

Cognitive Science Society

# 30<sup>th</sup> Annual Conference of the Cognitive Science Society

CogSci 2008

July 23-26, 2008  
Washington, D.C., USA

Volume 1 of 4

**Printed from e-media with permission by:**

Curran Associates, Inc.  
57 Morehouse Lane  
Red Hook, NY 12571  
[www.proceedings.com](http://www.proceedings.com)

ISBN: 978-1-60560-542-5

Some format issues inherent in the e-media version may also appear in this print version.

Copyright© (2008) by the Cognitive Science Society  
All rights reserved.

For permission requests, please contact the Cognitive Science Society  
at the address below.

Cognitive Science Society  
University of Texas – Psychology Department  
1 University Station – Department A8000  
Austin, Texas 78712-0187

PHONE: 512-471-2030  
FAX: 512-471-3053

[cogsci@psy.utexas.edu](mailto:cogsci@psy.utexas.edu)

# TABLE OF CONTENTS

## Volume 1

<b>Psychocomputational Models of Human Language Acquisition (PsychoCompLA-2008)</b> .....	1
<i>W.G. Sakas, D. Brizan</i>	
<b>Polyscheme and Cognitive Substrate Tutorial</b> .....	3
<i>N. Cassimatis, P. Bignoli, U. Kurup</i>	
<b>The Use of Event-Related Potentials to Study the Development and Decline of Cognitive Function</b> .....	4
<i>D. Mills, S. Luck</i>	
<b>Bayesian Models of Inductive Learning</b> .....	5
<i>T. Griffiths, C. Kemp, J. Tenenbaum</i>	
<b>The CLARION Cognitive Architecture: A Tutorial</b> .....	6
<i>S. Hélie, N. Wilson, Ron Sun</i>	
<b>Quantum Information Processing Theory</b> .....	8
<i>J. Busemeyer</i>	
<b>Dynamic Field Theory: Conceptual Foundations and Applications in the Cognitive and Developmental Sciences</b> .....	10
<i>J. Spencer, G. Schöner</i>	
<b>Preparing Research Grant Proposals for the Institute of Education Sciences: Bringing Cognitive Science to Education Research</b> .....	12
<i>E. Albro</i>	
<b>ACT-R Tutorial</b> .....	13
<i>N. Taatgen, H. van Rijn</i>	
<b>Computational Modeling of Spoken Language Processing: A Hands-On Tutorial</b> .....	14
<i>T. Strauss, D. Mirman, J. Magnuson</i>	
<b>Embodied Cognition and Robotics Approaches to Human Cognition and Learning</b> .....	15
<i>C. Yu, B. Scassellati</i>	
<b>Eye Tracking Research in Infants and Adults</b> .....	16
<i>D.C. Richardson, S. Johnson</i>	
<b>Words, Actions, Objects and Abstractions</b> .....	18
<i>Linda Smith</i>	
<b>Discovering the Conceptual Primitives</b> .....	19
<i>L. Aziz-Zadeh, D. Casasanto, J. Feldman, R. Saxe, L. Talmay</i>	
<b>Learning Novel Neighbors: Distributed Mappings Help Children and Connectionist Models</b> .....	21
<i>R. Newman, L. Samuelson, P. Gupta</i>	
<b>Fast-mapping and Reorganization: Development of Verb Meanings as a System</b> .....	27
<i>N. Saji, H. Saalbach, M. Imai, Y. Zhang, H. Shu, H. Okada</i>	
<b>Phonological Constraints on Children's Use of the Plural</b> .....	33
<i>M. Ettlenger, J. Zapf</i>	
<b>Children's Grammars Grow More Abstract with Age – Evidence From an Automatic Procedure for Identifying the Productive Units of Language</b> .....	38
<i>G. Borensztajn, W. Zuidema, R. Bod</i>	
<b>Semantic Convergence in the Bilingual Lexicon</b> .....	44
<i>E. Ameel, G. Storms, B. Malt, F. Van Assche</i>	
<b>A Computational Model of Conceptual Combination</b> .....	50
<i>P. Maguire, R. Maguire, A. Cater</i>	

<b>Phonaesthemes: A Corpus-Based Analysis</b> .....	56
<i>K. Otis, E. Sagi</i>	
<b>Modeling Semantic Cognition as Logical Dimensionality Reduction</b> .....	62
<i>Y. Katz, N. Goodman, K. Kersting, C. Kemp, J. Tenenbaum</i>	
<b>Retrospective Evaluations of Gambling Wins: Evidence for a ‘Peak-End’ Rule</b> .....	68
<i>E. Yu, D. Lagnado, N. Chater</i>	
<b>Predicting Reasoning from Visual Memory</b> .....	74
<i>E. Heit, B. Hayes</i>	
<b>Somatic Markers and Frequency Effects: Does Emotion Really Play a Role on Decision Making in the Iowa Gambling Task?</b> .....	80
<i>D. Fum, A. Napoli, A. Stocco</i>	
<b>What You Do Is What You Set: Semantic Representations of Tasks and the Capture of Awareness</b> .....	86
<i>A. Tiwathia, K. Livingston</i>	
<b>How Goals Shape Category Acquisition: The Role of Contrasting Categories</b> .....	92
<i>T. Davis, B. Love</i>	
<b>Modeling Idea Generation Sequences Using Hidden Markov Models</b> .....	98
<i>H-C. Wang</i>	
<b>Reinforcement Learning Leads to Risk Averse Behavior</b> .....	104
<i>J. Denrell</i>	
<b>Emotion-Driven Reinforcement Learning</b> .....	105
<i>R. Marinier III, J.E. Laird</i>	
<b>Sources of Information in Human Action</b> .....	111
<i>J. Loucks, D. Baldwin</i>	
<b>The Interactive Routine as Key Construct in Theories of Interactive Behavior</b> .....	117
<i>W.D. Gray</i>	
<b>Defending Extended Cognition</b> .....	118
<i>A. Chemero, M. Silberstein</i>	
<b>Adaptation to Embodied Dynamics: Evidence from Bayes’ Ball</b> .....	124
<i>C. Sims, W.D. Gray</i>	
<b>Inhibitory Mechanisms and Impairment in Domain-Specific Reasoning: Studies of Healthy Elderly Adults and Patients with Alzheimer’s Disease</b> .....	130
<i>D. Zaitchik, G. Solomon</i>	
<b>Ways of Explaining Properties</b> .....	131
<i>D. Heussen, J. Hampton</i>	
<b>Using Qualitative Reasoning for the Attribution of Moral Responsibility</b> .....	137
<i>E. Tomai, K. Forbus</i>	
<b>Is There Preferential Attachment in the Growth of Early Semantic Noun Networks?</b> .....	143
<i>T. Hills, M. Maouene, J. Maouene, A. Sheya, L.B. Smith</i>	
<b>Categorical Structure in Early Semantic Networks of Nouns</b> .....	149
<i>T. Hills, M. Maouene, J. Maouene, A. Sheya, L.B. Smith</i>	
<b>Factors Influencing the Interpretation of Noun-Noun Compounds</b> .....	155
<i>P. Maguire, R. Maguire, A. Cater</i>	
<b>Comparison Then Computation: A Model of Independent Causal Efficacy</b> .....	161
<i>K. Goedert</i>	
<b>Causal Learning through Repeated Decision Making</b> .....	167
<i>Y. Hagmayer, B. Meder</i>	

<b>Sequential Causal Learning in Humans and Rats</b> .....	173
<i>H. Lu, R. Rojas, T. Beckers, A. Yuille</i>	
<b>Spatial Language and Landmark Use: Can 3-, 4-, and 5-year-olds find the Middle?</b> .....	179
<i>N. Simms, D. Gentner</i>	
<b>Conceptualization in Language and Its Relation to Perception</b> .....	185
<i>T. Clausner, P. Kellman, E Palmer</i>	
<b>Spatial Description, Function and Context</b> .....	186
<i>E. Andonova, T. Tenbrink, K. Coventry</i>	
<b>English and Spanish Speakers Remember Causal Agents Differently</b> .....	192
<i>C. Fausey, L. Boroditsky</i>	
<b>Towards a Cognitive Science of Social Inequality: Children’s Attention-Related ERPs and Salivary Cortisol Vary with Their Socioeconomic Status</b> .....	198
<i>A. D’Angiuli, J. Weinberg, R. Grunau, C. Hertzman, P. Grebenkov</i>	
<b>Relating Intonational Pragmatics to the Pitch Realizations of Highly Frequent Words in English Speech to Infants</b> .....	204
<i>C. Quam, J. Yuan, D. Swingley</i>	
<b>An Embodied Dynamical Approach to Relational Categorization</b> .....	210
<i>P. Williams, R. Beer, M. Gasser</i>	
<b>The Evolution of Frequency Distributions: Relating Regularization to Inductive Biases Through Iterated Learning</b> .....	216
<i>F. Realí, T. Griffiths</i>	
<b>Learning, Understanding, and Acceptance: The Case of Evolution</b> .....	222
<i>A. Shtulman, P. Calabi</i>	
<b>To See or Not to See: The Visual Component of Complex Mental Arithmetic</b> .....	228
<i>W.A. Deslauriers, G.P. Ouellette, M. Barnes, J. LeFevre</i>	
<b>The Real Deal: What Judgments of Really Reveal about How People Think about Artifacts</b> .....	234
<i>B. Malt, M. Paquet</i>	
<b>The Color of Similarity</b> .....	240
<i>B. Breaux, M. Feist</i>	
<b>Theories of Expertise and Measures of Competence: Cognitive and Interactional Perspectives</b> .....	246
<i>C. Frederiksen, T. Koschmann, B. MacWhinney, C. Seifert, E. Shortliffe</i>	
<b>Parsing Verb-Final Clauses in German: Garden-path and ERP Effects Modeled by a Parallel Dynamic Parser</b> .....	248
<i>T. Vosse, G. Kempen</i>	
<b>Context Repetition Benefits are Dependent on Context Redundancy</b> .....	254
<i>G. Recchia, B.T. Johns, M.N. Jones</i>	
<b>Settling Dynamics in Distributed Networks Explain Task Differences in Semantic Ambiguity Effects: Computational and Behavioral Evidence</b> .....	260
<i>B. Armstrong, D. Plaut</i>	
<b>Predicting Word-Naming and Lexical Decision Times from a Semantic Space Model</b> .....	266
<i>B.T. Johns, M.N. Jones</i>	
<b>The Role of Coherence in Causal-Based Categorization</b> .....	272
<i>B. Rehder, S.W. Kim</i>	
<b>Causal Status and Explanatory Goodness in Categorization</b> .....	278
<i>J. Jameson, D. Gentner</i>	

<b>Absence Makes the Thought Grow Stronger: Reducing Structural Overlap Can Increase Inductive Strength</b> .....	284
<i>H.S. Lee, K. Holyoak</i>	
<b>Structured Correlation from the Causal Background</b> .....	290
<i>R. Mayrhofer, N. Goodman, M. Waldmann, J. Tenenbaum</i>	
<b>Joint Perception: Gaze and the Presence of Others</b> .....	296
<i>D.C. Richardson, M. Hoover, A. Ghane</i>	
<b>The Concept of Simulation in Control-Theoretic Accounts of Motor Control and Action Perception</b> .....	302
<i>M. Herschbach</i>	
<b>Thinking in Pictures: A Fresh Look at Cognition in Autism</b> .....	308
<i>M. Kunda, A. Goel</i>	
<b>A Bayesian Account of Reconstructive Memory</b> .....	314
<i>P. Hemmer, M. Steyvers</i>	
<b>The Role of Conditional and Joint Probabilities in Segmentation of Dynamic Human Action</b> .....	320
<i>M. Meyer, D. Baldwin</i>	
<b>The Hierarchies and Systems that Underlie Routine Behavior: Evidence from an Experiment in Virtual Gardening</b> .....	326
<i>N. Ruh, R. Cooper, D. Mareschal</i>	
<b>Attentional Allocation During Feedback: Eyetracking Adventures on the Other Side of the Response</b> .....	332
<i>M. Watson, M. Blair</i>	
<b>Preventing Postcompletion Errors: How Much Cue Is Enough?</b> .....	338
<i>M. Byrne</i>	
<b>Why Spatial-Numeric Associations Aren't Evidence for a Mental Number Line</b> .....	344
<i>D. Landy, E.L. Jones, J. Hummel</i>	
<b>Effects of Orthographic and Semantic Distractors on Visual Search for Single Words</b> .....	350
<i>L. Léger, J. Rouet, C. Ros, N. Vibert</i>	
<b>Crossed Hands Curve Saccades: Multisensory Dynamics in Saccade Trajectories</b> .....	356
<i>L. Emberson, R. Weiss, A. Barbosa, M. Spivey</i>	
<b>The Dynamic Field Theory vs. the Category Adjustment Model: A Critical Test</b> .....	362
<i>J. Spencer, W. Troob, V. Simmering</i>	
<b>Recognition, Categorization, and the Emergence of Meaning</b> .....	363
<i>S. Ullman</i>	
<b>Face and Word Processing: Two Sides of the Same Brain</b> .....	364
<i>D. Plaut</i>	
<b>Rumelhart Symposium: Integrating Human and Machine Vision: In Honor of Shimon Ullman</b> .....	365
<i>M. Tarr, M. Behrmann, C. Koch, R. Malach, N. Logothetis</i>	
<b>'Poverty of the Stimulus' Revisited: Recent Challenges Reconsidered</b> .....	367
<i>R. Berwick, N. Chomsky</i>	
<b>Modeling The Fan Effect Using Dynamically Structured Holographic Memory</b> .....	368
<i>M. Rutledge-Taylor, R. West</i>	
<b>Trade-Off Between Capacity and Generalization in a Model of Memory</b> .....	374
<i>G. Tannenbaum, Y. Yeshurun, S. Edelman</i>	
<b>The Impact of Labels on Visual Categorisation: a Neural Network Model</b> .....	380
<i>V. Gliozzi, J. Mayor, J-F. Hu, K. Plunkett</i>	

<b>Distinguishing Concept Categories from Single-Trial Electrophysiological Activity</b> .....	386
<i>B. Murphy, M. Dalponte, M. Poesio, L. Bruzzone</i>	
<b>Categorizing Fragments of Exemplars: Experimental and Computational Results</b> .....	392
<i>H. Harris</i>	
<b>Modeling Category Intuitiveness</b> .....	398
<i>E. Pothos, D. Edwards, T. Gureckis, P. Hines, N. Chater</i>	
<b>Illusory Correlation as the Outcome of Experience Sampling</b> .....	404
<i>J. Denrell, G. LeMens</i>	
<b>Do English and Mandarin Speakers Think Differently About Time?</b> .....	410
<i>L. Boroditsky</i>	
<b>Using the Distributional Statistics of Speech Sounds for Weighting and Integrating Acoustic Cues</b> .....	415
<i>J. Toscano, B. McMurray</i>	
<b>Language as a Cognitive Technology: English-Speakers Match Like Pirahã When You Don't Let Them Count</b> .....	421
<i>M. Frank, E. Fedorenko, E. Gibson</i>	
<b>Division of Labor between Semantics and Phonology in Normal and Disordered Reading Development across Languages</b> .....	427
<i>J. Yang, B. McCandliss, H. Shu, J. Zevin</i>	
<b>Variable Vulnerability of Words to Visual Impairment: Exploring Grain-Size Effects in Reading</b> .....	433
<i>G. Pagliuca, P. Monaghan, R. McIntosh</i>	
<b>Constraints for Computational Models of Reading: Evidence from Learning Lexical Stress</b> .....	439
<i>P. Monaghan, J. Arciuli, N. Seva</i>	
<b>The Emergence of Rule-Use: A Dynamic Neural Field Model of the DCCS</b> .....	445
<i>A. Buss, J. Spencer</i>	
<b>Automatic and Voluntary Shifts of Attention in the Dimensional Change Card Sorting Task</b> .....	451
<i>A. Fisher</i>	
<b>Analogy-Making in Children: The Importance of Processing Constraints</b> .....	457
<i>J-P. Thibaut, R. French, M. Vezneva</i>	
<b>BLOSSOM: Best Path Length on a Semantic Self-Organizing Map</b> .....	463
<i>R. Lindsey, M. Stipicevic, V. Veksler, W.D. Gray</i>	
<b>Experience with a Computer Word-Entry Method in Processing Chinese Characters by Fluent Typists</b> .....	469
<i>J-Y. Chen, C-Y. Chuang</i>	
<b>More-Or-Less Elicitation (MOLE): Testing A Heuristic Elicitation Method</b> .....	474
<i>M. Welsh, M.D. Lee, S. Begg</i>	
<b>Naïve Statistics: Intuitive Analysis of Variance</b> .....	480
<i>D. Trumppower, O. Fellus</i>	
<b>An Empirical Study of Errors in Translating Natural Language into Logic</b> .....	485
<i>D. Barker-Plummer, R. Cox, R. Dale, J. Etchemendy</i>	
<b>Learning Associations That Run Counter to Biases in Learning: Overcoming Overshadowing and Learned Inattention</b> .....	491
<i>A. Heckler, J. Kaminski, V. Sloutsky</i>	
<b>Human Dimension &amp; Cognitive Performance</b> .....	497
<i>P. Palmer</i>	

<b>A Cognitive Model Testing Moral Seduction Theory: Unconscious Bias and the Role Played by Expertise</b> .....	498
<i>A. Guiral, E. Ruiz, W. Rodgers, J. Gonzalo</i>	
<b>The ‘Hard’ Problem and Neural Correlates of Consciousness</b> .....	504
<i>P. Slezak</i>	
<b>Processes and Constraints in Explanatory Scientific Discovery</b> .....	505
<i>P. Langley, W. Bridewell</i>	
<b>Cognitive Science and Education Research: Engaging Issues of Social Context</b> .....	506
<i>G. Solomon, D. Medin, N. Nersessian, R. Gelman, L. Schulz</i>	
<b>Acquisition of Concepts with Characteristic and Defining Features</b> .....	508
<i>T. Schultz, J-P. Thivierge, K. Laurin</i>	
<b>Two Eras in Learning Theory: Implications for Cognitively Faithful Models of Language Acquisition and Change</b> .....	514
<i>P. Niyogi, R. Berwick</i>	
<b>Treebank Parsing and Knowledge of Language: A Cognitive Perspective</b> .....	515
<i>S. Fong, R. Berwick</i>	
<b>Advances in Modeling Human Category Learning with DIVA</b> .....	521
<i>K. Kurtz</i>	
<b>A Test of the Decision-Time Predictions of the ‘Take the Best’ Model</b> .....	522
<i>B. Schultz, D. Navarro</i>	
<b>A Bayesian Model of How People Search Online Consumer Reviews</b> .....	528
<i>S. Lelis, A. Howes</i>	
<b>From Reduction Back to Higher Levels</b> .....	534
<i>W. Bechtel, A. Abrahamsen</i>	
<b>Stopping Rules and Memory Search Termination Decisions</b> .....	540
<i>J. Harbison, E. Davelaar, M. Dougherty</i>	
<b>Key Misconceptions in Algebraic Problem Solving</b> .....	546
<i>J. Booth, K. Koedinger</i>	
<b>The Effects of Disease Category on Diagnostic Problem Solving in Mammography</b> .....	552
<i>R. Azevedo, G. Lewis, R. Klatzky, E. Siler</i>	
<b>The Effects of Peer Information on Problem-Solving in a Networked Group</b> .....	558
<i>T. Wisdom, X. Song, R. Goldstone</i>	
<b>Worked Examples and Tutored Problem Solving: Redundant or Synergistic Forms of Support?</b> .....	564
<i>R. Salden, V. Alevan, A. Renkl, R. Schwonke</i>	

## Volume 2

<b>Optimal Processing Times in Reading: a Formal Model and Empirical Investigation</b> .....	570
<i>N.J. Smith, R. Levy</i>	
<b>The Advantage of the Ungrammatical</b> .....	576
<i>L. Casasanto, I. Sag</i>	
<b>Assessing the Structure of Verbal Protocols</b> .....	582
<i>S. Todaro, J. Magliano, K. Millis, D. McNamara, C. Kurby</i>	
<b>Are Three Words All We Need? Recognizing Genre at the Sub-Sentential Level</b> .....	588
<i>P. McCarthy, S. Briner, J. Myers, A. Graesser, D. McNamara</i>	
<b>Syllogistic Reasoning with Generic Premises: The Generic Overgeneralization Effect</b> .....	594
<i>S. Khemlani, S.J. Leslie, S. Glucksberg</i>	



<b>Opponent Process Control in Linked, Dynamical Agents</b> .....	600
<i>Ronnie G. Ward, Robert Ward</i>	
<b>A Computational Model of the Visual Oddity Task</b> .....	606
<i>A. Lovett, K. Lockwood, K. Forbus</i>	
<b>Counting Sheep is a Good Way to Get to Sleep, but the Occasional Aardvark Will Wake You Up: How a Salient Event Improves Performance</b> .....	612
<i>B. Veksler, W.D. Gray</i>	
<b>30th Anniversary Symposia: Cognitive Science: The Past 30 Years and the Next 30 Years</b> .....	618
<i>L. Barsalou</i>	
<b>The Picture-Word Interference Effect is a Stroop Effect After All</b> .....	619
<i>L. van Maanen, H. van Rijn</i>	
<b>Priming and Lexical Interference in Infancy</b> .....	625
<i>S. Style, N. Arias-Trejo, K. Plunkett</i>	
<b>On the Persistence of Structural Priming: Mechanisms of Decay and Influence of Word Forms</b> .....	631
<i>G. Malhotra, M. Pickering, H. Branigan, J. Bednar</i>	
<b>Effect of Global Context on Homophone Ambiguity Resolution</b> .....	637
<i>D. Mirman, J. Magnuson, T. Straus, J. Dixon</i>	
<b>Representational Change and Numerical Estimation: Effect of Progressive Alignment on the Breadth of Transfer</b> .....	643
<i>C. Thompson, J. Opfer</i>	
<b>Timing of Adults' Utterances and Interpretation of Word Meanings in a Discrepant Labeling Situation</b> .....	649
<i>T. Yasuda, H. Kobayashi</i>	
<b>The Structural Alignment and Comparison of Events in Verb Acquisition</b> .....	655
<i>J. Childers</i>	
<b>Will It Float? How Invariance Affects Children's Understanding of Object Density</b> .....	661
<i>H. Kloos</i>	
<b>Understanding Why: The Cognitive Science of Explanation</b> .....	667
<i>T. Lombrozo, S. Sloman, M. Stevens, J.D. Trout, D. Weisberg</i>	
<b>Enhancing Learning Using Adaptive Computerized Tutoring in K-12 Settings</b> .....	669
<i>C. O'Donnell, G. Biswas, B. Gholson, A. Graesser, S. Craig, W. Ward, R. Cole, S. Siler</i>	
<b>Learning to Associate Object Categories and Label Categories: A Self-Organising Model</b> .....	671
<i>J. Mayor, K. Plunkett</i>	
<b>A Probabilistic Incremental Model of Word Learning in the Presence of Referential Uncertainty</b> .....	677
<i>A. Fazly, A. Alishahi, S. Stevenson</i>	
<b>A Connectionist Simulation of Structural Rule Learning in Language Acquisition</b> .....	683
<i>A. Laakso, P. Calvo</i>	
<b>Mutual Exclusivity in Cross-Situational Statistical Learning</b> .....	689
<i>D. Yurovsky, C. Yu</i>	
<b>Syntax and Discourse Constraints Interact at the Level of Structural Representation: Evidence from On-line Sentence Comprehension</b> .....	695
<i>M. Brown, V. Savova, E. Gibson</i>	
<b>Language Abstraction: Consolidation of Language Structure During Sleep</b> .....	701
<i>M. St.Clair, P. Monaghan</i>	

<b>Generalization and Systematicity in Echo State Networks</b> .....	707
<i>S. Frank, M. Čerňanský</i>	
<b>Mechanisms of Verb Inflection – Regular vs. Irregular or Easy vs. Hard?</b> .....	713
<i>G. Westermann, V. Kovic, N. Ruh</i>	
<b>Performing Bayesian Inference with Exemplar Models</b> .....	719
<i>L. Shi, N. Feldman, T. Griffiths</i>	
<b>Learning a Hierarchical Organization of Categories</b> .....	725
<i>S. Verheyen, E. Ameel, T. Rogers, G. Storms</i>	
<b>Modeling Typicality: Extending the Prototype View</b> .....	731
<i>W. Voorspoels, W. Vampaemel, G. Storms</i>	
<b>Principles of Generalization for Learning Sequential Structure in Language</b> .....	737
<i>M. Frank, D. Ichino, J. Tenenbaum</i>	
<b>Statistical Discourse Analysis of Group Problem Solving: Evaluations, Wrong Ideas, Rudeness, Justifications, and Micro-Creativity</b> .....	743
<i>M.M. Chiu</i>	
<b>Upsides and Downsides of Gesturing in Problem Solving</b> .....	749
<i>P. Cushen, J. Wiley</i>	
<b>Compound Analogical Design, or How to Make a Surfboard Disappear</b> .....	755
<i>M. Helms, S. Vattam, A. Goel</i>	
<b>Social Science: Complex Cognition in Early AIDS Research</b> .....	761
<i>K. Lippa, V. Shalin</i>	
<b>Motion Language Shapes People’s Interpretation of Unrelated Ambiguous Figures</b> .....	767
<i>A. Dils, L. Boroditsky</i>	
<b>Does Social Information Influence Sentence Processing?</b> .....	773
<i>L. Casasanto</i>	
<b>The Role of Cognitive Functions in Communication: The Case of Traumatic Brain Injury</b> .....	779
<i>R. Angeleri, F. Bosco, K. Sacco, M. Zettin, L. Colle, B. Bara</i>	
<b>Why Do The Math? The Impact of Calculator Use on Participants’ Actual and Perceived Retention of Arithmetic Facts</b> .....	785
<i>A. Pyke, J. LeFevre, R. Isaacs</i>	
<b>To Understand Your Understanding, You Must Understand What Understanding Means</b> .....	791
<i>J. Wiley, T. Griffin, K. Thiede</i>	
<b>The Role of Deliberate Practice in Expertise: Necessary but Not Sufficient</b> .....	797
<i>F. Gobet</i>	
<b>A Computational Developmental Model of the Implicit False Belief Task</b> .....	798
<i>V. Berthiaume, K. Onishi, T. Schultz</i>	
<b>The Strategy Behind Belief Revision: A Matter of Judging Probability or the Use of Mental Models</b> .....	804
<i>A.G. Wolf, M. Knauff</i>	
<b>Training a Bayesian: Three-and-a-Half-Year-Olds’ Reasoning About Ambiguous Evidence</b> .....	810
<i>E. Bonawitz, A. Fischer, L. Schulz</i>	
<b>Evidence for Generalized Cognitive Search Processes at Multiple Levels in a Hierarchical Problem Solving Task</b> .....	816
<i>T. Hills, R. Goldstone, P. Todd</i>	

<b>The Role of Internal Information in the Spatial Learning Task through Path Integration</b> .....	817
<i>K. Ohtsu</i>	
<b>Situated and Prospective Path Planning: Route Choice in an Urban Environment</b> .....	823
<i>J. Wiener, T. Tenbrink, J. Henschel, C. Hölscher</i>	
<b>Hemispheric Asymmetry in Visual Perception Arises from Differential Encoding Beyond the Sensory Level</b> .....	829
<i>J.H. Hsiao, R. Shahbazi, G. Cottrell</i>	
<b>Can Relationality be Distinguished from Abstractness in Noun Mutability?</b> .....	835
<i>D. Gentner, J. Asmuth</i>	
<b>Tracks in the Mind: Differential Entrenchment of Common and Rare Liturgical and Everyday Multiword Phrases in Religious and Secular Hebrew Speakers</b> .....	841
<i>J. Berant, C. Caldwell-Harris, S. Edelman</i>	
<b>Predicting Information Needs: Adaptive Display in Dynamic Environments</b> .....	847
<i>B. Lowe, M. Jones, M. Tomlinson, M. Howe</i>	
<b>Decoupling of Intuitions and Performance in the Use of Complex Visual Displays</b> .....	853
<i>M. Hegarty, H. Smallman, A. Stull</i>	
<b>Efficient Coding in Visual Short-Term Memory: Evidence for an Information-Limited Capacity</b> .....	859
<i>T. Brady, T. Konkle, G. Alvarez</i>	
<b>Gesturing to Promote Higher-Order Thinking: Cross-Cultural Differences</b> .....	865
<i>L. Richland</i>	
<b>Cultural Mixture Modeling: Identifying Cultural Consensus (and Disagreement) Using Finite Mixture Modeling</b> .....	871
<i>S. Mueller, E. Veinott</i>	
<b>Extending the Limits of Counting in Oceania: Adapting Tools for Numerical Cognition to Cultural Needs</b> .....	877
<i>A. Bender, S. Beller</i>	
<b>Rules and Exemplars in Language Acquisition</b> .....	883
<i>R. Bod, C.L.H. Kam, D. Freudenthal, A. Clark, W. Sakas</i>	
<b>Integrating Cognitive Architectures with External Environments: Approaches and Contributions to Validation</b> .....	885
<i>G. Gunzelmann, R. Wray, A. Pope, B. Best, J. Trafton</i>	
<b>Identifying Sources of Intractability in Cognitive Models: An Illustration using Analogical Structure Mapping</b> .....	887
<i>I. van Rooij, P. Evans, M. Müller, J. Gedge</i>	
<b>Similarity Between Propositional Elements Does Not Always Determine Judgments of Analogical Relatedness</b> .....	893
<i>R. Minervino, N. Oberholzer, M. Trench</i>	
<b>Mapping and Inference in Analogical Problem Solving – As Much as Needed or as Much as Possible?</b> .....	899
<i>E. Wiese, U. Konerding, U. Schmid</i>	
<b>Human Logic in Spatial Reasoning</b> .....	905
<i>M. Ragni</i>	
<b>Speaking Rationally: Uniform Information Density as an Optimal Strategy for Language Production</b> .....	911
<i>A. Frank, T. Jaeger</i>	
<b>What Tunes Accessibility of Referring Expressions in Task-Related Dialogue?</b> .....	917
<i>E.G. Bard, R. Hill, M. Foster</i>	

<b>Anticipatory Eye Movements Mediated by Word-Order Constraints</b> .....	923
<i>P. Engelhardt, M. Xiang, F. Ferreira</i>	
<b>Speakers Communicate Their Perceptual-Motor Experience to Listeners Nonverbally</b> .....	929
<i>S.W. Cook, M. Tanenhaus</i>	
<b>Now You See It, Now You Don't: Verbal But Not Visual Cues Facilitate Visual Object Detection</b> .....	935
<i>G. Lupyan, M. Spivey</i>	
<b>Musical Change Deafness: The Inability to Detect Change in a Non-speech Auditory Domain</b> .....	941
<i>K. Agres, C. Krumhansl</i>	
<b>Picture Perception and the Two Visual Subsystems</b> .....	947
<i>B. Nanay</i>	
<b>Action Anticipation and Interference: A Test of Prospective Gaze</b> .....	953
<i>E. Cannon, A. Woodward</i>	
<b>How Outcomes of Actions Influence Infants' Representation of Those Actions</b> .....	958
<i>L. Oakes, S. Perone, K. Madole</i>	
<b>Thinking by Doing and Doing by Thinking: A Taxonomy of Actions</b> .....	964
<i>H. Neth, T. Müller</i>	
<b>The Pragmatics of Explanation</b> .....	970
<i>S. Chin-Parker, A. Bradner</i>	
<b>Who Framed Roger Rabbit: The Effect of Legal Role and Frame on the Outcome of Civil Disputes</b> .....	976
<i>V. Gilliland, J. Dunn, D. Navarro</i>	
<b>Variation Sets Facilitate Artificial Language Learning</b> .....	982
<i>L. Onnis, H. Waterfall, S. Edelman</i>	
<b>Grounding Word Learning in Multimodal Sensorimotor Interaction</b> .....	988
<i>C. Yu, L.B. Smith, A. Pereira</i>	
<b>What You Learn is What You See: Using Eye Movements to Study Infant Cross-Situational Word Learning</b> .....	994
<i>C. Yu, L.B. Smith</i>	
<b>How Features Create Knowledge of Kinds</b> .....	1000
<i>S. Hidaka, L.B. Smith</i>	
<b>A Fully Analytical Model of the Visual Lexical Decision Task</b> .....	1006
<i>F.M. del Prado Martin</i>	
<b>A Rational Analysis of Confirmation with Deterministic Hypotheses</b> .....	1012
<i>J. Austerweil, T. Griffiths</i>	
<b>Fluency and Psychological Distance</b> .....	1018
<i>D. Oppenheimer, A. Shah, A. Alter</i>	
<b>Optimal Predictions in Everyday Cognition: The Wisdom of Individuals or Crowds?</b> .....	1022
<i>M. Mozer, H. Pashler, H. Homaei</i>	
<b>Implicit Learning and Syntactic Persistence: Surprisal and Cumulativity</b> .....	1028
<i>T. Jaeger, N. Snider</i>	
<b>Revealing Individual Differences in the Iowa Gambling Task</b> .....	1034
<i>L. Newman, T. Polk, S. Preston</i>	
<b>Blocking Effects on Dimensions: How Attentional Focus on Values Can Spill Over to the Dimension Level</b> .....	1040
<i>J. Kaminski, A. Heckler, V. Sloutsky</i>	

<b>Evaluating Systematicity in Neural Networks Through Transformation Combination</b> .....	1046
<i>E. Buz, R. Frank</i>	
<b>Modeling the Acquisition of Statistical Regularities in Tone Sequences</b> .....	1052
<i>A. Hazan, P. Holonowicz, I. Salselas, P. Herrera, H. Purwin, A. Knast, S. Durrant</i>	
<b>Understanding Addictive Behavior on the Iowa Gambling Task Using Reinforcement Learning Framework</b> .....	1058
<i>A. Dezfuli, M. Keramati, H. Ekhtiari, H. Safaei, C. Lucas</i>	
<b>The Function of Causal Explanatory Reasoning in Children</b> .....	1064
<i>C. Legare, S. Gelman, H. Wellman, T. Kushnir</i>	
<b>Assessing Psychological Theories of Causal Meaning and Inference</b> .....	1070
<i>S. Chaigneau, A. Barbey</i>	
<b>The Relationship Between Causal and Counterfactual Reasoning</b> .....	1076
<i>W. Jimenez-Leal, N. Chater</i>	
<b>Learning Causal Models via Progressive Alignment &amp; Qualitative Modeling: A Simulation</b> .....	1082
<i>S. Friedman, K. Forbus</i>	
<b>Causal Priming: How a Language Production Mechanism Guides Representation</b> .....	1088
<i>C. Fausey, L. Boroditsky, N. Snider</i>	
<b>Structural Determinants of Interventions on Causal Systems</b> .....	1094
<i>B. Edwards, R. Burnett, F. Keil</i>	
<b>Removing the Time Crutch: Can Preschoolers Still Make Causal Judgments?</b> .....	1100
<i>H. Kloos, V. Sloutsky</i>	
<b>Thinking Counterfactually – How Controllability Affects the ‘Undoing’ of Causes and Enablers</b> .....	1106
<i>S. Egan, C. Frosch</i>	
<b>Why are People Bad at Detecting Randomness? Because It Is Hard</b> .....	1112
<i>J.J. Williams, T. Griffiths</i>	
<b>Do Causal Beliefs Influence the Hot-Hand and the Gambler’s Fallacy?</b> .....	1118
<i>G. Gronchi, S. Sloman</i>	
<b>Feature Inference and Eyetracking</b> .....	1123
<i>B. Colner, B. Rehder, A. Hoffman</i>	
<b>A Prototype-Exemplars Hybrid Cognitive Model of “Phenomenon of Typicality” in Categorization: A Case Study in Biological Classification</b> .....	1129
<i>F. Gagliardi</i>	
<b>Flexible Attentional Learning in Infancy</b> .....	1135
<i>V. Sloutsky, C. Robinson</i>	

### Volume 3

<b>A Grammar-Based Approach to Visual Category Learning</b> .....	1141
<i>V. Savivam, J. Tenenbaum</i>	
<b>Is Cognitive Activity of Speech Based on Statistical Independence?</b> .....	1147
<i>L. Feng, L. Hansen</i>	
<b>Learning Within-Category Attribute Correlations in a One-Attribute Visual Search Classification Paradigm</b> .....	1153
<i>G. Giguère, G. Lacroix, G. Howell, S. Larochelle</i>	
<b>Regulatory Fit Effects in a Nonlinearly Separable Category Learning Task</b> .....	1159
<i>R. Nadler, J. Minda, P-S. Lin</i>	

<b>How Folk Psychology Has Determined Evolutionary Theories About Altruism: An Alternative Perspective Based on Buddhist Theory</b> .....	1165
<i>R.L. West</i>	
<b>Disjunction Effect in Prisoners Dilemma: Evidences from an Eye-tracking Study</b> .....	1168
<i>E. Hristova, M. Grinberg</i>	
<b>Group Solution Assembly in Response to a Simulated Emergency</b> .....	1174
<i>D. Mendonça, Y. Hu</i>	
<b>Is It More Wrong to Care Less? The Effects of “More” and “Less” on the Quantity (In)Sensitivity of Protected Values</b> .....	1180
<i>S. Sachdeva, D. Medin</i>	
<b>Stages in the Evolution of Ethnocentrism</b> .....	1185
<i>T. Schultz, M. Hartshorn, R. Hammond</i>	
<b>Mixed Effects of Distractor Tasks on Incubation</b> .....	1191
<i>S. Hélie, L. Xiong, Ron Sun</i>	
<b>Applying Comparison-Induced Distortion Theory to Body-Size Judgments</b> .....	1197
<i>J. Choplin</i>	
<b>The Role of Mechanism in Expectations About the Future: Luck and Skill</b> .....	1203
<i>B. Burns, C. Cox, A. Sheridan</i>	
<b>Phonological Priming in Infancy</b> .....	1209
<i>K. Plunkett, N. Mani</i>	
<b>Defining the Dimensions of the Human Semantic Space</b> .....	1215
<i>W.D. Gray, V. Veksler, R. Govostes</i>	
<b>Complex Meanings First? On the Priority of Nouns in Language Acquisition and Evolution</b> .....	1221
<i>M. Werning</i>	
<b>Incremental Syntactic Planning Across Clauses</b> .....	1227
<i>C. Gómez Gallo, T. Jaeger, R. Smyth</i>	
<b>Permutations as a Means to Encode Order in Word Space</b> .....	1233
<i>M. Sahlgren, A. Holst, P. Kanerva</i>	
<b>Beyond Monosyllables: Word Length and Spoken Word Recognition</b> .....	1239
<i>T. Strauss, J. Magnuson</i>	
<b>How Fundamental is Embodiment to Language Comprehension? Constraints on Embodied Cognition</b> .....	1245
<i>M. Louwerse, P. Jeuniaux</i>	
<b>Connecting Phonological Encoding To Articulation - Is Cascading Required? A Computational Investigation</b> .....	1251
<i>H.S. Moat, M.Corky, R. Hartsuiker</i>	
<b>Modifying the Suffixation Preference Across Domains</b> .....	1257
<i>J. Hupp, V. Sloutsky, P. Culicover</i>	
<b>Meaning Construction, Spatial Language, and Past History</b> .....	1263
<i>R. O’Ceallaigh, K. Coventry</i>	
<b>Early Lexical Development: A Corpus-Based Study of Three Languages</b> .....	1269
<i>S. Liu, X. Zhao, P. Li</i>	
<b>Locative Case Marking and Abstraction in Child Hungarian</b> .....	1275
<i>A. Fidler, A. Babarczy</i>	
<b>Conceptual Knowledge of Counting: How Relevant is Order Irrelevance?</b> .....	1281
<i>J. LeFevre, J. Bisanz, S. Skwarchuk, B. Smith-Chant, L. Fast, T. Shanahan, M. Penner-Wilger, W. Deslauriers, R. Watchorn</i>	

<b>An Evaluation of the Testing Effect with Third Grade Students</b> .....	1287
<i>C. Brojde, B. Wise</i>	
<b>The Expression of Affect in Mandarin Parent-Child Conversation</b> .....	1293
<i>C-C. Huang</i>	
<b>Use of Referential Context in Children's Language Processing</b> .....	1299
<i>Y.T. Huang, J. Snedeker</i>	
<b>Controlling Biases in Demanding Tasks</b> .....	1305
<i>A. Heuvelink, J. Treur</i>	
<b>From Modeler-free Individual Data Fitting to 3-D Parametric Prediction Landscapes: A Research Expedition</b> .....	1311
<i>S. Kase, F. Ritter, M. Schoelles</i>	
<b>Hierarchical Bayesian Modeling of Individual Differences in Texture Discrimination</b> .....	1317
<i>T. Rubin, M.D. Lee, C. Chubb</i>	
<b>MoralDM: A Computational Model of Moral Decision-Making</b> .....	1323
<i>M. Dehghani, E. Tomai, K. Forbus, R. Iliev, M. Klenk</i>	
<b>Bellwethers and the Emergence of Trends in Online Communities</b> .....	1329
<i>Y. Sakamoto, E. Sadlon, J. Nickerson</i>	
<b>Bayesian Columnar Networks for Grounded Cognitive Systems</b> .....	1335
<i>F. Röhrbein, J. Eggert, E. Körner</i>	
<b>A Bayesian Approach to Diffusion Process Models of Decision-Making</b> .....	1341
<i>J. Vandekerckhove, F. Tuerlinckx, M.D. Lee</i>	
<b>A Formal Analysis of Cultural Evolution by Replacement</b> .....	1347
<i>J. Xu, F. Realí, T. Griffiths</i>	
<b>More than 8,192 Ways to Skin a Cat: Modeling Behavior in Multidimensional Strategy Spaces</b> .....	1353
<i>M.R. Smith, R. Lewis, A. Howes, A. Chu, C. Green</i>	
<b>Theory-based Social Goal Inference</b> .....	1359
<i>C.L. Baker, N. Goodman, J. Tenenbaum</i>	
<b>Dynamical Models and Mechanistic Explanations</b> .....	1365
<i>C. Zednik</i>	
<b>Response Time Distributions in Partially-Coherent Quantum Walk Models for Simple Decision Tasks</b> .....	1371
<i>I. Fuss, D. Navarro</i>	
<b>EVOC: A Computer Model of the Evolution of Culture</b> .....	1377
<i>L. Gabora</i>	
<b>Funding Opportunities for Cognitive Scientists Through the Institute of Education Sciences</b> .....	1383
<i>C. O'Donnell, E. Doolittle</i>	
<b>Increased Availability of Arithmetic Facts Following Working Memory Processing</b> .....	1384
<i>C. Was, J. Paternite, R. Wooley</i>	
<b>Mutual Influences of Interlimb Coordination Dynamics and Semantic Retrieval Dynamics Parameters During Dual Task Performance</b> .....	1390
<i>A. Kiefer, B. Christopher, K. Shockley, M. Riley</i>	
<b>Memory in a Messy Domain: Expertise and Memory for Mental Health Disorder Categories</b> .....	1396
<i>J.K. Marsh</i>	
<b>Does Memory Mediate Susceptibility to Cognitive Biases? Implications of the Decision-by-Sampling Theory</b> .....	1402
<i>B. Bruza, M. Welsh, D. Navarro</i>	

<b>Remembering Beliefs</b> .....	1408
<i>S. Devitt</i>	
<b>Effects of Divided Attention in the Word Fragment Completion Task with Unique or Multiple Solutions</b> .....	1414
<i>P. Spataro, C. Rossi-Arnaud, P. Pazzano</i>	
<b>Bottom-Up Model of Strategy Selection</b> .....	1420
<i>Smoleń, S. Wichary</i>	
<b>The Role of Attention in Nonspecific Preparation</b> .....	1425
<i>R. van Lambalgen, S. Los</i>	
<b>Bipartite Structure of Working Memory</b> .....	1431
<i>A. Chuderski, Z. Stettner, J. Orzechowski</i>	
<b>Developing a Magic Number Four, Plus or Minus Two: The Dynamic Field Theory Reveals Why Visual Working Memory Capacity Estimates Differ Across Tasks and Development</b> .....	1437
<i>V. Simmering, J. Spencer</i>	
<b>A Model of Time-Estimation Considering Working Memory Demands</b> .....	1443
<i>N. Pape, L. Urbas</i>	
<b>Stretching to Learn: Ambiguous Evidence and Variability in Preschoolers' Exploratory Play</b> .....	1449
<i>H. Gweon, L. Schulz</i>	
<b>Children's Attention to Property Likelihood as a Guide to Property Projection</b> .....	1454
<i>C. Lawson, A. Fisher</i>	
<b>Preschoolers Use Sampling Information to Infer the Preferences of Others</b> .....	1459
<i>T. Kushnir, F. Xu, H. Wellman</i>	
<b>Using Perceptually Rich Objects to Help Children Represent Number: Established Knowledge Counts</b> .....	1463
<i>L. Petersen, N. McNeil</i>	
<b>Children's Counterfactual Reasoning Strategy in Belief Contravening Problems</b> .....	1469
<i>N. Van Hoeck, K. Dieussaert, R. Revlin</i>	
<b>A Broken Fork in the Hand is Worth Two in the Grammar: A Spatio-Temporal Bias in Children's Interpretation of Quantifiers and Plural Nouns</b> .....	1475
<i>V. Melgoza, A. Pogue, D. Barner</i>	
<b>Bridging the Gap: Children's Developing Inferences About Objects' Labels and Insides from Causality-at-a-Distance</b> .....	1481
<i>D. Buchanan, D. Sobel</i>	
<b>Can Analogy Help Children Make Transitive Inference?</b> .....	1487
<i>M. Mutafchieva, B. Kokinov</i>	
<b>Easy or Not Easy: Young Children's False Belief Understanding in Communicative Situations</b> .....	1493
<i>K. Sato</i>	
<b>Theory Acquisition and the Language of Thought</b> .....	1498
<i>C. Kemp, N. Goodman, J. Tenenbaum</i>	
<b>Cognitively Based Assessment of, for and as Learning: A 21<sup>st</sup> Century Approach for Assessing Reading Competency</b> .....	1504
<i>T. O'Reilly, K. Sheehan</i>	
<b>A Bayesian Model of the Acquisition of Compositional Semantics</b> .....	1510
<i>S. Plantadosi, N. Goodman, J. Tenenbaum</i>	
<b>Analysing Problem Structuring in a Collaborative Explanation Dialogue to Capture Conceptual Change</b> .....	1516
<i>M. Tscholl, J. Dowell</i>	



<b>Teaching Games: Statistical Sampling Assumptions for Learning in Pedagogical Situations</b> .....	1522
<i>P. Shafto, N. Goodman</i>	
<b>A Connectionist Model of Artificial Grammar Learning: Simulations Based on Higham (1997) Indexes of Knowledge Representa</b> .....	1528
<i>M. Wierzchon, J. Barbasz</i>	
<b>An Alternative View of the Relation between Finger Gnosis and Math Ability: Redeployment of Finger Representations for the Representation of Number</b> .....	1534
<i>M. Penner-Wilger, M.L. Anderson</i>	
<b>Learning Composable Signals for a Cognitive Substrate</b> .....	1540
<i>J. Beal</i>	
<b>Learning Abstract Principles through Principle-Case Comparison</b> .....	1546
<i>J. Colhoun, D. Gentner, J. Lowenstein</i>	
<b>A Model-based Approach to Second-Language Learning of Grammatical Constructions</b> .....	1552
<i>G. Frishkoff, L. Levin, P. Pavlik, K. Idemaru, N. deJong</i>	
<b>Conceptual Coherence in Philosophy Education - Visualizing Initial Conceptions of Philosophy Students with Self-Organizing Maps</b> .....	1558
<i>A. Rusanen, O. Lappi, T. Honkela, M. Nederström</i>	
<b>Knowledge Integration in Creative Problem Solving</b> .....	1564
<i>S. Hélié, R. Sun</i>	
<b>Physicians' Use of Deep Features: Expertise Differences in Patient Categorization</b> .....	1570
<i>S. Devantier, J. Minda, W. Hadarra, M. Goldszmidt</i>	
<b>How Expert Tutors Revise Tutoring Policies and Strategies When Students Make Mistakes</b> .....	1576
<i>E. Lulis, S. Argamon, M. Evens</i>	
<b>Development of Conceptual Understanding and Problem Solving Expertise in Chemistry</b> .....	1582
<i>J. Davenport, D. Yaron, K. Koedinger, D. Klahr</i>	
<b>Conditions for Selection and Conceptualization in Diagrams and Sentences</b> .....	1588
<i>R. Barone, P.C-H. Cheng</i>	
<b>Does the Use of Diagrams as Communication Tools Result in their Internalization as Personal Tools for Problem Solving?</b> .....	1594
<i>Y. Uesaka, E. Manalo</i>	
<b>Productive Failure in Mathematical Problem Solving</b> .....	1600
<i>M. Kapur, L. Dickson, T.P. Yhing</i>	
<b>A Functional Taxonomy of Discourse Moves for Conversation Management During Cognitive Clinical Interviews about Scientific Phenomena</b> .....	1606
<i>V.R. Lee, R. Russ, B. Sherin</i>	
<b>“Is the Missing 1 Dollar in the Cheater’s Hand?” The Cheater Detection Module as a Constraint within Insight Problem Solving</b> .....	1612
<i>K. Abe, M. Nakagawa</i>	
<b>Diagram Interaction During Intelligent Tutoring in Geometry: Support for Knowledge Retention and Deep Understanding</b> .....	1618
<i>K. Butcher, V. Alevan</i>	
<b>Extending and Testing the Bayesian Theory of Generalization</b> .....	1624
<i>D. Navarro, M.D. Lee, M. Dry, B. Schultz</i>	
<b>Laws and Makeups in Context-Dependent Reduction Relations</b> .....	1630
<i>J. Treur</i>	

<b>Building Production Systems with Realistic Spiking Neurons</b> .....	1636
<i>T. Stewart, C. Eliasmith</i>	
<b>Computational Analysis of Graphic Generation: Effects of Surface and Structural Similarity</b> .....	1642
<i>J. Morita</i>	
<b>The Fragmented Folk: More Evidence of Stable Individual Differences in Moral Judgments and Folk Intuitions</b> .....	1648
<i>A. Feltz, E. Cokely</i>	
<b>Inhibition Needs No Negativity: Negative Links in the Construction-Integration Model</b> .....	1654
<i>M. Rowe, D. McNamara</i>	
<b>When Do We Stop Calling Them Mirror Neurons?</b> .....	1660
<i>S. Uithol, W. Haselager, H. Bekkering</i>	
<b>Mental Space Mapping Applied to Argument</b> .....	1666
<i>M. Guarini</i>	
<b>The Bayesian Logic of Conjunction Fallacies: Probability Rating Tasks and Pattern-Sensitivity</b> .....	1672
<i>M. von Sydow</i>	
<b>A Parallel Distributed Processing Model of Accessibility of Attachment Knowledge</b> .....	1678
<i>R. Thrush, D.C. Plant</i>	
<b>Sadder but Wiser Induction? Situation-Personality Interaction Revealed by an Inductive Reasoning Model</b> .....	1684
<i>K. Sakamoto, M. Nakagawa</i>	
<b>Systematic Comparison of Semantic Models on Human Similarity Rating Data: The Effectiveness of Subspacing</b> .....	1690
<i>B.P. Stone, S. Dennis, P. Kwantes</i>	
<b>Specific Impairments in Cognitive Development: A Dynamical Systems Approach</b> .....	1696
<i>F. Baughman, M.S.C. Thomas</i>	
<b>Finding Feature Representations of Stimuli: Combining Feature Generation and Similarity Judgment Tasks</b> .....	1702
<i>M. Zeigenfuse, M.D. Lee</i>	

## Volume 4

<b>Modeling Two Kinds of Reasoning</b> .....	1708
<i>E. Heit, C. Rotello</i>	
<b>Presentation Modality in Age of Acquisition Rating Reflects Mode of Acquired Knowledge: Evidence from Category-Specific Effects</b> .....	1714
<i>A. Janyan, E. Andonova</i>	
<b>Top-Down and Bottom-Up Processes in Web Search Navigation</b> .....	1720
<i>S-C. Wu, C.S. Miller</i>	
<b>Classifying Objects Based on Their Visual Similarity to Target Categories</b> .....	1726
<i>W. Zhang, D. Samaras, G. Zelinsky</i>	
<b>Category Labels Highlight Feature Interrelatedness in Similarity Judgment</b> .....	1732
<i>N-Y. Yu, T. Yamauchi, J. Schumacher</i>	
<b>Autonomous Perceptual Feature Extraction in a Topology-Constrained Architecture</b> .....	1738
<i>S. Chartier, G. Giguère</i>	
<b>The Effect of the Internal Structure of Categories on Perception</b> .....	1744
<i>T. Gureckis, R. Goldstone</i>	

<b>Does Functional Knowledge Have a Privileged Status in the Speeded Computation of Word Meaning?</b> .....	1750
<i>A. Le, R. Rondina II, G. Cree</i>	
<b>Representational Formalism in Which Syntax and Semantics Are Congruent: Towards the Resolution of Searle's Chinese Room Challenge</b> .....	1756
<i>L. Goldfarb</i>	
<b>Vacillation and Hesitation in Category Rating: Evidence from PC Cursor Trajectories</b> .....	1762
<i>K. Shiina</i>	
<b>Vocabulary Development in English and Chinese: A Comparative Study with Self-Organizing Neural Networks</b> .....	1768
<i>X. Zhao, P. Li</i>	
<b>LSA as a Measure of Coherence in Second Language Natural Discourse</b> .....	1774
<i>S. Crossley, T. Salsbury, P. McCarthy, D. McNamara</i>	
<b>Sound Symbolism in Word Learning</b> .....	1780
<i>L. Nygaard, A.E. Cook, L. Namy</i>	
<b>A Stochastic Model for the Vocabulary Explosion</b> .....	1786
<i>C. Mitchell, B. McMurray</i>	
<b>Learning Words from Context</b> .....	1792
<i>V. Sloutsky, X. Yao</i>	
<b>Prior Knowledge Bootstraps Cross-Situational Learning</b> .....	1797
<i>K.A. Klein, C. Yu, R. Shiffrin</i>	
<b>Inferring a Probabilistic Model of Semantic Memory from Word Association Norms</b> .....	1803
<i>M. Andrews, D. Vinson, G. Vigliocco</i>	
<b>On the Utility of Conjoint and Compositional Frames and Utterance Boundaries as Predictors of Word Categories</b> .....	1809
<i>D. Freudenthal, J. Pine, F. Gobet</i>	
<b>Acquisition and Representation of Grammatical Categories: Grammatical Gender in a Connectionist Network</b> .....	1815
<i>J. Mirković, M. Seidenberg, M.C. MacDonald</i>	
<b>The Amorphous Fixation Measure Revisited: with Applications to Autism</b> .....	1821
<i>F. Shic, K. Chawarska, B. Scassellati</i>	
<b>A Graphical Chunk Production Model: Evaluation Using Graphical Protocol Analysis With Artificial Sentences</b> .....	1827
<i>P.C-H. Cheng, H. Rojas-Anaya</i>	
<b>When Do Standard Approaches for Measuring Vocabulary Difficulty, Syntactic Complexity and Referential Cohesion Yield Biased Estimates of Text Difficulty?</b> .....	1833
<i>K. Sheehan, I. Kostin, Y. Futagi</i>	
<b>The Interaction Between Information and Intonation Structure: Prosodic Marking of Theme and Rheme</b> .....	1839
<i>M. Louwerse, P. Jeuniaux, B. Zhang, J. Wu, M. Hoque</i>	
<b>Perception of Direction and its Influence on Geometric Discoveries</b> .....	1845
<i>F. Lara-Dammer, D. Hofstadter</i>	
<b>One of These Greebles is Not Like the Others: Semi-Supervised Models for Similarity Structures</b> .....	1850
<i>R. Stephens, D. Navarro</i>	
<b>A Fast Computational Model of Analogical Retrieval (and Mapping)</b> .....	1856
<i>D. O'Keefe, F. Costello</i>	

<b>Toward a Model of Differential Influence in Discussions: Negotiating Quality, Authority, and Access Within a Heated Student Argument</b> .....	1862
<i>R. Engle, J. Langer-Osuna, M. McKinney de Royston</i>	
<b>Individual Differences in Sustained Vigilant Attention: Insights from Computational Cognitive Modeling</b> .....	1868
<i>G. Gunzelmann, L.R. Moore Jr., K. Gluck, H.P.A. Van Dongen, D. Dinges</i>	
<b>The Integration of Spatial Information Across Different Perspectives</b> .....	1874
<i>J. Wiener, T. Meilinger, A. Berthoz</i>	
<b>How Visual Information Affects a Spatial Task</b> .....	1880
<i>P. Khooshabeh, M. Hegarty</i>	
<b>Around the World in 80 Steps Or How to Represent Space from Within</b> .....	1886
<i>B. Milligan, J. Luo</i>	
<b>Faith: Serving Emotional Epistemic-Goals Rather than Evidence-Coherence</b> .....	1892
<i>T. Griffin</i>	
<b>Bayesian Modeling of Human Sequential Decision-Making on the Multi-Armed Bandit Problem</b> .....	1898
<i>D. Acuna, P. Schrater</i>	
<b>Investigating Distributed Decisions Using Bandit Problem Environments</b> .....	1904
<i>S.K.M. Yi</i>	
<b>Mistaking the Instance for the Rule: A Critical Analysis of the Truth-table Paradigm</b> .....	1910
<i>W. Schroyens</i>	
<b>Activation or Inhibition? Why Reasoners are Not Blind for Alternative Explanations</b> .....	1916
<i>K. Mehlhorn, M. Baumann, F. Bocklisch</i>	
<b>Ageing, Plasticity, and Cognitive Reserve in Connectionist Networks</b> .....	1922
<i>M.S.C. Thomas</i>	
<b>Modeling Ancient and Modern Arithmetic Practices: Addition and Multiplication with Arabic and Roman Numerals</b> .....	1928
<i>D. Schlimm, H. Neth</i>	
<b>Deontic Reasoning Squared</b> .....	1934
<i>S. Beller</i>	
<b>How the Appearance of an Operator Affects its Formal Precedence</b> .....	1940
<i>D. Landy, M.N. Jones, R. Goldstone</i>	
<b>A Critical Review of Thinking About What is True, Possible and Irrelevant in Reasoning from or Reasoning About Conditional Propositions</b> .....	1946
<i>W. Schroyens</i>	
<b>Goal-Driven Hypothesis Testing in a Rule Discovery Task</b> .....	1952
<i>F. Vallée-Tourangeau, T. Payton</i>	
<b>Illusory Inferences about Embedded Disjunctions</b> .....	1958
<i>S. Khemlani, P. Johnson-Laird</i>	
<b>Coincidences and the Encounter Problem: A Formal Account</b> .....	1964
<i>J-L. Dessalles</i>	
<b>Complex-Arithmetic Problem Solving: Differences among Belgian, Canadian, and Chinese Participants</b> .....	1970
<i>I. Imbo, J. LeFevre</i>	
<b>Is it Better to Give Than to Receive? The Assistance Dilemma as a Fundamental Unsolved Problem in the Cognitive Science of Learning and Instruction</b> .....	1976
<i>K. Koedinger, P. Pavlik, B. McLaren, V. Alevan</i>	

<b>Concepts are Not “Webs of Sensation”: Evidence from Motion Words</b> .....	1982
<i>M. Bedny, A. Caramazza, E. Grossman, A. Pascual-Leone, R. Saxe</i>	
<b>An ACT-R Representation of Information Processing in Autism</b> .....	1988
<i>M. Matessa</i>	
<b>When and How Often Should Worked Examples be Given to Students? New Results and a Summary of the Current State of Research</b> .....	1994
<i>B. McLaren, S-J. Lim, K. Koedinger</i>	
<b>Category Properties and the Category-Order Effect</b> .....	2000
<i>J. Schoenherr, R. Thomson</i>	
<b>Prosodic Correlates of Linguistic and Extra-Linguistic Information in Dutch</b> .....	2006
<i>D. Dimitrova, G. Redeker, M. Egg, J. Hoeks</i>	
<b>Individual Differences in Language Processing: An Embodied Approach</b> .....	2012
<i>X. Xu</i>	
<b>Reversed Concreteness Effect and Differentiated Cognate Processing Determined by Direction of Translation and L2 Proficiency</b> .....	2018
<i>M. Hristova, A. Janyan</i>	
<b>A Single-Mechanism Dual-Route Model of German Verb Inflection</b> .....	2024
<i>N. Ruh, G. Westermann</i>	
<b>New Perspective for Verb Learning</b> .....	2030
<i>H. Yoshida, L.B. Smith, B. Weisinger</i>	
<b>Online Expectations for Verbal Arguments Conditional on Event Knowledge</b> .....	2034
<i>K. Bicknell, J. Elman, M. Hare, K. McRae, M. Kutas</i>	
<b>Event Knowledge vs. Verb Knowledge</b> .....	2040
<i>J. Willits, R. Sussman, M. Amato</i>	
<b>Identifying Emotional Characteristics from Short Blog Texts</b> .....	2046
<i>A. Gill, R.M. French, D. Gergle, J. Oberlander</i>	
<b>Hypothetical Drawing in Embodied Spatial Reasoning</b> .....	2052
<i>A. Shimojima, Y. Katagiri</i>	
<b>On the Path to Understanding the On-line Processing of Grammatical Aspect</b> .....	2058
<i>S.E. Anderson, T. Matlock, C. Fausey, M. Spivey</i>	
<b>Using Diagrams to Design Information Systems</b> .....	2064
<i>J. Corter, J. Nickerson, B. Tversky, D. Zahner, Y.J. Rho</i>	
<b>Comparing the Utility of Pairwise and Feature-Derived Similarity Measures for Generating Spatial Representations of Semantic Concepts</b> .....	2070
<i>M. Dry, G. Storms</i>	
<b>The Influence of Perceptual Difficulty on Family Resemblance Sorting</b> .....	2076
<i>F. Milton, A. Wills</i>	
<b>A Model of Language Processing and Spatial Reasoning Using Skill Acquisition to Situate Action</b> .....	2082
<i>S.A. Douglas, J. Anderson</i>	
<b>The Thermal Qualities of Substance: A Cross-Cultural Account</b> .....	2088
<i>S. Narayanan</i>	
<b>Expertise in a Map Reading Task: The Role of Schemas in the Processing of Topographical Relief Information</b> .....	2094
<i>R. Kent, P.C-H. Kent</i>	
<b>A Working Memory Simulator for Computational Estimation of Cognitive During Learning</b> .....	2100
<i>F. Courtemanche, A. Mayers, M. Najjar</i>	

<b>Memory Processes in Perceptual Decision Making</b> .....	2106
<i>M. Saggat, R. Miiikkulainen, D. Schuyet</i>	
<b>Practice Effects on Interruption Tolerance in Algebraic Problem-Solving</b> .....	2112
<i>D. Woelki, A. Oulasvirta, J. Kiefer, R. Lischke</i>	
<b>Computational Modelling of Mental Imagery in Chess: A Sensitivity Analysis</b> .....	2118
<i>F. Gobet, A. Waters</i>	
<b>Investigating Limited Perception Effects from a Cognitive Science Perspective</b> .....	2124
<i>E. Alkhalifa</i>	
<b>Can Unsuccessful Tests Enhance Learning?</b> .....	2129
<i>L. Richland, L.S. Kao, N. Kornell</i>	
<b>From List Learning to Semantic Knowledge: Search and Learning of Associative Memory</b> .....	2135
<i>G.E. Cox, J.I. Harbison, E. Davelaar</i>	
<b>Does a Lack of Contiguity with Visual Text Cause the Modality Effect in Multimedia Learning?</b> .....	2141
<i>A. Schueler, K. Scheiter, P. Gerjets, R. Rummer</i>	
<b>Adolescents' Use of Multiple Representations of Information in Self-Regulated and Externally-Regulated Learning with Hypermedia</b> .....	2147
<i>A. Witherspoon, R. Azevedo, G. Lewis</i>	
<b>Are Self-Explaining and Coached Problem Solving More Effective When Done by Pairs of Students Than Alone?</b> .....	2153
<i>R. Hausmann, B. van de Sande, K. VanLehn</i>	
<b>The Effects of Feedback Elaboration on the Giver of Feedback</b> .....	2159
<i>R. Wooley, C. Was, C. Schunn, D. Dalton</i>	
<b>Using Teachable Agent Feedback to Support Effective Learning-by-Teaching</b> .....	2165
<i>R. Roscoe, J. Wagster</i>	
<b>Impact of the 2D and 3D Vision on the Learning of Fine Motor Skills According to the Instrumental Dimension: Implications for Training in Minimal Invasive Surgery</b> .....	2171
<i>A. Blavier, A. Nyssen</i>	
<b>Incremental Syntactic Disambiguation Using Depicted Events: Plausibility, Co-Presence and Dynamic Presentation</b> .....	2177
<i>E. Ellsiepen, P. Knoeferle, M. Crocker</i>	
<b>Adapting Referring Expressions to the Task Environment</b> .....	2183
<i>M. Guhe, E. Bard</i>	
<b>Active Object Exploration in Toddlers and its Role in Visual Object Recognition</b> .....	2189
<i>A. Pereira, K. James, S.S. Jones, L.B. Smith</i>	
<b>The Task Structures the Response: Reference Frame Alignment in Toddlers' Emerging Object Search Strategies</b> .....	2195
<i>L. Perry, L. Samuelson, J. Spencer</i>	
<b>Cultural Differences in Cognitive Processing Style: Evidence from Eye Movements During Scene Processing</b> .....	2201
<i>Z. Liu, M. Daneman, E. Reingold</i>	
<b>Remembering when Words are Mutually Exclusive</b> .....	2206
<i>E. Mather, K. Plunkett</i>	
<b>Seeing Heaviness</b> .....	2212
<i>M. Streit, K. Shockley, M. Riley</i>	
<b>Cascade Effect in Perceiving Onset Timings of Others' Responses and Feeling about Communication</b> .....	2217
<i>Y. Yoshikawa, K. Yamauchi, I. Ishiguro</i>	

<b>Social Responses to Collaborator: Dilemma Game with Human and Computer Agent</b> .....	2223
<i>K. Miwa, H. Terai, S. Hirose</i>	
<b>Tuning in to Another Agent’s Action Capabilities</b> .....	2229
<i>T. Davis, V. Ramenzoni, K. Shockley, M. Riley</i>	
<b>Motion Behavior and its Influence on Human-likeness in an Android Robot</b> .....	2235
<i>M. Shimada, H. Ishiguro</i>	
<b>Motor Dynamics of Task Switching</b> .....	2241
<i>N. Hindy, M. Spivey</i>	
<b>The Difference in the Manner of Interacting with a Moving Robot Influences Animacy Perception</b> .....	2247
<i>H. Fukuda, K. Ueda</i>	
<b>Introducing Emotions in an Analogy-Making Model</b> .....	2252
<i>I. Vankov, K. Kiryazov, M. Grinberg</i>	
<b>People’s Interpretations of Agents’ Attitude from Artificial Sounds Expressed by Agents with Different Appearances</b> .....	2258
<i>T. Komatsu, S. Yamada</i>	
<b>A Robot’s Experience of Another Robot: Simulation</b> .....	2264
<i>T. Bosse, J. Hoorn, M. Pontier, G. Siddiqui</i>	
<b>A Robot’s Experience of its User: Theory</b> .....	2270
<i>J. Hoorn</i>	

## Author Index