

Vita
LYNNE M. REDER
September, 2017

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EDUCATION, ACADEMIC HONORS and POSITIONS:

2013 - 2017 Elected Member at Large, Section J, AAAS
2011 - 2016 Elected to Governing Board of The Psychonomic Society
2010 Elected to the Memory Disorders Research Society (MDRS)
2007 Elected to the Society of Experimental Psychologists
2005 Elected Fellow, Association for Psychological Science
2001 Elected Fellow, American Association for Advancement of Science
1999 Elected Fellow, American Psychological Association, Div. 3
1992 - Professor, Carnegie Mellon University
Faculty, Center for the Neural Basis of Cognition
Member, Human Computer Interaction Institute
1983 - 1992 Associate Professor, Carnegie Mellon University
1978 - 1983 Assistant Professor, Carnegie Mellon University
1978 Elected Member/Fellow of Psychonomic Society
1977 - 1978 Lecturer at Yale University
1976 - 1978 Awarded NRSA Post-Doctoral Fellowship
1976 Awarded Rackham Dissertation Grant
1973 - 1976 Awarded NSF Graduate Fellowship
1972 - 1976 University of Michigan, Ph.D. in Psychology
1972 Graduated with honors in Psychology
Graduated Phi Beta Kappa
1968 - 1972 Stanford University, B.A. in Psychology

RESEARCH SUPPORT:

Principal Investigator	Grant and/or Contract Number and Title	
Source		
Years Inclusive		
1998 - 2014	T32 MH19983 Combined Computational and Empirical Approaches to the Study of Cognitive Neuroscience	NIMH
1996 - 2010	R01 MH52808 Exploring the SAC Model of Memory	NIMH
1997 - 2001	AASERT grant to accompany A Computational Model of Individual Differences in Working Memory	AFOSR

1997 - 1999	Localizing Individual Differences in Task Performance via Computational Models of Working Memory Capacity	AFOSR
1995 – 1999	A Proposal to Model ATC in ACT	ONR
1995 - 1998	ASSERT grant to accompany A Proposal to Model ATC in ACT	ONR
1995 - 1996	Grant to support Carnegie Symposium on Cognition, entitled Metacognition and Implicit Memory	ONR
1990 - 1994	Tests of a Model of Question Answering	NSF
1988 - 1990	Components of Initial Skill Learning: Development of Effective Examples and Training Procedures	NSF
1983 - 1988	Strategies for Question-Answering: A Three-Stage Model	NSF
1983 - 1987	Design of Instructional Material for Optimizing Skill Learning	ONR
1983 – 1984	Carnegie-Mellon University grant for development of software for Educational Computing purposes	CMU
1979 - 1980	Grant from Institute on Aging, Portland, for memory research	Institute on Aging

Member or Co-Investigator Grant and/or Contract Number and Title Source

Years Inclusive

2005 - NIDA	T90DA022762 & R90DA023426 Interdisciplinary Training in Computational Neuroscience	NIH
2007 -	NIGMS GM081760 training grant on Brain and Behavior Carnegie Mellon-University of Pittsburgh Center for the Neural Basis of Cognition Undergraduate Research Fellowship in Computational Neuroscience	NIGMS
2007 -	GM75770-01A1 Research Training in Anesthesiology and Pain Management	NIGMS
2002 - 2005	N00014-02-2-0269 Cognitive Modeling of Individual Differences in Working Memory: Predicting Individual Differences in Complex, Interactive Environments	ONR
2000 - 2002	Computational Modeling of Individual Differences in Working Memory and Strategy Adaptivity	NSF
1998 - 2001	Computational Models and Coordinated Neuroimaging of Learning and Cognitive Function	NSF: Learning and Intelligent Systems

PUBLICATIONS AND PAPERS IN PRESS:

- Shen, Z., Popov, V., Delahay, A., & Reder, L. (in press). Symbol familiarity affects working memory demands during mathematical problem solving. *Memory & Cognition*
- Popov V., & Reder, L. (2017). Target-to-distractor similarity can help visual search performance. In G. Gunzelmann, A. Howes, T. Tenbrink, & E. Davelaar (Eds.), *Proceedings of the 39th Annual Conference of the Cognitive Science Society* (pp.). Austin, TX: Cognitive Science Society.
- Manelis, A. , Popov, V., Paynter, C., Walsh, M., Wheeler, M., Vogt, K., & Reder, L. (2017). Cortical Networks Involved in Memory for Temporal Order. *Journal of Cognitive Neuroscience*. Advance online publication
- Delahay, A.B. & Reder, L.M. (In press). Short-term memory. In Frey, B. (Ed.), *The SAGE Encyclopedia of Educational Research, Measurement, and Evaluation*. Thousand Oaks, CA: Sage Publications.
- Walsh, M. M., Paynter, C. A., Zhang, Y., & Reder, L. M. (2016). Hitting the reset button: An ERP investigation of memory for temporal context. *Brain Research*, 1642, 524-531. DOI: 10.1016/j.brainres.2016.04.047
- Liu, X., L. & Reder, L. M. (2016) fMRI Exploration of Pedagogical Benefits of Repeated Testing: When More Is Not Always Better. *Brain and Behavior*, 6(7), e00476, DOI: [10.1002/brb3.476](https://doi.org/10.1002/brb3.476)
- Reder, L.M., Liu, X., Keinath, A., & Popov, V. (2016). Building Knowledge Requires Bricks, Not Sand: The Critical Role of Familiar Constituents in Learning. *Psychonomic Bulletin & Review*, 23(1), 271-277. DOI: 10.3758/s13423-015-0889-1
- Dong, S., Reder, L. M., Yao, Y., Liu, Y., & Chen, F. (2015). Individual differences in working memory capacity are reflected in different ERP and EEG patterns to task difficulty. *Brain Research*, 1616, 146-156. DOI: 10.1016/j.brainres.2015.05.003
- Oates, J.M., Reder, L.M., Cook, S., & Faunce, P. (2015). Spurious recollection from a dual-process framework: The role of partial matching. In J.G.W. Raaijmakers, A.H. Criss, R.L. Goldstone, R.M. Nosofsky, and M. Steyvers (Eds.), *Cognitive Modeling in Perception and Memory: A Festschrift for Richard M. Shiffrin*. New York: Psychology Press, p. 145-161.
- Manelis, A. & Reder, L. M. (2014) Effective Connectivity among the working memory regions during preparation for and during performance of the n-back task. *Frontiers in Human Neuroscience* 8:593. DOI: 10.3389/fnhum.2014.00593

- Liu, X. L., Liang, P., Li, K., & Reder, L. M. (2014). Uncovering the neural mechanisms underlying learning from tests. *Plos One*, vol. 9 (3) e92025. DOI: 10.1371/journal.pone.0092025
- Liu, X. L., Walsh, M. M., & Reder, L. M. (2014). An attentional adaptation account of spatial negative priming: Evidence from event-related potentials. *Cognitive, Affective, and Behavioral Neuroscience*, 14, 49–61. DOI: 10.3758/s13415-013-0237-8
- Nie, A., Griffin, M., Keinath, A., Walsh, M., Dittmann, A., & Reder, L. M. (2014). ERP profiles for face and word recognition are based on their status in semantic memory not their stimulus category. *Brain Research*, 1557, 66-73. DOI: 10.1016/J.BRAINRES.2014.02.010
- Manelis, A., & Reder, L. M. (2013). He Who Is Well Prepared Has Half Won The Battle: An fMRI Study of Task Preparation. *Cerebral Cortex*. DOI: <http://dx.doi.org/10.1093/cercor/bht262>
- Griffin, M., Dewolf, M., Keinath, A., Liu, X. L., & Reder, L. M. (2013). Identical vs. Conceptual repetition FN400 and Parietal Old/New ERP components occur during encoding and predict subsequent memory. *Brain Research*, 1512, 68-77. DOI: 10.1016/j.brainres.2013.03.014
- Manelis, A., Paynter, C. A., Wheeler, M. E., & Reder, L. M. (2013). Repetition related changes in activation and functional connectivity in hippocampus predict subsequent memory. *Hippocampus*, 23(1), 53-65. DOI: 10.1002/hipo.22053
- Manelis, A., Reder, L. M. (2012). Procedural Learning and Associative Memory Mechanisms Contribute to Contextual Cueing: Evidence from fMRI and Eye-Tracking. *Learning & Memory*, 19(11), 527-534. DOI:10.1101/lm.025973.112
- Liang, P., Manelis, A., Liu, X., Aizenstein, H., Gyulai, F., Quinlan, J., & Reder, L. M. (2012). Using arterial spin labeling perfusion MRI to explore how midazolam produces anterograde amnesia. *Neuroscience Letters*, 522(7), 113-117. DOI: 10.1016/j.neulet.2012.06.019
- Reder, L. M., Victoria, L. W., Manelis, A., Oates, J. M., Dutcher, J. M., Bates, J. T., Cook, S., Aizenstein, H. A., Quinlan, J., Gyulai, F. (2012). Why it's easier to remember seeing a face we already know than one we don't: pre-existing memory representations facilitate memory formation. *Psychological Science*. 24(3):363-372. DOI: 10.1177/0956797612457396.
- Manelis, A., Reder, L. M. & Hanson, S. J. (2011). Dynamic changes in the medial temporal lobe during incidental learning of object-location associations. *Cerebral Cortex*, 22(4), 828-837. DOI: 10.1093/cercor/bhr151

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- Buchler, N. G., Faunce, P. A., Light, L. L., Gottfredson, N., & Reder, L. M. (2010). Effects of repetition on associative recognition in young and older Adults: Item and associative strengthening. *Psychology and Aging*, 22(1), 104-121. DOI: 10.1037/a0020816
- Oates, J.M. & Reder L.M. (2010). Memory for pictures: Sometimes a picture is not worth a single word. In Benjamin, A. S. (Ed.), *Successful Remembering and Successful Forgetting: A Festschrift in Honor of Robert A. Bjork*. New York: Psychology Press, pp. 447-462.
- Paynter, C.A., Kotovsky, K., & Reder, L.M. (2010). Problem-solving without awareness: An ERP investigation. *Neuropsychologia*, 48(10), 3137-3144. DOI: 10.1016/j.neuropsychologia.2010.06.029
- Victoria, L.W. & Reder, L.M. (2010). How midazolam can help us understand human memory: Three illustrations. Frensch, P. (Ed.), *Cognitive and Neuropsychological Issues*. Volume 1, *Psychology Press*, 225-238.
- Paynter, C.A., Reder, L.M., & Kieffaber, P.D. (2009). Knowing we know before we know: ERP correlates of initial feeling-of-knowing. *Neuropsychologia*, 47(3), 796-803. DOI: 10.1016/j.neuropsychologia.2008.12.009
- Reder, L.M., Park, H., & Keiffaber, P. (2009). Memory systems do not divide on consciousness: Reinterpreting memory in terms of activation and binding. *Psychological Bulletin*, 135(1), 23-49. DOI: 10.1037/a0013974
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- Reder, L.M., Paynter, C., Diana, R.A., Ngiam, J., & Dickison, D. (2007). Experience is a double-edged sword: A computational model of the encoding/retrieval tradeoff with familiarity. In Ross, B. & Benjamin, A.S. (Eds.), *The Psychology of Learning and Motivation*, Academic Press, 271-312. DOI: 10.1016/S0079-7421(07)48007-0
- Reder, L.M., Oates, J.M., Dickison, D., Anderson, J.R., Gyulai, F., Quinlan, J.J., Ferris, J.L., Dulik, M. & Jefferson, B. (2007). Retrograde facilitation under midazolam: The role of general and specific interference. *Psychonomic Bulletin & Review*, 14(2), 261-269.
- Buchler, N.E.G., & Reder, L.M. (2007). Modeling age-related memory deficits: A two-parameter solution. *Psychology & Aging*, 22(1), 104-121.

DOI: 10.1037/0882-7974.22.1.104

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Park, H., Arndt, J.D., & Reder, L.M. (2006). A contextual interference account of distinctiveness effects in recognition. *Memory & Cognition*, *34*(4), 743-751. [Lead Article]

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Diana, R., Reder, L.M., Arndt, J., & Park, H. (2006). Models of recognition: A review of arguments in favor of a dual process account. *Psychonomic Bulletin & Review*. *13*, 1-21. [Lead Article]

Diana, R.A. & Reder, L.M. (2006). The low frequency encoding disadvantage: Word frequency affects processing demands. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, *32*(4), 805-815. DOI: 10.1037/0278-7393.32.4.805

Diana, R., & Reder, L.M. (2005). The list strength effect: A contextual competition account. *Memory & Cognition*, *33*(7), 1289-1302.

Diana, R., Vilberg, K.L., & Reder, L.M. (2005). Identifying the ERP correlate of a recognition memory search attempt. *Cognitive Brain Research*, *24*, 674-684. DOI: 10.1016/j.cogbrainres.2005.04.001

Park, H., Reder, L.M., & Dickison, D. (2005). The effects of word frequency and similarity on recognition judgments: The role of recollection. *Journal of Experimental Psychology: Learning, Memory & Cognition*, *31*(3), 568-578. DOI: 10.1037/0278-7393.31.3.568

Diana, R. & Reder, L.M. (2004). Visual vs. verbal metacognition: Are they really different? In Levin, D.T. (Ed), *Thinking and Seeing: Visual Metacognition in Adults and Children*. Cambridge: MIT Press, pp. 187-201.

Park H., Quinlan, J.J., Thornton, E.R., & Reder, L.M. (2004). The effect of midazolam on visual search: Implications for understanding amnesia. *Proceedings of the National Academy of Sciences*, *101*(51), 17879-17883. DOI: 10.1073/pnas.0408075101

Park, H. & Reder, L.M. (2004). Moses illusion: Implication for human cognition. In Pohl, R.F. (Ed), *Cognitive Illusions*. Hove: Psychology Press, pp. 275-291.

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- Schunn, C.D., Lovett, M.C., & Reder, L.M. (2001). Awareness and working memory in strategy adaptivity. *Memory & Cognition*, 29(2), 254-266.
- Schunn, C.D. & Reder, L.M. (2001). Another source of individual differences: Strategy adaptivity to changing rates of success. *Journal of Experimental Psychology: General*, 130, 59-76.
- Simmons, M.R., Reder, L.M., & Fiez, J. (2001). The role of perceptual fan in explicit recognition: Functional neuroimaging evidence *Abstracts of the Eighth Annual Meeting of the Cognitive Neuroscience Society*, New York NY.
- Anderson, J.R., Greeno, J.G., Reder, L.M., & Simon, H.A. (2000). Perspectives on learning, thinking, and activity. *Educational Researcher*, 29 (4), 11-13.
- Anderson, J.R., Reder, L.M., & Simon, H.A. (2000, Summer). Applications and misapplications of cognitive psychology to mathematics education. *Texas Educational Review*.
- Lovett, M.C., Daily, L.Z., & Reder, L.M. (2000). A source activation theory of working memory: Cross-task prediction of performance in ACT-R. *Journal of Cognitive Systems Research*, 99-118.
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- Anderson, J.R. & Reder, L.M. (1999). Process, not representation: Reply to Radvansky (1999). *Journal of Experimental Psychology: General*, 128(2), 207-210.
- Anderson, J.R. & Reder, L.M. (1999). The fan effect: New results and new theories. *Journal of Experimental Psychology: General*, 128(2), 186-197.
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- Note: Above paper was the winner of the 1989 NCTE Award for Excellence in Technical and Scientific Writing: Best Article Reporting Formal Research in Technical or Scientific Communication.

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- Anderson, J.R. & Reder, L.M. (1987). Effects of number of facts studied on recognition versus sensibility judgments. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 13(3), 355-367. [Lead Article].
- Charney, D.H. & Reder, L.M. (1987). Initial skill learning: An analysis of how elaborations facilitate the three components. In Morris, P.E. (Ed.), *Modeling Cognition*, London: Wiley Publishers, 135-165.
- Reder, L.M. (1987). Beyond associations: Strategic components in memory retrieval. In Gorfein, D. & Hoffman, R. (Eds.), *Memory and Learning: The Ebbinghaus Centennial Conference*, Hillsdale, NJ: Lawrence Erlbaum Associates, 203-220.
- Reder, L.M. (1987). Strategy selection in question answering. *Cognitive Psychology*, 19(1), 90-138.
Note: Above paper was reprinted in Nelson, T.O. (1992). *Metacognition: Core Readings*, Allyn & Bacon Publishers.
- Charney, D.H. & Reder, L.M. (1986). Designing tutorials for computer users: Effects of the form and spacing of practice on skill learning. *Human Computer Interaction*, 2, 297-317.
- Reder, L.M., Charney, D.H., & Morgan, K.I. (1986). The role of elaborations in learning a skill from an instructional text. *Memory and Cognition*, 14(1), 64-78
- Reder, L.M., Wible, C., & Martin, J. (1986). Differential memory changes with age: Exact retrieval versus plausible inference. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 12(1), 72-81.
Note: Above paper was reprinted in Komatsu, L. (1994). *Experimenting with the Mind: Readings in Cognitive Psychology*, Brooks/Cole.
- Reder, L.M. (1985). Techniques available to author, teacher and reader to improve retention of main ideas of a chapter. In Chipman, S., Segal, J., & Glazer, R. (Eds.), *Thinking and Learning Skills: Current Research and Open Questions*, Vol. 2. Hillsdale, NJ: Lawrence Erlbaum Associates, 37-64.
- Reder, L.M. & Wible, C. (1984). Strategy use in question-answering: Memory strength and task constraints on fan effects. *Memory and Cognition*, 12, 411-419.
- Reder, L.M. (1983). What kind of pitcher can a catcher fill? Effects of priming in sentence comprehension. *Journal of Verbal Learning and Verbal Behavior*, 22, 189-202.

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- Allwood, C.M., Wikstrom, T., & Reder, L.M. (1982). The effects of text structure on free recall: More support for summaries. *Poetics*, 11, 145-153.
- Reder, L.M. (1982). Elaborations: When do they help and when do they hurt? *Text*, 2, 211-224.
- Reder, L.M. (1982). Plausibility judgments vs. fact retrieval: Alternative strategies for sentence verification. *Psychological Review*, 89, 250-280.
- Reder, L.M. & Anderson, J.R. (1982). Effects of spacing and embellishments on memory for the main points of a text. *Memory and Cognition*, 10, 97-102. [Lead Article].
- Reder, L.M. & Ross, B.H. (1981). The effects of integrated knowledge on fact retrieval and consistency judgments: When does it help, and when does it hurt. *Proceedings of the Cognitive Science Society*, Berkeley.
- Reder, L.M. (1980). The role of elaboration in the comprehension and retention of prose: A critical review. *Review of Educational Research*, 50, 5-53. [Lead Article].
- Reder, L.M. & Anderson, J.R. (1980). A comparison of texts and their summaries: Memorial consequences. *Journal of Verbal Learning and Verbal Behavior*, 19, 121-134. [Lead Article].
- Reder, L.M. & Anderson, J.R. (1980). A partial resolution of the paradox of interference: The role of integrating knowledge. *Cognitive Psychology*, 12, 447-472. [Lead Article].
- Anderson, J.R. & Reder, L.M. (1979). An elaborative processing explanation of depth of processing. In Cermak, L.S. & Craik, F.I.M. (Eds.), *Levels of Processing in Human Memory*. Hillsdale, NJ: Lawrence Erlbaum Associates, 385-403.
- Reder, L.M. (1979). The role of elaborations in memory for prose. *Cognitive Psychology*, 11, 221-234.
- Reder, L.M. & Anderson, J.R. (1979). Use of thematic information to speed search of semantic nets. *Proceedings of the 6th International Joint Conference on Artificial Intelligence*.
- Smith, E.E., Haviland, S.E., Reder, L.M., Brownell, H., & Adams, N. (1976). When preparation fails: Disruptive effects of prior information on perceptual recognition. *Journal of Experimental Psychology: Human Perception and Performance*, 2, 151-161. [Lead Article].

Reder, L.M., Anderson, J.R., & Bjork, R.A. (1974). A semantic interpretation of encoding specificity. *Journal of Experimental Psychology*, 102(4), 648-656.

Anderson, J.R. & Reder, L.M. (1974). Negative judgments in and about semantic memory. *Journal of Verbal Learning and Verbal Behavior*, 13, 664-681.

INVITED PRESENTATIONS:

Workshop on Memory and Skill, Duke University, Durham, North Carolina, April 2016. Not knowing what we know: A call for a theory-neutral database for empirical results in psychology (Popov & Reder).

Special Symposium of the Psychonomic Society Governing Board, University of Edinburgh, Edinburgh, Scotland, July, 2015.
Building Knowledge Requires Bricks, Not Sand: The Critical Role of Familiar Constituents in Learning (Reder, Liu, Keinath & Povov)

Society for Neuroscience, Washington D.C., November, 2011.
The evolution of a chunk: tracking changes in MTL during incidental learning of object-location associations (Manelis Reder & Hanson) [Invited Symposium]

Applications of Cognitive Science Research to Educational Practice, Symposium on *Learning to Learn*, sponsored by the Francisco Manuel Dos Santos Foundation, University of Aveiro and University of Lisbon, October, 2011. [Featured Speaker]

The International Joint Conference on Active Media Technology and Brain Informatics, Beijing, China, October, 2009.
How Midazolam Can Help Us Understand Human Memory: 3 Illustrations and a Proposal for a New Methodology. [Keynote Address]

The Institute of Psychology, Chinese Academy of Sciences, Beijing, China, October, 2009.
How Midazolam Can Help Us Understand Human Memory: 3 Illustrations and a Proposal for a New Methodology. [Invited Colloquium]

Successful Remembering and Successful Forgetting, Festschrift to celebrate the contributions of Robert A. Bjork in understanding human learning and memory. University of California, Los Angeles, January 10-11, 2009.
Context & Amnesia: How midazolam can help inform memory mechanisms.

The International Congress of Psychology, Berlin, Germany, July, 2008.
Using drugs to help us understand human memory. [Invited Address]

The International Congress of Psychology, Berlin, Germany, July, 2008. Invited Symposium, Computational models of episodic memory.

How a dual-process model of recognition accounts for spurious recollection.

The 20th Annual Association for Psychological Science, Chicago, IL, May, 2008.
Experience is a double-edged sword: The encoding/retrieval tradeoff with familiarity. [Invited Address]

The 115th Annual Convention of the American Psychological Association, Division 3 Experimental Psychology, San Francisco, 2007. Section on Uniting Psychology through Memory. *Experience is a double-edged sword: A computational model of the encoding/retrieval tradeoff with familiarity.* [Invited Address]

The (Grand) SLAMM: Symposium on Language and Memory at Manitoba, Winnipeg, 2007. *Memory Systems Do Not Divide on Consciousness.* [Invited Address]

The 28th Annual Conference of the Cognitive Science Society 2006 (Vancouver), Plenary Symposium on "The Synergy Of Implicit And Explicit Learning Processes" *Implicit and explicit processes in learning & metacognition: Giving consciousness too much attention.*

Eighth Annual CNBC Retreat, Hidden Valley, October 2004
The effect of midazolam on visual search: Implications for understanding amnesia. [Invited Talk]

Conference on Metacognition and Education, Barnard College, NYC, June 2004
Senior moments: Memory, meta-memory, and aging.

Invited Address at SWIM, SEPA, Atlanta, March, 2004
Distinctiveness: An operational definition and its effect on encoding and retrieval.

Symposium on the Mirror Effect. EPA, Baltimore, March, 2003
The mirror effect: A mechanistic, dual process account.

Kent Forum on Applied Psychology: Visual Metacognition, June 2002
Visual and verbal metacognition: Are they really different?

Georgia Institute of Technology, October 2000
Relating implicit and explicit memories: A source of activation confusion account.

Stanford University, February 1999
SAC: An activation based account of implicit and explicit memory phenomena.

Metacognition: Process, Function, and Use, September 1999 (Clermont-Ferrand, France) *Metacognition: Giving consciousness too much credit.*

American Psychological Society, June, 1999 (Denver, CO)

Relating implicit and explicit memories: A source of activation confusion account. [Invited Address]

Tsukuba International Conference on Memory, 1998

SAC: An activation based account of implicit and explicit memory phenomena. Consciousness and memory. Current Progress and Challenges (Tsukuba, Japan).

Models of Working Memory Conference, July 1997 (Boulder, CO)

Modeling working memory in a unified architecture. (Lovett, M., Reder, L.M., & Lebiere, C.)

Attention and Performance XVII, July 1996 (Haifa, Israel)

Exploring individual differences in strategy selection: Adaptativity in an air traffic controller's task.

International Conference on Memory, July 1996 (Padova, Italy)

Symposium speaker on the topic of Metacognition.

Symposium organizer and speaker on the topic of Computational Models of Working Memory Performance.

27th Carnegie Symposium on Cognition, May 1995

Metacognition does not imply awareness: Strategy choice is governed by implicit learning and memory.

Symposium on Metacognition and Social Psychology, Universite Catholique de Louvain, Louvain La Neuve, Belgium, May 1995

Rapid Feeling-of-Knowing: A Strategy Selection Mechanism.

University of Trier, May 1995

A computational model of feeling of knowing and strategy choice.

Practical Aspects of Memory, III, August 1994 (University of Maryland)

Learning in context: Situated learning and transfer.

Lake Geneva Language Comprehension Conference, July 1994

Further explorations of the Moses illusion: An activation account.

International Congress of Psychology, July 1992 (Brussels)

Symposium on Inferential Processes in Text.

Reading what isn't there: Further explanations of the Moses illusion.

American Psychological Society, June 1992 (San Diego, CA)

Invited Multispecialty Symposium: Theoretical, Cognitive, Developmental, and Neuropsychological Aspects of Metacognition.

Evidence and mechanisms for a strategy selection phase in memory retrieval.

University of Colorado, February 1992

Strategy selection in question answering.

- 1991 International Conference on Memory, Lancaster University, Lancaster, UK, July
Strategy choice in letter rotation: How sensitive are we to the dynamics of the environment?
- International Conference on Memory, Lancaster University, Lancaster, UK, July 1991
Better the second time around: Re-presentation reverses verbalization's impairment of face recognition (with Schooler, J. & Ryan, R.)
- The Flinders University of South Australia, March 1991
Locus of the Moses illusion: Imperfect encoding, retrieval, or match?
- Queensland University of Technology: School of Mathematics, Science and Technology Education, Queensland, February 1991 (Queensland, Australia)
The role of memory load in algebra problem solving.
- University of Queensland, Department of Psychology, February 1991 (Queensland, Australia)
Locus of the Moses illusion: Imperfect encoding, retrieval, or match?
- Sylvia Beach Language Comprehension Conference, July 1989
Partial matching during reading: What word reading times tell us about the Moses illusion.
- Pennsylvania State University, April 1989
Strategy choice in question-answering: The role of feeling of knowing.
- Conference on Inference Generation during Discourse Comprehension, Memphis State University, March 1988
Plausible inference.
- University of Adelaide, Australia, April 1987
Skill learning.
- The Flinders University of South Australia, April 1987
Question answering.
- Smithsonian Institute, October 1986
Lecture on memory.
- Midwestern Psychological Association, May 1986
Strategy selection in question-answering.
- International Workshop on Modeling Cognition, July 1985
The role of examples in learning a cognitive skill.
- The Ebbinghaus Centennial Conference, April 1985
Beyond associations: Strategic components in memory retrieval.

- Temple University, November 1984
A strategy selection model for question-answering.
- APA Symposium, August 1981
Comprehension and inference in textual information processing.
- Thinking and Learning Skills, LRDC, October 1980
Techniques available to author, teacher, and reader to improve retention of main ideas of a chapter.
- University of Illinois, Center for the Study of Reading, February 1980
Comparison of texts and their summaries.
- The National Reading Conference (Invited Address), November 1979
The role of elaborations in learning introductory material.
- Midwestern Psychological Association (Invited Paper), May 1979
Comparison of textbook chapters with their summaries: Support for cliff notes.
- Rockefeller University, April 1978
Thematic relatedness, plausible reasoning and the fan effect.
- Levels of Processing Conference, June 1977 (Rockport, MA)
Elaboration explanation of depth of processing.

ABSTRACTS AND CONFERENCE PRESENTATIONS:

- Cognitive Science Society Annual Meeting, July, 2017 (London, UK). Repetition improves memory by strengthening existing traces: Evidence from paired-associate learning under midazolam. (Poster with Popov, V.)
- Psychonomic Society Annual Meeting, November, 2016 (Boston)
Symbol Familiarity Interacts with Working Memory Demands during Mathematical Problem-Solving (with Shen, Z., Popov, V. & Delahay, A.)
- Memory Disorders Research Society, September, 2016 (Princeton).

Working Memory Resources are Consumed according to the Inverse Strength/Familiarity of the Elements to be Processed

Anesthesiology Annual Meeting, May, 2016 (San Francisco). Variability in the Effect of Experimental Pain on Longterm Memory During Sedation with Dexmedetomidine & Midazolam. Vogt, K., Ibinson, J., Tremel, J., Popov, V., Reder, L., & Fiez, J.

Psychonomics, May, 2016 (Granada, Spain)
Building Knowledge Requires Bricks, Not Sand: The Critical Role of Familiar Constituents in Learning. Spoken presentation: (with Liu, X., Keinath, A., Popov, V.)

Society of Experimental Psychologists, April, 2016 (Columbia University).
Constructing new knowledge: The interplay of familiarity, discrimination, partial-matching and working memory (with V. Popov, X. Liu & A. Keinath).

Psychonomics, November, 2015 (Chicago, IL)
Building Knowledge Requires Bricks, Not Sand: The Critical Role of Familiar Constituents in Learning. Spoken presentation: (with Liu, X., Keinath, A., Popov, V.)

Psychonomics, November, 2014 (Long Beach, CA)
Brain Activity During Testing Predicts Later Learning Success
Spoken presentation (with Liu, X., Liang, P., & Li, K.)

Psychonomics, November, 2014 (Long Beach, CA)
Neural Mechanisms underlying Mnemonic Benefits of Repeated Retrieval,
Poster presentation (Liu, X., Liang, P., Li, K. & Reder, L. M.)

Cognitive Neuroscience Meeting, April 2014 (Boston, MA)
Brain Activity During Testing Predicts Later Learning Success
Poster presentation (Liu, X., Liang, P., Li, K. & Reder, L. M.)

Psychonomics, November 2013 (Toronto, ON)
Brain Activity During Testing Predicts Later Learning Success (Liu, X., Liang, P., Li, K. & Reder, L. M.)

Annual Summer Interdisciplinary Conference, July, 2011.
Familiarity of Elements affects knowledge formation.

Cognitive Neuroscience Meeting, April, 2011 (San Francisco)
An Attentional Adaption Account of Spatial Negative Priming-Evidence from ERP Poster presentation (Liu X. L., Walsh M. & Reder, L. M.)

Annual Interdisciplinary Conference, Feb, 2011 (Jackson Hole),
Combining fMRI and eye-tracking to understand contextual cueing in visual search (Manelis, A. & Reder, L.M.)

Psychonomics, November 2010 (St. Louis)

Comparison of Procedural and Contextual Learning Using fMRI and Eyetracking.

Poster presentation (Manelis, A. & Reder, L.M.)

Psychonomics, November 2009 (Boston)

Context Effects in Episodic Recognition of Famous Versus Nonfamous Faces.

Psychonomics, November 2009 (Boston)

Recognition and Priming Under Midazolam.

Poster presentation (Victoria, L.W., Reder, L.M., Dutcher, J.M., Aizenstein, H.J., Quinlan, J.J., Gyulai, F.)

Society of Experimental Psychologists, April 2008 (Bloomington, Indiana)

Using midazolam to address questions about the nature of human memory.

Thirty-Third Annual Interdisciplinary Conference, Jackson Hole, WY, February,

2008. *How Synthetic Amnesia Can Help Us Understand Human Memory.*

Psychonomics, November 2006 (Houston)

A new paradigm for measuring the independent contributions of familiarity and recollection to recognition.

Poster presentation (Buchler, N.E.G., Reder, L.M. & Light, L.L.)

Psychonomics, November 2006 (Houston)

Long- and short-term negative and positive priming.

Poster presentation (Erickson, M.A., Shang, J., Buchanan, E.E., & Reder,

L.M.)

The Fifth Annual Summer Interdisciplinary Conference (ASIC 2006), Andalsnes, Norway, July 2006

The interaction of implicit and explicit memory processes in learning and behavior.

Psychonomics, November 2005 (Toronto)

Recollection depends on unitization, but uncommon stimuli can be recognized by familiarity alone.

Psychonomics, November 2005 (Toronto)

Conjunction memory errors: The contribution of recollection.

Poster presentation (Park, H., & Reder, L.M.)

Psychonomics, November 2005 (Toronto)

Manipulating word frequency effects by varying processing demands: Low-frequency words are more difficult to encode.

Poster presentation (Diana, R.D., & Reder, L.M.)

The Fourth Annual Summer Interdisciplinary Conference (ASIC 2005), Briancon, France, July 2005

The role of consolidation in memory: Comparison of general vs. specific interference using midazolam.

12th Annual Cognitive Neuroscience Society Meeting, April 2005 (New York City, NY)

Identifying the ERP correlate of a recognition memory search attempt.
Poster presentation (Diana, R.D., Vilberg, K.L., & Reder, L.M.)

Academy of Lifelong Learning at Carnegie Mellon University, January 2005

Mechanisms of memory and how aging affects it.

Psychonomics, November 2004 (Minneapolis)

The other race effect: How do processing time and distracting contexts influence recognition of faces?

Poster presentation (Diana, R.D. & Reder, L.M.)

Psychonomics, November 2004 (Minneapolis)

The effect of midazolam on visual search.

Poster presentation (Park, H., Quinlan, J.J., Thornton, E.R., & Reder, L.M.)

Italy, The Third Annual Summer Interdisciplinary Conference (ASIC 2004), Cavalese,

July 2004 *Picking up the gauntlet: Reply to Malmberg, Holden & Shiffrin.*

Twenty-ninth Annual Interdisciplinary Conference, Jackson Hole, WY, February 2004

The effect of midazolam on visual search: Implications for understanding hippocampal function.

Psychonomics, November 2003 (Vancouver, BC, Canada)

Distinctiveness: An operational definition with empirical support.

Poster presentation (Park, H., Arndt, J. & Reder, L.M.)

Psychonomics, November 2002 (Kansas City)

The effect of distinctive visual information on false recognition.

Poster presentation (Arndt, J. & Reder, L.M.)

Psychonomics, November 2002 (Kansas City)

The effects of irrelevant perceptual information on memory for faces.

Poster presentation (Diana, R.A. & Reder, L.M.)

Cognitive Neuroscience Society, 2001 (New York, NY). The role of perceptual fan in explicit recognition: Functional neuroimaging evidence. (Simmons, M.R., Reder L.M., Fiez, J.A.) *Abstracts of the Eighth Annual Meeting of the Cognitive Neuroscience Society.*

Psychonomics, November 2001 (Orlando)

Evidence for a dual-process interpretation of the word frequency mirror effect.

Poster presentation (Arndt, J. & Reder, L.M.)

- Psychonomics, November 2001 (Orlando)
Support for a dual-process account of mirror effects in recognition.
 Poster presentation (Cary, M. & Reder, L.M.)
- Psychonomics, November 2000 (New Orleans)
Modeling the role of perceptual features in word recognition and fragment completion.
 Poster presentation (Cary, M. & Reder, L.M.)
- Psychonomics, November 2000 (New Orleans)
The role of perceptual and conceptual fan in explicit recognition: Analogous processes.
 Poster presentation (Simmons, M., Reder, L.M., Donavos, D. K., & Fiez, J.)
- 24th Annual Interdisciplinary Conference, 1999 (Jackson Hole)
Negative priming, habituation, implicit learning in a spatial localization task.
- Psychonomics, November 1999 (Los Angeles)
Self-regulation of study time and the retention of rare and common events.
 Poster presentation (Dashen, M. & Reder, L.M.)
- Psychonomics, November 1999 (Los Angeles)
The role of perceptual similarity in explicit recognition: Evidence against multiple systems.
 Poster presentation (Reder, L.M., Donavos, D.K., & Erickson, M.A.)
- Psychonomics, November 1998
Feeling of knowing and strategy selection for solving arithmetic problems .
 Poster presentation (Reder, L.M. & Ritter, F.)
- American Educational Research Association, April 1998 (San Diego, CA)
The feeling-of-knowing in strategy selection. (Schunn, C.D. & Reder, L.M.)
- Psychonomics, November 1997 (Philadelphia)
Individual differences in strategy adaptation.
 Poster presentation (Schunn, C.D. & Reder, L.M.)
- Cognitive Science Conference, August 1997 (Stanford)
Modeling individual differences in a digit working memory task.
 Poster presentation (Lovett, M., Reder, L.M., & Lebiere, C.)
- Cognitive Science Conference, August 1997 (Stanford)
Modeling the mirror effect in a continuous remember/know paradigm.
- Psychonomics, November 1997 (Philadelphia)
Spatial habituation and expectancy effects in a negative priming paradigm.
 Poster presentation (Reder, L.M. & Weber, K.H.)

- Psychonomics, November 1996 (Chicago)
Modeling word frequency effects in a continuous remember/know judgment paradigm.
Poster presentation (Reder, L.M., Nhouyvanisvong, A., Schunn, C.D., Angstadt, P., & Hiraki, K.)
- Psychonomics, November 1996 (Chicago)
What do parity and five effects in arithmetic tell us about subjects' strategy control?
Poster presentation (Lemaire, P. & Reder, L.M.)
- AAAI-96 Workshop on Computational Cognitive Modeling, August 1996 (Portland, OR)
Modeling Changes in Strategy Selections Over Time. (Schunn, C.D. & Reder, L.M.)
- Psychonomics, November 1995 (Los Angeles)
Metacognition does not imply awareness: Implicit processes govern strategy selection.
- Psychonomics, November 1994 (St. Louis)
The malleability of validity judgements: Thinking versus justification.
Poster presentation (Kamas, E., Reder, L.M., & Schooler, J.)
- AIC (Annual Interdisciplinary Conference, 15th annual) session on Memory and Metamemory, January 1990
The role of feeling of knowing in selection of question answering strategies.
- American Educational Research Association, April 1988 (with D. Charney)
Learning by example, problem-solving, and discovery learning.
- American Educational Research Association, April 1987 (with D. Charney)
Designing interactive tutorials for computer users: Effects of the form of practice on skill learning.
- American Educational Research Association, April 1986 (with D. Charney)
Learning a skill from an instructional text: The role of elaborations.
- Conference on College Composition, March 1985 (with D. Charney)
The role of examples and explanations in teaching procedural skills.
(ERIC/IR Microfiche ED-259-718)
- Psychonomics, November 1985
Mechanisms for strategy-selection in question answering.
- Psychonomics, November 1982
Memory changes with age: Compensating shifts in strategy.

Cognitive Science, August 1981

Effects of integrated knowledge on fact retrieval and consistency: When does it help and when does it hurt?

Psychonomics, November 1981

What kind of pitcher can a catcher fill? Priming in sentence comprehension.

Psychonomics, November 1980

Plausibility judgments versus fact retrieval: efficient strategies for question-answering.

Psychonomics, November 1979

The role of integrating knowledge on fan effects.

International Joint Conference on Artificial Intelligence, August 1979

Use of thematic information to speed search of semantic nets.

Midwestern Psychological Association, May 1976

Elaborations and story processing.

EXTRACURRICULAR SERVICE:

Editorial Board:

Psychological Review (2010 - 2015)

Journal of Experimental Psychology: Learning, Memory and Cognition (1983 - 1986, 1989 - 2002)

Memory and Cognition (1982 - 1990)

Journal of Cognitive Systems Research (1998 - 2009)

National Committee Service:

Steering Committee, American Association for the Advancement of Science, Section J, psychology, 2014-2017.

Psychonomic Society liaison to the American Association for the Advancement of Science, 2011-2016

Governing Board, Psychonomic Society, 2010-2016

American Psychological Association nominating committee for Early Career Awards, 2003-2005

American Association for the Advancement of Science

Electorate Nominating Committee for Psychology, Section J.
2002 - 2005

Institute for Educational Science, Read Panel, March, 2004

Institute for Educational Science, Basic Processes, 2007-2010

National Institute of Health: NIDA Review Panel, November, 2000

National Institute of Mental Health T32 Review Panel, October, 2003

National Research Council (National Academy of Sciences),

Committee on Techniques for the Enhancement of Human
Performance, 1991 – 1994
National Research Council (National Academy of Sciences),
Special Oversight Commission for the Mathematics Learning Study,
1998 - 2000
National Science Foundation Human Cognition & Performance Review
Panel,
April 2000

Society Affiliations:

Society of Experimental Psychology
Memory Disorders Research Society
Cognitive Neuroscience Society
Psychonomic Society, Fellow
American Psychological Society, Fellow
American Association for the Advancement of Science, Fellow
Association for Psychological Science, Fellow

Ad hoc Reviewer:

American Educational Research Journal	Journal of Educational Psychology
American Journal of Psychology	Journal of General Psychology
American Psychologist	Journal of Gerontology
Attention, Perception & Psychophysics	Journal of Memory and Language
Brain & Behavior	Journal of Psychology and Aging
Cerebral Cortex	JVLVB
Cognition	Memory & Cognition
Cognition & Emotion	NeuroImage
Cognitive, Affective & Behavioral Neuroscience	Neuropsychology
Cognitive Psychology	PLOS One
Cognitive Psychology Letters	PNAS
Cognitive Science	Psychology and Aging
Cognitive Science Quarterly	Psychological Bulletin
Consciousness and Cognition	Psychological Science
Developmental Psychology	Psychonomic Bulletin & Review
Hippocampus	Psychophysiology
JEP: General	Quarterly J. of Exp. Psychology
JEP: Applied	Review of Educational Research
JEP: Human Learning and Memory	
JEP: Human Perception & Performance	

External Grant Reviewer:

National Institute of Education
National Science Foundation
National Sciences and Engineering Research Council of Canada
National Academy of Sciences, Committee on Aging
Air Force Office of Scientific Research
Economic and Social Research Council
University of Arizona, Center for Consciousness Studies
Medical Research Council, U.K.

Institute of Education Sciences, Basic Processes grant review panel
Japan Society for the Promotion of Science
Israeli Science Foundation

University and Departmental Service:

Lecture in uPNC Summer Boot Camp Series, July 2010, 2012, 2016
Lecture to RAMS students, July 2106
Lecture in Osher Series, April 2015
Director of EEG lab, fall 2006 – 2014
Presidential Review Committee 2006
Lecture to the Academy of Lifelong Learning, January 2005
Faculty evaluation committee, 2004-2005
Cognitive Faculty Search Committee, 2003-2004
Director of Training Grant on Combined Computational and Behavioral
Approaches to the Study of Cognition, 1997 - 2014
Steering Committee on SDS/Psych joint Ph.D. program, 2001 - 2010
Head of Cognitive Faculty Search, 1999 - 2000
College Faculty Organization Chair 1999 - 2000
Promotions & Tenure Committee, 1999 - 2000
Organizer of Training Grant Core Courses, 1999
Space Committee for New Wing, 1998 - 1999
Planning Committee for HCI major, 1995 - 1996
Graduate Core Course Restructuring Committee, 1995
Organizer of the 27th Carnegie Symposium on Cognition, 1995
Faculty Senate Nominating Committee, 1995
University Committee on Special Faculty Appointments, 1994
Committee of Investigation on Ethics in Research, 1994
Faculty Senate, 1993 - 1996
Department Head Search Committee, 1992 - 1993
Study Abroad Coordinator, 1989 - 1995
Internal Review Board, 1987 - 1991
Graduate Education Restructuring Committee, 1987
Library Representative, 1981 - 1985
College Computing Committee, 1984
Colloquium Organizer, 1978 - 1980