discovery. Poster presented at the biennial meeting of the Society for Research in Child Development. Indianapolis, Indiana, 1995.
31. Waters, H.S., & Kim, K. Planning and evaluation: Two sides of the same coin. Paper presented at a Symposium "On the development of planning" at the biennial meeting of the Society for Research in Child Development. Indianapolis, Indiana, 1995.
32. Waters, H.S. In search of intentionality. Invited colloquium to the Department of Psychology, University of Wuerzberg, Germany, 1995.
33. Waters, H.S., Cunliffe, M., Tran, E., & Rodrigues, L. Story telling in young children. Poster presented at the annual meeting of the American Psychological Society. NYC, 1995.
34. Holmes, J.B., & Waters, H.S. The phenomenology of false memories: Where remember/know judgments diverge. Poster presented at the annual meeting of the American Psychological Society. New York, NY, 1995.
35. Holmes, J.B., & Waters, H.S. The phenomenology of false memories: Effects of semantic integration and encoding conditions on remember/know and confidence judgments. Paper presented at the annual meeting of the Psychonomic Society. Los Angeles, California, 1995.
36. Waters, H.S. Prose production in children. Invited colloquium to the Department of Psychology at the Chinese University of Hong Kong. Hong Kong, 1995.
37. Waters, H.S. Cognitive representations of early experience. Invited colloquium to the Department of Psychology at the National Taiwan University. Taiwan, 1995.

38. Waters, H.S. Cognitive strategy development in children. Invited colloquium to the Department of Psychology at the National Taiwan University. Taiwan, 1995.
39. Waters, H.S. The development of prose production: From recall to reconstruction. Paper presented at the annual Winter Text Conference. Jackson Hole, Wyoming, 1996.
40. Kunnmann, T. W., & Waters, H.S. Metacognition and strategy discovery. Poster presented at the annual meeting of the American Educational Research Association. NYC, 1996.
41. Waters, H.S., Rodrigues, L., & Ridgeway, D. Narrative assessment of attachment representations: A cognitive re-analysis. Poster presented at the biennial meeting of the International Society for the Study of Behavioral Development. Quebec City, Canada, 1996.
42. Waters, H.S. Young children's problem solving: The move toward planfulness. Invited colloquium to the Laboratory of Comparative Ethology, NICHD, Bethesda, Maryland, 1997.
43. Waters, H.S. Chair of paper symposium "Recent trends in narrative production," presented at the biennial meeting of the Society for Research in Child Development. Washington, DC, 1997.
44. Waters, H.S., Cunliffe, M.A., Rodrigues, L.M., & Liao, Y. Articulating a domain-specific view of narrative production. Paper presented at a Symposium "Recent trends in narrative production" at the biennial meeting of SRCD. Washington, DC, 1997.
45. Waters, H.S. Metacognition and Strategy Discovery. Invited presentation as part of a SUNY-based conference entitled "Conversation in the Disciplines on Metacognition" hosted by SUNY-Cortland, 1997.
46. Waters, H.S., Rodrigues, L M., & Ridgeway, D. Cognitive underpinnings of narrative attachment assessment. Paper presented at a Symposium "Moving to the level of representation: Insights gained from comparing attachment measures" at the annual meeting of the International Society for the Study of Personal Relationships. Saratoga Springs, NY, 1998.
47. Holmes, J.B., Hamilton, M., & Waters, H.S. The phenomenology of conceptual integration in text processing. Paper presented at the annual Winter Text Conference. Jackson Hole, Wyoming, 1999.
48. Waters, H.S. The secure script in attachment representation and assessment. Invited colloquium to the Institute of Child Development, University of Minnesota. Minneapolis, Minnesota, 1999.
49. Rodrigues, L.M., Cunliffe, M.A., & Waters, H.S. Schema abstraction in repeated prose production. Poster presented at the biennial meeting of the Society for Research in Child Development. Albuquerque, New Mexico, 1999.
50. Waters, H.S., Liu, X., & Brennan, K. In search of narrative co-construction: Adult children's reports of parental relationships. Poster presented at the biennial meeting of the

Society for Research in Child Development. Albuquerque, New Mexico, 1999.

51. Waters, H.S., Cunliffe, M.A., & Guttman-Steinmetz. Mother-child communication about interpersonal experiences in early childhood. Invited presentation at an NSF-sponsored conference, "Creating the climate for children's learning: Families, peers, and curriculum as affordances and constraints across the transition to school." Birmingham, Alabama, 1999.
52. Waters, H.S. Goal-directed activity as an organizational construct. Poster presented at the first annual meeting of the Cognitive Development Society. Chapel Hill, North Carolina, 1999.
53. Cunliffe, M.A., Guttman-Steinmetz, S., & Waters, H.S. Narrative co-construction: Individual differences across mother-child pairs. Poster presented at the first annual meeting of the Cognitive Development Society. Chapel Hill, North Carolina, 1999.
54. Wais, D., Rodrigues, L.M., & Guttman-Steinmetz, S., Zevallos, A., Waters, H.S., Posada, G., Carbonell, O.A., Alzate, G., & Bustamante, M.R. Attachment scripts across cultures. Poster presented at the annual meeting of the Jean Piaget Society meeting. Montreal, Quebec, 2000.
55. Hamilton, M., Holmes, J.B., & Waters, H.S. The phenomenology of text processing. Poster presented at the annual meeting of the American Psychological Society. Miami Beach, Florida, 2000.
56. Waters, H.S., & Waters, E. The secure script in attachment representation and assessment. Invited colloquium at the University of Leiden, 2000.
57. Mashek, D., Cunliffe, M.A., Waters, H.S., & Robinson, J. Teaching graduate students to teach. Roundtable discussion presented at the National Institute on the Teaching of Psychology conference. Tampa, Florida, 2001.
58. Waters, H.S., Cunliffe, M.A., & Guttman-Steinmetz, S. In search of narrative co-construction. Paper presented at an invited Symposium "Attachment and early representation: Integrating perspectives from cognitive and attachment approaches" at the biennial meeting of the Society for Research in Child Development. Minneapolis, Minnesota, 2001.
59. Waters, H.S., & Rodrigues, L.M. Are attachment scripts the building blocks of attachment representations: Narrative assessment of representations and the AAI. Poster presented at a Poster Symposium "What does the Adult Attachment Interview measure and when does it matter? Longitudinal studies of attachment representations" at the biennial meeting of the Society for Research in Child Development. Minneapolis, Minnesota, 2001.
60. Waters, H.S. Co-constructing script-like representations of early social experience. Invited colloquium at the Instituto Superior de Psicologia Aplicada (Institute of Applied Psychology) at Lisbon, Portugal, 2001.

61. Waters, H.S., & Waters, E. Learning in and learning about relationships: Toward a social-cognitive synthesis. Invited presentation at a National Science Foundation Workshop “Interpersonal relationships and developmental transitions: Mechanisms and context.” Auburn University, Alabama, 2001.
62. Waters, H.S., Holmes, J.B., & Cunliffe, M. Children’s theory of mind in early problem-solving behavior. Poster presented at the 2nd meeting of the Cognitive Development Society. Virginia Beach, Virginia, 2001.
63. Waters, H.S., Rubman, C., & Zevallos, A. Children’s revision skills: A competence-performance distinction. Paper presented at the annual meeting of the American Educational Research Association. New Orleans, LA, 2002.
64. Zevallos, A., Cinanni, M., & Waters, H.S. The effects of joint story telling on early narrative development. Paper presented at the annual meeting of the American Educational Research Association. New Orleans, LA, 2002.
- 65-67. Waters, H. & Waters, E. (2003) Script-like representations of secure base experience: Evidence of cross-age, cross-cultural and behavioral links: (7 presentations). Poster Symposium presented at the biennial meeting of the Society for Research In Child Development. Tampa, Florida. April 16-18.
 - 1) Introduction: Key issues in attachment study: The architecture of attachment representations. (E. Waters)
 - 2) Maternal attachment scripts and infant secure base behavior. (M. Tini, D. Corcoran, L. Rodrigues, E. Waters)
 - 3) Co-constructing script-like representations of early secure base experience. (S. Guttman-Steinmetz, M. Elliott, M. Steiner, H. Waters)
 - 4) Adolescent representations of close relationships: Organized around a secure base script? (M. Steiner, M. Arjomand, H. Waters)
 - 5) Attachment scripts in adult men and adolescent males. (M. Elliott, M. Tini, L. Fetten, M. Saunders)
 - 6) Current relationship attachment scripts: Correlates and partner-specific contributions. (D. Wais, D. Treboux)
 - 7) Attachment scripts across cultures: Further evidence for a universal secure base script. L. Rodrigues, A. Zevallos, B. Turan, and K. Green)
68. Waters, H.S., Rodrigues, L., & Wais, D. Developing and testing a narrative assessment protocol for evaluating the organization of secure base knowledge in adults. Paper presented at a Symposium “Narrative assessment of attachment representations in adults: Using word prompts to elicit secure base stories” at the meeting of the European Developmental Psychology conference. Milan, Italy, 2003.

69. Waters, H.S., & Waters, T.E.A. Expertise in children and adults: The role of knowledge utilization. Poster presented at the 3rd biennial meeting of the Cognitive Development Society. Park City, Utah, 2003.
70. Waters, H.S. Narrative assessment of attachment representations. Invited colloquium to the Child Development and Family Studies & Psychology Departments, Purdue University. LaFayette, Indiana, 2004.
71. Waters, H.S. Narrative assessment of attachment representations. Invited colloquium to the Psychology Department, University of Guelph. Guelph, Ontario, Canada, 2004.
72. Cassidy, J., Woodhouse, S.S., Dykas, M.J., Steinberg, S., & Waters, H.S. Narrative assessment of attachment representations: Links between secure base scripts and adolescent attachment. Paper presented at a Symposium "Narrative methods and understanding children's social and emotional development" at the biennial meeting of the Society for Research in Child Development. Atlanta, Georgia, 2005.
73. Rafferty, M.T., Corcoran, D.M., & Waters, H.S. Maternal attachment scripts and the cross-generation transmission of attachment. Poster presented at the biennial meeting of the Society for Research in Child Development. Atlanta, Georgia, 2005.
74. Waters, H.S., & Zaman, W. Mother-child patterns of narrative co-construction: The role of mother's attachment security. Paper presented at the 35th annual meeting of the Jean Piaget Society. Vancouver, BC, Canada, 2005.
75. Coppola, G., Vaughn, B., & Waters, H.S. La procedura narrativa per la valutazione dello script di base sicura in eta adulta: Contributo alla validazione da un campione americano e da un campione italiano. Paper presented at the annual congress of the Association of Italian Psychologists. Cagliari-Sardinia, Italy, 2005.
- 76-80. Waters, H. - Chair (2007) The attachment prototype hypothesis: Secure base script representations in diverse kinds of relationships: (7 presentations). Poster Symposium presented at the biennial meeting of the Society for Research In Child Development. Boston, Mass. March 29-April 1.
 - 1) Co-construction of affect regulating cognitions: The role of maternal script knowledge. (A. Apetroaia, V. Gomes, H. Waters)
 - 2) Maternal script knowledge and judgments of mother-child interactions. (H. Waters, S. Cuva, D. Corcoran, E. Bottino)
 - 3) Adolescent secure-base script knowledge, parent-adolescent functioning and security in peer & romantic relationships. (J. Davila, H. Waters, C.Stroud, L. Starr, S.Steinberg)
 - 4) Romantic secure base script knowledge: Representations and relations to couple status. (J. Davila, H. Waters, M. Miller, A. Yoneda, S. Steinberg)
 - 5) Attachment scripts and undergraduate mentoring relationships. (A. Zevallos, G. Shephard, E. Waters)

- 6) Attachment script knowledge and the caregiving relationship among adult children caring for parents with dementia. (C. Chen, M. Hartman, S. Zimmerman, D. Miklowitz)
- 7) Discussion (E. Waters)
81. Waters, H.S. Discussant's comments. Longitudinal studies on memory development. Symposium presented at the biennial meeting of the International Society for the Study of Behavioral Development. Wurzburg, Germany, 2008.
82. Apetroaia, A.I., & Waters, H.S. Script-like representations of attachment: Current relevance and future directions. Paper presented at a Symposium "Current topics in research on attachment and caregiving: Assessment and effects of level-specific organization" at the biennial meeting of the International Society for the Study of Behavioral Development. Wurzburg, Germany, 2008.
83. Apetroaia, A.I., & Waters, H.S. Co-construction of affect regulating cognitions: The role of mother's attachment security. Poster presented at XXIX meeting of the International Congress of Psychology. Berlin, Germany, 2008.
84. Zevallos, A.L., Waters, H.S., & Waters, E. The building blocks of positive mentor-student expectations: Contributions from attachment and mentoring experiences. Poster presented at the biennial meeting of the Society for Research in Child Development. Denver, CO, 2009.
85. Apetroaia, A.I., Skinner, S., & Waters, H.S. Intergenerational transmission of secure base scripts. Poster presented at the biennial meeting of the Society for Research in Child Development. Denver, Colorado, 2009.
86. Waters, T., Austin, A., & Waters, H.S. Relations between Life Story episodes and attachment security. Poster presented at the 6th biennial meeting of the Cognitive Development Society. San Antonio, Texas, 2009.
87. Bianchini, A., Zevallos, A.L., & Waters, H.S. College mentoring experiences: Role of attachment and positive mentoring expectations. Poster presented at the biennial meeting of the Society for Research in Child Development. Montreal, Canada, 2011.
88. Waters, H.S., Scandariato, I., Waters, T., Bianchini, A., Horan, E., & Bosmans, G. Middle childhood attachment narratives: Organized around a secure base script? Poster presented at the biennial meeting of the Society for Research in Child Development. Montreal, Canada, 2011.
89. Skinner, S., Gomes, V., & Waters, H.S. Attachment script knowledge and evaluations of parenting behavior. Poster presented at the biennial meeting of the Society for Research in Child Development. Montreal, Canada, 2011.
90. Apetroaia, A., & Waters, H.S. Intergenerational Transmission of Secure Base Scripts: The Role of Maternal Co-Construction. Poster presented at the biennial meeting of the Society for Research in Child Development. Montreal, Canada, 2011.

91. Bosmans, G. (moderator), Kerns, K., Steele, H., Waters, H.S., Moss, E. (panelists). Roundtable Discussion: Attachment in Middle Childhood: Theoretical and Measurement Implications of an Emerging Research Field. Biennial meeting of the Society for Research in Child Development. Seattle, Washington, 2013.
92. Ullrich, N., & Waters, H.S. Information processing strategies for addressing different spelling errors. Poster presented at the biennial meeting of the Cognitive Development Society. Memphis, Tennessee, 2013.
93. Steele, R.D., Roisman, G.I., Bost, K.K., Vaughn, B.E., Truitt, W., Waters, H.S., Booth-LaForce, C., & Waters, T.E.A. Caregiving antecedents of secure base script knowledge in the NICHD Study of Early Child Care and Youth Development (SECCYD). Poster presented at the biennial meeting of the Society of Research in Adolescence. Austin, Texas. 2014.
94. Yates, T., Spiegel, J., & Waters, H.S. Secure base scripts in an at-risk sample: Comparisons to typical development and correlates with adjustment. Poster presented at the biennial meeting of the Society of Research in Adolescence. Austin, Texas. 2014.
95. Steele, R.D., Waters, T.E.A., Bost, K.K., Vaughn, B.E., Truitt, W., Waters, H.S., Booth-LaForce, C., & Roisman, G.I. The developmental antecedents of secure base knowledge: Evidence from the 18 year follow-up of the NICHD SECCYD. Paper presented at a Symposium “The developmental origins of script-like attachment representations” at the biennial meeting of the Society of Research in Child Development. Philadelphia, PA, 2015.
96. Zakir, N., Huth-Bocks, A., & Waters, H.S. The relation between maternal secure base scripts and child security in an at-risk sample. Poster presented at the biennial meeting of the Society of Research in Child Development. Philadelphia, PA, 2015.
97. Skinner, S., Waters, H.S., Rodriguez, I., Ullrich, N., & Waters, E. Modeling secure base parenting cognitions. Poster presented at the biennial meeting of the Society of Research in Child Development. Philadelphia, PA, 2015.

Research Interests

My research uses experimental methods to examine several important topics in children’s cognitive development, including the development of memory strategies and prose production skills. Recently, I have begun to apply skills and methods developed in this research to examine children’s and adults’ mental representations of experience in social relationships. My work is rigorously empirical and programmatic. The empirical articles typically involved multiple experiments, comparisons among several age groups, and or study of the same subjects across time. Almost all of my publications have been subject to blind peer review and appear in the journals of the leading publishers and academic societies in my field. The great majority of my conference presentations too are peer reviewed.

Cognitive Development

It has been said that we know something best when we know it from its beginnings. Traditionally, child psychologists have focused on three key questions about development. They ask (1) what develops, (2) what is the course of development, and (3) what are the mechanisms of developmental change. Answers to these questions are relevant to our understanding of both normal and atypical development. They also bear on our understanding of how early experience may influence later behavior. And they have important implications for prevention and intervention in educational and other settings.

One of the most important conclusions of cognitive development theory and research concerns what develops. Cognitive development is not primarily a matter of increasing power or capacity. In fact, many basic capacities change little after early childhood. The major performance changes we see throughout childhood and adolescence reflect instead the acquisition of strategies for using basic cognitive abilities more effectively. Thus, for example, memory development is primarily the development of rehearsal strategies that keep items in short term memory, strategies for moving material into long term memory (e.g., activating the intention to remember), and strategies such as category clustering and narrative organization that make material more accessible to recall. Much the same can be said of developmental change in areas such as problem solving, and basic school skills.

Some cognitive strategies are discovered informally in the course of ordinary behavior; others are explicitly taught. Experience is also an important factor in cognitive development. With familiarity, words become more familiar, have more associates, etc. Concepts become elaborated and better consolidated. In addition, increasing world knowledge provides an increasingly useful framework from which to build expectations. Both the specifics of a cognitive task and the experience a child brings to it influence children's strategy use and strategy effectiveness. A number of my studies have illustrated that children are not necessarily aware of their strategic behavior or even knowing that behaving strategically would affect performance. The term metacognition refers to the child's verbalizable knowledge of strategies, monitoring strategy use and evaluating strategy effectiveness within and across tasks. My research has contributed to current understanding of strategy development & the role of metacognition in children's learning.

Research on Memory: Mechanisms of Change and Developmental Trends

Tasks and Instructions. One of my primary interests is the importance of task variables and processing instructions in strategy acquisition, use, and generalization. I have published a number of articles demonstrating how strategy use is differently affected at different ages by the materials to be learned and/or instructions or processing conditions of the task. My work has contributed to our understanding of children's cognitive strategy use in work with materials such as categorizable vs. unrelated words, high frequency vs. low frequency words, narrative vs. descriptive materials, typical vs. distinctive passage content. It has also contributed to our understanding of processing conditions such as semantic processing instructions, generate vs. listen instructions, and various type of explicit and implicit strategy use prompts. (e.g., Waters, 1981; Waters, 1982; Cantor, Andreassen, & Waters, 1985; Cox & Waters, 1986; Waters &

Schreiber, 1991; Waters & Hou, 1994; Rubman & Waters, 2000).

A common developmental pattern is evident across all of these studies. Preschool and early elementary age children use cognitive strategies most reliably and effectively when it is prompted and facilitated by *both* the test materials and the processing instructions (Waters & Andreassen, 1983). As children become older, one or the other is sufficient to prompt strategic behavior, and eventually the child is relatively free of the effects of these variables as they become more deliberate and planful in their strategic behavior. These patterns are seen across strategies and across gender, even though females progress more quickly toward proficient strategic behavior than males (Waters, 1981; Cox & Waters, 1986; Waters & Schreiber, 1991).

Metacognition. Children's cognitive performance is not entirely a function of the materials they work with or the processing instructions teachers or experimenters provide. One of the key insights guiding current cognitive development theory and research concerns the important role of metacognition, the child's own conscious cognitive activity (thinking about thinking) during and across tasks. In memory tasks, such awareness and monitoring is referred to as *metamemory* (e.g., Salatas & Flavell, 1976). I have reported a number of studies tracking the development of children's verbal guidance of their own cognitive performance (Waters, 1982; Cantor, Andreassen & Waters, 1985; Andreassen & Waters, 1989). Interestingly, developmental level, materials, and processing instructions affect children's thinking about strategy use in much the same way as they affect strategy use itself.

The generality of these conclusions across such a wide range of tasks, materials, and ages, and in both sexes, and in both strategy use and strategy monitoring, has helped consolidate current understanding of the nature, course, and mechanisms of memory development.

Strategy Effectiveness. In addition to my work on strategy use and monitoring, I have conducted several studies on how the effectiveness of cognitive strategies affects children's awareness of strategy use and transfer to new tasks (Waters & Kunnmann, 2009). The findings indicate that strategy training is most effective under conditions in which processing demands are minimal so that the child can easily "discover" the strategy. Whether the strategy helps performance is secondary. Instead, transfer (continued strategy use) is based on the child's level of awareness of their own cognitive activity. This work should help explain the typically bumpy (non-linear) road to planful, deliberate strategic behavior and have important implications for the best approach to strategy training in young children.

Finally, one of my more recent contributions to the discussion of strategy efficiency is a theoretical paper on conceptual and methodological issues in current work on deficits in children's strategy use (Waters, 2000). This paper includes recommendations for experimental analysis of developmental and individual differences in strategy efficiency and how they can influence the links between metamemory and performance. I am implementing these recommendations in my current work on strategy development and use.

Producing Descriptive and Narrative Passages: Developmental Changes and Strategy Use

Throughout my career I have been interested in the extent to which developmental trends and mechanisms uncovered in research with word lists and other experimental materials apply to

more complex materials, particularly to materials the children themselves produce. Accordingly, I have conducted a number of studies of children's strategic behavior in producing original descriptive and narrative passages (Waters, 1978; Waters, 1980; Waters, 1981; Waters, 1983; Waters & Lomenick, 1983; Waters & Hou, 1987; Waters, Hou, & Lee, 1993; Waters & Lee, 1994). This work has identified the types of rules children use to organize different types of materials and how these rules change across age. One of the more important conclusions from this work is that the acquisition of skills for organizing passages play an important role in children's ability to access material from memory and produce increasingly lengthy and elaborated passages from a given set of prompts.

Despite important differences in the organization of descriptive and narrative passages (the former tending to be hierarchical, the latter organized around temporal-causal sequences), patterns of change for both descriptive and narrative passages are remarkably similar. Descriptive production skills begin with a simple rule in which related facts are produced in clusters without any organizing frame, then proceed to the use of topic headings that organize groups of descriptive facts, and finally the introduction of themes and topic interconnections that interrelate sections of the entire passage (Waters & Lomenick, 1983). Similarly, narrative production skills begin with a simple temporal rule (and then, and then), proceed to the use of both temporal and causal connections ("cause," "so," "since," etc.) enabling the child to casually link successive events, to the use of an episode structure that organizes all of the story events around the goals of the character (Waters & Hou, 1987).

In addition to documenting age changes in prose production rules, my work also highlights systematic changes in content elaboration, suggesting that organization drives content elaboration, a pattern that I first documented in a single subject study of a second-grade child's daily productions of "Class News" (Waters, 1980). I pursued that finding in studies of repeated prose production (Waters, Hou, & Lee, 1993) and in studies of narrative production, comprehension, and recall (Waters & Lee, 1994). One key conclusion from the studies reported in Waters and Lee (1994) was that having children produce their own passages supports cognitive engagement and multi-level representation. This, in turn, leads to better organization and recall than typically occurs when a child reads and recalls text materials.

In brief, my work on descriptive and narrative production tasks casts light on the course and mechanisms of developing prose production skills and demonstrates the relevance of traditional research with experimenter generated materials to more complex material and processing tasks. It also has important implications for assessing and teaching children's literacy skills. For example, it suggests that building a production component into early listening/reading curricula would be an effective way to improve comprehension skills. As a first step toward such applications, Rubman and Waters (2000) have demonstrated that having children construct story board representations while reading leads to better comprehension monitoring than occurs when children simply read prepared texts.

Mental Representation of Early Social Experience

One of the enduring questions in developmental theory and research is whether early experience influences later behavior. Correlational data support the notion that early experience importantly influences at least some domains of later behavior, especially in the realm of early and later social relationships. Answering the question "How is early experience represented in

memory?” is an important step toward understanding the mechanisms of stability, change, and early influence on later development.

Early experience can leave a wide range of representations from images, to associatively based expectations, to generalized script-like event representations (Oppenheim & Waters, 1995). Building on methods and results from my work on prose production, I have made considerable progress toward understanding script-like representations that arise from experience in children’s and adults’ attachment relationships. In early work on this problem, Bretherton and her colleagues developed story completion task to assess the coherence of children’s attachment representations. They found that attachment security scores based on Bowlby & Ainsworth’s attachment theory were significantly related to the child’s behavior with its mother (Bretherton, Ridgeway, and Cassidy, 1995). In a reanalysis of the data from this important study, I showed comparable results when the passages were scored in terms of formal cognitive features such as content elaboration and use of a “secure base” script (Waters, Rodrigues, & Ridgeway, 1998). These results support the notion that children construct script-like representation of important facets of their early social experience. They also suggest that formal cognitive analysis can clarify, and to some extent replace, traditional assessment methods based on highly theoretical criteria and clinical judgement.

In recent research, I have adapted methods I developed in my prose production research to test hypotheses about the nature of attachment representations in adulthood (Waters & Waters, 2006). Using the prompt-word outline method developed in my previous research on prose, I had adult subjects produce narratives about mother-child and adult-adult interactions in ordinary and emergency situations. These were scored in terms of the subject’s knowledge and use of our “secure base script”. In both pilot and replication studies, secure base scriptedness was highly correlated within and across mother-child vs. adult-adult passages and across emergency vs. ordinary passages. This supports the view that attachment experience leads to a single generalized representation, not separate representations of child parent and adult-adult experience. Low correlations between scriptedness of attachment passages and scriptedness of non-attachment passages (e.g., Going Shopping) showed that our scriptedness assessment is not measuring general story-telling skills. Finally, the scriptedness of attachment-related passages accounted for virtually all of the reliable variance in subject’s scores on the only well validated measure of adult attachment security, the Berkeley Adult Attachment Interview. As in the reanalysis of the Bretherton story-completion data, scoring formal cognitive characteristics can clarify, and to some extent can replace, a complex clinical scoring system.

I have also collected cross-cultural data to test the generality of these conclusions cross-culturally. Several reports of preliminary results from Switzerland, Zimbabwe, Romania, Turkey and Colombia have been presented at major national and international conferences in my field. In collaboration with colleagues from other countries we have published results linking attachment secure script representations and children’s security (Vaughn, Copolla, Verissimo, Monteiro, Santos, Posada, Carbonell, Plata, Waters, Bost, McBride, Shin, & Korth, 2007).

On the strength of this research, I have received \$340,000 from the Cox-Steiner Foundation for further research on script-like representations of attachment experience in non-clinical and clinical populations. The goals of the project are to (1) relate mothers’ knowledge and use of the secure base script to their caregiving behavior and their infant’s attachment behavior, (2) adapt the prompt-word method for assessing attachment representations at key

points in childhood, and (3) adapt and validate the prompt-word method for assessing attachment representations of children and parents in a child psychiatric clinic sample.

I hope this research will (1) provide useful tools for assessing attachment representations across age and across culture, (2) highlight the potential for contributions from cognitive psychology to social and developmental research, (3) offer a methodological paradigm for research on the effects of early experience on later behavior. When the work for the Cox-Steiner Foundation is completed, I will turn my attention to the active roles that parents play as co-constructors of their children's representations of early experience in a variety of domains.