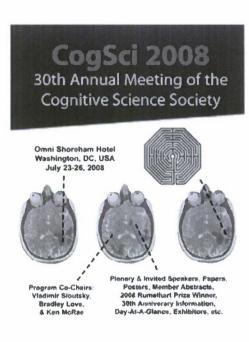
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						ed 295 student registrations (with 6
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## Introduction



CogSci 2008 is the 30th Annual Conference of the Cognitive Science Society. The 2008 Annual Conference has attracted more than 500 submissions from across the world, with the program featuring multiple symposia, talks, and posters representing many research themes and approaches within Cognitive Science. Each year, the Annual Conference of the Cognitive Science Society features a particular area of study. The theme of CogSci 2008 is The Development and Decline of Cognitive Function. This theme highlights the rise of cognitive function in the course of normal development and its decline and involution as a result of brain damage or We believe that understanding normal aging. development and decline of cognitive function is critical for understanding mature well-functioning cognition. year's theme is reflected in the selection of the two plenary speakers, Linda Smith and David Plaut, whose research

exemplifies the theme of the conference. The program will feature several additional important events. First, there will be a symposium honoring the 2008 Rumelhart Prize winner, Shimon Ullman, as well as Shimon's talk. There will also be an announcement of the 2009 Rumelhart Prize winner. In addition, in 2008 the Cognitive Science Society is marking its 30<sup>th</sup> Anniversary – that's right our society is about to enter middle age! The 30<sup>th</sup> Anniversary will be marked by an invited symposium organized by Larry Barsalou. It will consist of two parts, focusing on the trajectories of disciplines and perspectives within Cognitive Science over the past 30 years. The 30<sup>th</sup> Anniversary Symposium will bring together many of those who were there at the beginning of the Society and who are today leaders in the field of cognitive science.

The 30th Annual Conference will be held on July 23-26, 2008 in The Omni Shoreham Hotel in Washington, DC. Washington is the capital of the United States and the home of an extraordinary number of historical monuments, the Smithsonian Institute, and numerous museums for the arts and the natural sciences. The conference will be co-located with the Annual Meeting of the Society for Mathematical Psychology (http://www.cogs.indiana.edu/socmathpsych).

In total, 515 paper submissions were received, of which 383 were accepted as 6-page papers in the Proceedings. These include 166 (32.29%) papers scheduled for oral presentation, and 217 (42.21%) for poster presentation. There were also 6 symposia and 13 publication based talks accepted as oral presentations. In addition, 165 member abstracts were accepted for poster presentation. Finally, there will be 10 tutorials and 2 workshops offered on July 23, the day before the main conference.

Organizing the conference is a large undertaking, involving a tremendous amount of work for an extended period of time. It could not have been done without the help of many people. Primary thanks go to Kevin Gluck, the Cognitive Science Society Conference Officer. Kevin took on the responsibility of organizing the CogSci conference every year in order to have more continuity across

conferences and to improve long-range planning. Kevin does a large part of that organization and planning. Many thanks go to Mike Mozer, CogSci 2008 Event Chair - his insight and sage advice have been greatly appreciated. Simon Dennis has been instrumental in bringing advances in cognitive science to scheduling the conference. For the first time in the history of the Society the scientific program was created by an LSA-based algorithm rather than by human beings - go Deep Blue! Jennifer Wiley did a fabulous job communicating to federal funding agencies that the 30th Annual Conference of the Cognitive Science Society is a worthy endeavor, whereas Niels Taatgen selected recipients of the multiple awards given by the Society. Thanks are also due to the 9 members of the Organizing Committee, for managing various aspects of the conference; the 79 members of the Program Committee, for their critical work in the review process; and the 591 reviewers, for providing thorough and helpful reviews. See the listings of these committees on subsequent pages. In addition, we would like to thank James Stewart, for quickly diagnosing and fixing problems arising from the submission/reviewing software, Chris McNorgan for managing the conference website, and Deborah Gruber, the Society's Business Manager, for contributing to all aspects of the conference planning and preparation. Thanks are also due to all of the generous sponsors for their support of the conference, awards, workshops and tutorials, and for supporting student participation through reduced registration fees and travel support. We specifically acknowledge the Robert J. Glushko and Pamela Samuelson Foundation, the National Science Foundation, Air Force Research Laboratory, the Institute of Education Sciences of the US Department of Education, Air Force Office of Scientific Research, Cognitive Sciences Branch at the Army Research Laboratory - Human Research and Engineering Directorate, Office of Naval Research, Elsevier, the Cognitive Science Society, as well as to the University of Illinois at Chicago and Arizona State University Polytechnic for serving as the institutional sponsors for the federal grants supporting this conference. And above all, we would like to thank all the authors, the presenters, and the attendees of CogSci08 – without you there would have been no conference. Have a great 2008 conference and have fun in the Capital City!

### CogSci 2008 Organizing Committee

CogSci 2008 Program Co-Chairs: Bradley Love, Ken McRae, and Vladimir Sloutsky

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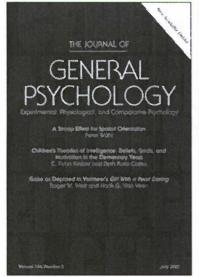
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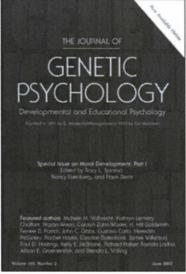
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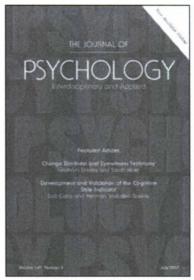
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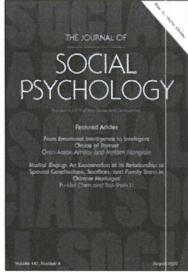
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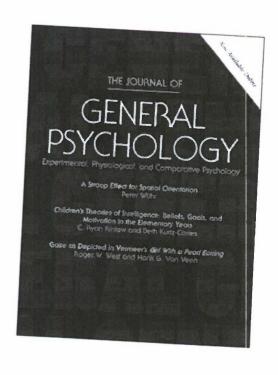
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\* Please be sure to visit the Heldref table at the exihibit Hall.



#### 2008 Paper Awards

#### Marr Prize

The Marr Prize, named in honor of the late David Marr, is awarded to the best student paper at the conference. All student first authors were eligible for the Marr Prize for the best student paper. The Marr Prize includes an honorarium of \$1,000 and is co-sponsored by The Cognitive Science Society and Elsevier.

The winner of the 2008 Marr Prize for Best Student Paper is:

Michael Frank, Evelina Fedorenko, Edward Gibson (see page 19 of the program)

Language as a Cognitive Technology: English-speakers match like Pirahã when you don't let them count.

#### **Computational Modeling Prizes**

Four prizes worth \$1,000 each are awarded for the best full paper submissions to CogSci 2008 that involve computation cognitive modeling. The four prizes represent the best modeling work in the areas of perception/action, language, higher-level cognition, and applied cognition.

The winners of the 2008 Computational Modeling Prizes are:

Applied Cognition (see page 14 of program)

#### Gideon Borensztajn, Jelle Zuidema, and Rens Bod

Children's grammars grow more abstract with age – Evidence from an automatic procedure for identifying the productive units of language.

Language (see page 23 of program)

#### Afsaneh Fazly, Afra Alishahi, & Suzanne Stevenson

A Probabilistic Incremental Model of Word Learning in the Presence of Referential Uncertainty.

Perception/Action (see page 19 of program)

#### Joseph Toscano and Bob McMurray

Using the distributional statistics of speech sounds for weighting and integrating acoustic cues.

Higher-level cognition (see page 17 of program)

#### Pernille Hemmer and Mark Steyvers

A Bayesian Account of Reconstructive Memory.

#### Cognition and Student Learning (CaSL) Prize

The Cognition and Student Learning (CaSL) Prize is an honorarium of \$1,000 that is awarded to the best paper on research conducted on a topic directly related to cognitive science, educational practice, and subject matter learning. This prize is sponsored by the Institute of Education Sciences.

The winner of the 2008 Cognition and Student Learning Prize is:

Ron Salden, Vincent Aleven, Alexander Renkl, and Rolf Schwonke (see page 21 of program)

Worked Examples and Tutored Problem Solving: Redundant or Synergistic Forms of Support?

#### **Student Travel Awards**

Travel awards have been provided to students whose papers were accepted as oral presentations and who indicated a need for travel funding. The \$10,000 in student travel awards is generously sponsored by the Robert J. Glushko and Pamela Samuelson Foundation.

The 2008 Travel Awards went to:

Laura Staum Casasanto	Joseph Austerweil	Daniel Heussen
Bella Veksler	Heeseung Lee	Aaron Buss
Brooke Breaux	Marc Ettlinger	Yarden Katz
Phil Maguire	Mitchell Herschback	Jeff Loucks
Michael Frank	Chris Sims	Dan Yurovsky
Meredith Meyer	Ralf Mayrhofer	Sunny Khemlani
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Noburo Saji	Erica Yu	

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We sincerely thank the sponsors of the 30<sup>th</sup> Annual Cognitive Science Society Conference for their support of the conference, awards, workshops, tutorials, and for supporting student participation through reduced registration fees and travel support.

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# **Program Notes**

	On-Site Registration Hours	Packet Pick Up Hours
	(Director's Room)	(Sales Conference Room)
Tuesday	5:00pm-7:00pm	5:00pm-7:00pm
Wednesday	7:00am-2:00pm, 5:00-7:00pm	7:00am-2:00pm, 5:00-7:00pm
		(West Registration Desk)
Thursday	7:00am-2:00pm, 3:00-4:30pm	7:00am-3:30pm
Friday	8:00am-9:30am, 11:00am - 2:30pm	8:00am-3:30pm
Saturday	8:00am-9:30am	8:00am-3:30pm

#### **Executive Committee Meeting**

Wednesday 9:30 – 2:00pm Chairman's Boardroom

#### **Governing Board Meetings**

Wednesday 2:30 – 5:00pm Thursday 12:15 – 1:45pm Friday 12:15 – 1:45pm Chairman's Boardroom

#### **Fellows Committee Meeting**

Thursday 7:00pm Blue Room

#### **Cognitive Science Society Business Meeting**

(All members are invited) Saturday 8:00 – 9:15am Regency Ballroom

# **How to Cite Your Paper**

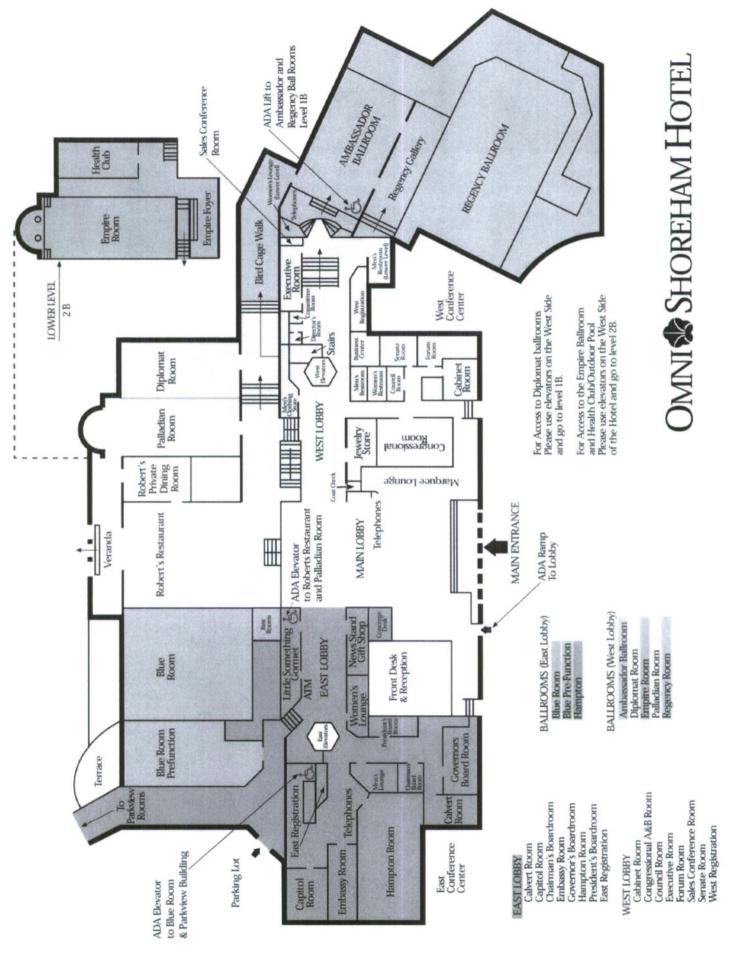
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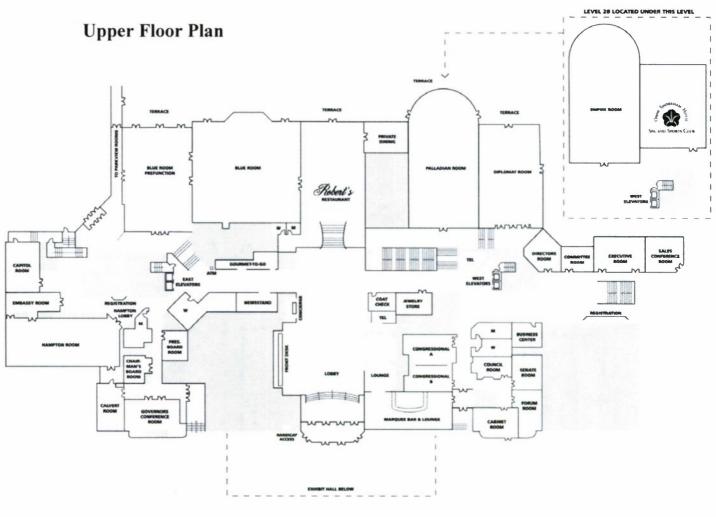
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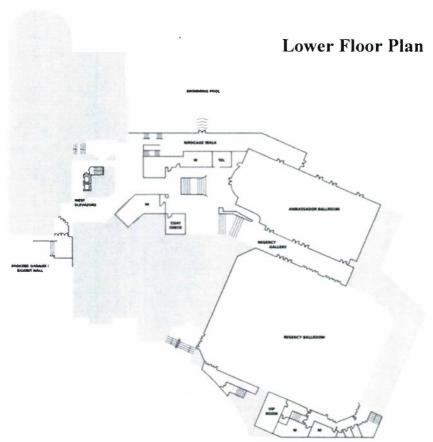
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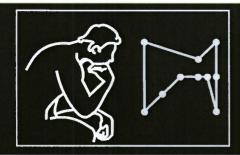






# **Conference At A Glance**

	Wednesday	Thursday	Friday	Saturday
8:00 - 8:15		Opening Remarks		During Marting
8:15 – 9:15		Plenary Talk	Plenary Talk	Business Meeting
9:15 – 9:30		Break	Break	Break
9:30 – 11:00		6-track session: 4 talks each	Rumelhart Symposium & 2-track session: 4 talks each	6-track session: 4 talks each
11:00 – 11:15	Workshops & Tutorials	Break	Break	Break
11:15 – 12:15	8:30am to 5pm  Coffee Breaks 10 – 10:30 am 3 – 3:30 pm  Lunch	7-track session: 3 talks each	7-track session: 3 talks each	7-track session: 3 talks each
12:15 – 1:45		Lunch	Lunch	Lunch
1:45 – 3:15		6-track session: 4 talks each	6-track session: 4 talks each	6-track session: 4 talks each
3:15 – 3:30	Noon to 1:30	Break	Break	Break
3:30 - 4:30		Rumelhart Leeture	30th Anniversary Symposium & 2-track session:	30th Anniversary Symposium & 2-track session:
4:30 – 5:00 5:00 – 5:30		Rumelhart Reception	4 talks each	4 talks each
5:30 - 7:00		Posters	Posters	Posters



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# CogSci 2008 Main Program Information

# Workshops & Tutorials • Wednesday, July 23, 2008

Meeting Room

Cabinet Room
Senate

Room

Calvert

Room

Workshop: Psychocomputational Models of Human Language Acquisition (Psychocompla-2008)	William Gregory Sakas, David Brizan	Diplomat Room
Tutorial: Polyscheme and Cognitive Substrate Tutorial	Nicholas Cassimatis, Perrin Bignoli, Unmesh Kurup	Council Room
<i>Tutorial:</i> The Use of Event-Related Potentials to Study the Development and Decline of Cognitive Function	Debra L. Mills, Steven J. Luck	Executive Room
Tutorial: Bayesian Models of Inductive Learning	Thomas L. Griffiths, Charles Kemp, Joshua B. Tenenbaum	Congressional A & B

Sébastien Hélie, Nick Wilson, Ron Sun

John P. Spencer, Gregor Schöner

Jerome R. Busemeyer

#### 8:30-12:00

Sciences

Tutorial: The Clarion Cognitive Architecture: A Tutorial

Tutorial: Dynamic Field Theory: Conceptual Foundations

and Applications in the Cognitive and Developmental

Tutorial: Quantum Information Processing Theory

8:30-5:00

Workshop: Preparing Research Grant Proposals for the Institute of Education Sciences: Bringing Cognitive Science to Education Research	Elizabeth R. Albro	Capitol Room
Tutorial: Act-R Tutorial	Niels A. Taatgen, Hedderik van Rijn	Forum Room

#### 10:30-5:00

Tutorial: Computational Modeling of Spoken Language	Ted J. Strauss, Daniel Mirman,	Governor's
Processing: A hands-on tutorial	James Magnuson	Room

#### 1:30-5:00

Tutorial: Embodied Cognition and Robotics Approaches to Human Cognition and Learning	Chen Yu, Brian Scassellati	Capitol Room
Tutorial: Eye Tracking Research in Infants and Adults	Daniel C. Richardson, Scott P. Johnson	Forum Room

#### **NOTES:**

# Thursday, July 24, 2008

8:00–8:15		Pdf No. on CD
Opening Remarks		
8:15–9:15 • Plenary Talk	Regency Ballroom	
Words, Actions, Objects, and Abstractions: Overlapping loops of cause and consequence in developmental process	Linda B. Smith	25
9:15–9:30 • Coffee Break		
9:30-11:00 • 6 Track Session		
Symposium	Regency Ballroom	
Discovering the Conceptual Primitives:	Jerome Feldman, Lisa Aziz-Zadeh, Daniel Casasanto, Rebecca Saxe, Leonard Talmy	27
Language Learning (Chair: Rochelle Newman)	Ambassador Ballroom	
Learning Novel Neighbors: Distributed Mappings Help Children and Connectionist Models	Rochelle S. Newman, Larissa Samuelson, Prahlad Gupta	29
Fast-Mapping and Reorganization: Development of Verb Meanings As a System	Noburo Saji, Henrik Saalbach, Mutsumi Imai, Yupin Zhang, Hua Shu, Hiroyuki Okada	35
Phonological Constraints on Children's Use of the Plural	Marc Ettlinger, Jennifer A. Zapf	41
Applied Modeling Prize: Children's Grammars Grow More Abstract With Age: Evidence from an Automatic Procedure for Identifying the Productive Units of Language	Gideon Borensztajn, Willem Zuidema, Rens Bod	47
Semantic/Concepts (Chair: Eef Ameel)	Empire Room	
Semantic Convergence in the Bilingual Lexicon	Eef Ameel, Gert Storms, Barbara Malt, Fons Van Assche	53
A Computational Model of Conceptual Combination	Phil Maguire, Rebecca Maguire, Arthur W. S. Cater	59
Phonaesthemes: A Corpus-Based Analysis	Katya Otis, Eyal Sagi	65
Modeling Semantic Cognition As Logical Dimensionality Reduction	Yarden Katz, Noah Goodman, Kristian Kersting, Charles Kemp, Joshua B. Tenenbaum	71
Reasoning and Decision Making (Chair: Erica Yu)	Diplomat Room	
Retrospective Evaluations of Gambling Wins: Evidence for a 'Peak-End' Rule	Erica C. Yu, David A. Lagnado, Nick Chater	77
Predicting Reasoning From Visual Memory	Evan Heit, Brett K. Hayes	83
Somatic Markers and Frequency Effects: Does emotion really play a role on decision making in the Iowa Gambling Task?	Danilo Fum, Antonio Napoli, Andrea Stocco	89
What You Do is What You Set: Semantic Representations of Tasks and the Capture of Awareness	Anirudh Tiwathia, Kenneth Livingston	95

#### Thursday, July 24, 2008

#### Emotional and Cognitive Dynamics in Learning (Chair: Tyler Davis) Palladian Room

How Goals Shape Category Acquisition: the Role of Contrasting Categories	Tyler Davis, Bradley C. Love	101
Modeling Idea Generation Sequences Using Hidden Markov Models	Hao-Chuan Wang	107
Reinforcement Learning Leads to Risk Averse Behavior	Jerker C. Denrell	113
Emotion-Driven Reinforcement Learning	Robert P. Marinier, John E. Laird	115

#### Action and Embodied Cognition (Chair: Jeff Loucks) Blue Room

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The Interactive Routine As Key Construct in Theories of Interactive Behavior	Wayne D. Gray	127
Defending Extended Cognition	Anthony Chemero, Michael Silberstein	129
Adaptation to Embodied Dynamics: Evidence From Bayes' Ball	Chris R. Sims, Wayne D. Gray	135

#### 11:00-11:15 · Coffee Break

#### 11:15-12:15 • 7 Track Session

#### Reasoning and Explanation (Chair: Greg Solomon)

#### Regency Ballroom

Inhibitory Mechanisms and Impairment in Domain-Specific Reasoning: Studies of Healthy Elderly Adults and Patients with Alzheimer's Disease	Deborah Zaitchik, Gregg Solomon	141
Ways of Explaining Properties	Daniel Heussen, James A. Hampton	143
Using Qualitative Reasoning for the Attribution of Moral Responsibility:	Emmett Tomai, Ken Forbus	149

# Structure in Language and Developmental Trajectories (Chair: Thomas T. Hills)

#### Ambassador Ballroom

Is There Preferential Attachment in the Growth of Early Semantic Noun Networks?	Thomas T. Hills, Mounir Maouene, Josita Maouene, Adam Sheya, Linda B. Smith	155
Categorical Structure in Early Semantic Networks of Nouns	Thomas T. Hills, Mounir Maouene, Josita Maouene, Adam Sheya, Linda B. Smith	161
Factors Influencing the Interpretation of Noun-Noun Compounds	Phil Maguire, Rebecca Maguire, Arthur W. S. Cater	167

#### Causal Learning and Computations (Chair: Kelly Goedert) Empire Room

Comparison Then Computation: a Model of Independent Causal Efficacy	Kelly M. Goedert	173
Causal Learning Through Repeated Decision Making	York Hagmayer, Bjoern Meder	179
Sequential Causal Learning in Humans and Rats	Hongjing Lu, Randall R. Rojas, Tom Beckers, Alan Yuille	185

#### 11:15-12:15 • 7 Track Session (continued)

# Thursday, July 24, 2008

#### Space in Language, Perception, and Cognition (Chair: Nina Sims) Diplomat Room

Spatial Language and Landmark Use: Can 3-, 4-, and 5-Year-Olds Find the <i>Middle?</i>	Nina Simms, Dedre Gentner	191
Conceptualization in Language and Its Relation to Perception	Timothy C. Clausner, Philip J. Kellman, Evan M. Palmer	197
Spatial Description, Function and Context:	Elena Andonova, Thora Tenbrink, Kenny R. Coventry	199

#### Contextualized Cognition (Chair: Caitlin Fausey)

#### Palladian Room

English and Spanish Speakers Remember Causal Agents Differently	Caitlin M. Fausey, Lera Boroditsky	205
Towards a Cognitive Science of Social Inequality: Children's Attention-Related Erps and Cortisol Vary with Their Socioeconomic Status	Amedeo D'Angiulli, Joanne Weinberg, Ruth Grunau, Clyde Hertzman, Pavel Grebenkov	211
Relating Intonational Pragmatics to the Pitch Realizations of Highly Frequent Words in English Speech to Infants	Carolyn M. Quani, Jiahong Yuan, Daniel Swingley	217

#### Emergent Understanding (Chair: Paul Williams)

#### Blue Room

An Embodied Dynamical Approach to Relational Categorization	Paul L. Williams, Randall D. Beer, Michael Gasser	223
The Evolution of Frequency Distributions: Relating Regularization to Inductive Biases Through Iterated Learning	Florencia Reali, Thomas L. Griffiths	229
Learning, Understanding, and Acceptance: the Case of Evolution	Andrew Shtulman, Prassede Calabi	235

#### Semantic Cognition (Chair: Wendy Ann Deslauriers)

#### **Executive Room**

To See Or Not to See: the Visual Component of Complex Mental Arithmetic	Wendy Ann Deslauriers, Gene Ouellette, Martin Barnes, Jo-Anne LeFevre	241
The Real Deal: What Judgments of <i>Really</i> Reveal about How People Think about Artifacts	Barbara C. Malt, Michael R. Paquet	247
The Color of Similarity	Brooke O. Breaux, Michele I. Feist	253

#### 12:15-1:45 • Lunch (on your own)

# Thursday, July 24, 2008

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omputational Models of Language Processing (Chair: Theo Vosse)	Ambassador Ballroom	
Parsing Verb-Final Clauses in German:Garden-Path and Erp Effects Modeled by a Parallel Dynamic Parser	Theo G. Vosse, Gerard A. M. Kempen	261
Context Repetition Benefits Are Dependent on Context Redundancy	Gabriel Recchia, Brendan T. Johns, Michael Jones	267
Settling Dynamics in Distributed Networks Explain Task Differences in Semantic Ambiguity Effects: Computational and Behavioral Evidence:	Blair C. Armstrong, David C. Plaut	273
Predicting Word-Naming and Lexical Decision Times From a Semantic Space Model	Brendan T. Johns, Michael N. Jones	279
ansal Reasoning and Categorization (Chair: Bob Rehder)	Empire Room	
The Role of Coherence in Causal-Based Categorization	Bob Rehder, ShinWoo Kim	285
Causal Status and Explanatory Goodness in Categorization	Jason Thomas Jameson, Dedre Thomas Gentner	291
Absence Makes the Thought Grow Stronger: Reducing Structural Overlap Can Increase Inductive Strength	Hee Seung Lee, Keith Holyoak	297
Structured Correlation From the Causal Background	Ralf Mayrhofer, Noah D. Goodnian, Michael R. Waldniann, Joshna B. Tenenbann	303
nternal and External Forces on Memory and Action Chair: Daniel Richardson)	Diplomat Room	
Joint Perception: Gaze and the Presence of Others	Daniel C. Richardson, Merrit A. Hoover, Arezou Ghane	309
The Concept of Simulation in Control-Theoretic Accounts of Motor Control and Action Perception	Mitchell Herschbach	315
Thinking in Pictures: a Fresh Look At Cognition in Autism	Maithilee Kunda, Ashok K. Goel	321
<b>Higher-Level Cognition Modeling Prize:</b> A Bayesian Account of Reconstructive Memory	Pernille Hemmer, Mark Steyvers	327
nes for Learning and Action (Chair: Meredith Meyer)	Palladian Room	
The Role of Conditional and Joint Probabilities in Segmentation of Dynamic Human Action:	Meredith Meyer, Dare Baldwin	333
The Hierarchies and Systems That Underlie Routine Behavior: Evidence From an Experiment in Virtual Gardening	Nicolas Ruh, Richard P. Cooper, Denis Mareschal	339
Attentional Allocation During Feedback: Eyetracking Adventures on the Other Side of the Response	Marcus R. Watson, Mark R. Blair	345

## 1:45-3:15 • 6 Track Session (continued)

# Thursday, July 24, 2008

## Spatial Cognition (Chair: David Landy)

#### Blue Room

Why Spatial-Numeric Associations Aren't Evidence for a Mental Number Line	David H. Landy, Erin L. Jones, John E. Hummel	357
Effects of Orthographic and Semantic Distractors on Visual Search for Single Words	Laure Léger, Jean-François Rouet, Christine Ros, Nicolas Vibert	363
Crossed Hands Curve Saccades: Multisensory Dynamics in Saccade Trajectories	Lauren L. Emberson, Rebecca J. Weiss, Adriano Barbosa, Eric Vatikiotis-Bateson, Michael J. Spivey	369
The Dynamic Field Theory vs. the Category Adjustment Model: A Critical Test	John P. Spencer, Wendy Troob, Vanessa R. Simmering	375

#### 3:15-3:30 • Coffee Break

#### 3:30-4:30

#### Rumelhart Lecture

#### Regency Ballroom

Rumelhart Lecture	Kegency Dailroom	
Recognition, Categorization, and the Emergence of Meaning	Shimon Ullman 2008 Rumelhart Prize Winner	377
4:30-5:30 • Rumelhart Reception	Diplomat Terrace/Empire Patio	
5:30–7:00 • Poster Session 1	Exhibit Hall	See page 31 of program

# **NOTES:**

# Friday, July 25, 2008

Friday, July 25, 2008			
8:15–9:15 • Plenary Talk	Regency Ballroom	Pdf No on CD	
Face and Word Processing: Two Sides of the Same Brain	David C. Plaut	379	
9:15–9:30 • Coffee Break 9:30–11:00 • Rumelhart Symposium & 2 Track Session			
Rumelhart Symposium (Chair: Michael Tarr)	Regency Ballroom		
Rumelhart Symposium: Integrating Human and Machine Vision: in Honor of Shimon Ullman	Michael J. Tarr, Marlene Behrmann, Christof Koch, Nikos Logothetis, Rafi Malach	381	
The Nature of Learning and Representation (Chair: Bob Berwick)	Ambassador Ballroom		
'Poverty of the Stimulus' Revisited: Recent Challenges Reconsidered	Robert C. Berwick, Noam Chomsky	383	
Modeling the Fan Effect Using Dynamically Structured Holographic Memory	Matthew F. Rutledge-Taylor, Robert L. West	385	
Trade-Off Between Capacity and Generalization in a Model of Memory	Guy Tannenbaum, Yehezkel Yeshurun, Shimon Edelman	391	
The Impact of Labels on Visual Categorisation: a Neural Network Model	Valentina Gliozzi, Julien Mayor, Jon-Fan Hu, Kim Plunkett	397	
Concepts and Categories (Chair: Brian Murphy)	Empire Room		
Distinguishing Concept Categories From Single-Trial Electrophysiological Activity	Brian Murphy, Michele Dalponte, Massimo Poesio, Lorenzo Bruzzone	403	
Categorizing Fragments of Exemplars: Experimental and Computational Results	Harlan D. Harris	409	
Modeling Category Intuitiveness	Emmanuel M. Pothos, Amotz Perlman, Darren J. Edwards, Todd M. Gureckis, Peter M. Hines, Nick Chater	415	
Illusory Correlation As the Outcome of Experience Sampling	Jerker Denrell, Gaël Le Mens	421	
11:00–11:15 • Coffee Break  11:15–12:15 • 7 Track Session  Language and Cognition (Chair: Lera Boroditsky)	Regency Ballroom		
Do English and Mandarin Speakers Think Differently about Time?	Lera Boroditsky	427	
Using the Distributional Statistics of Speech Sounds for Weighting and Integrating Acoustic Cues	Joseph C. Toscano, Bob McMurray	433	

Michael C. Frank, Evelina Fedorenko,

Edward Gibson

439

Language As a Cognitive Technology: English-Speakers Match Like Pirahã When You Don't Let Them Count

#### 11:15-12:15 • 7 Track Session (continued)

## Friday, July 25, 2008

#### Visual Word Recognition at Multiple Grain Sizes (Chair: Jason Zevin) Anibassador Ballroom

Division of Labor Between Semantics and Phonology in Normal and Disordered Reading Development Across Languages	Jianfeng Yang, Bruce Mccandliss, Hua Shu, Jason D. Zevin	445
Variable Vulnerability of Words to Visual Impairment: Exploring Grain-Size Effects in Reading	Giovanni Pagliuca, Padraic Monaghan, Robert McIntosh	451
Constraints for Computational Models of Reading: Evidence From Learning Lexical Stress	Padraic Monaghan, Joanne Arciuli, Nada Sèva	457

#### Cognitive Development (Chair: Aaron Buss)

#### **Empire Room**

The Emergence of Rule Use: a Dynamic Neural Field Model of the Dccs	Aaron T. Buss, John P. Spencer	463
Automatic and Voluntary Shifts of Attention in the Dimensional Change Card Sorting Task	Anna V. Fisher	469
Analogy-Making in Children: the Importance of Processing Constraints	Jean-Pierre Thibaut, Robert French, Milena Vezneva	475

#### Evaluating Judgments and Meaning (Chair: Robert Lindsey)

#### Diplomat Room

BLOSSOM: Best Path Length on a Semantic Self-Organizing Map	Robert V. Lindsey, Michael J. Stipicevic, Vladislav D. Veksler, Wayne D. Gray	481
Experience With a Computer Word-Entry Method in Processing Chinese Characters by Fluent Typists	Jenn-Yeu Chen, Chun-Yu Chuang	487
More-Or-Less Elicitation (Mole): Testing a Heuristic Elicitation Method	Matthew B. Welsh, Michael D. Lee, Steve H. Begg	493

#### Overcoming Misconceptions During Learning

#### (Chair: David Trumpower)

#### Palladian Room

Naïve Statistics: Intuitive Analysis of Variance	David L. Trumpower, Olga Fellus	499
An Empirical Study of Errors in Translating Natural Language into Logic	Dave Barker-Plummer, Richard Cox, Robert Dale, John Etchemendy	505
Learning Associations That Run Counter to Biases in Learning: Overcoming Overshadowing and Learned Inattention	Andrew F. Heckler, Jennifer A. Kaminski, Vladimir M. Sloutsky	511

#### Discussion

#### Blue Room

Human Dimension & Cognitive Performance	Brigadier General Peter Palmer	517

#### Higher-Order Cognition (Chair: Andres Guiral)

#### Executive Room

A Cognitive Model Testing Moral Seduction Theory: Unconscious Bias and the Role Played by Expertise (Expertise and Moral Seduction)	Andrés Guiral, Waymond Rodgers, Emiliano Ruiz, José A. Gonzalo	519
The "Hard" Problem and Neural Correlates of Consciousness	Peter Slezak	525
Processes and Constraints in Explanatory Scientific Discovery	Pat Langley, Will Bridewell	527

#### 1:45-3:15 • 6 Track Session

emposium	Regency Ballroom	
Cognitive Science and Education Research: Engaging Issues of Social Context	Gregg Solomon, Rochel Gelman, Doug Medin, Nancy Nersessian, Laura Schulz, Megan Bang, Christine Massey, Kimberly Brenneman, Wendy Newstetter	529
anguage and Concept (Chair: Thomas Shultz)	Ambassador Ballroom	
Acquisition of Concepts with Characteristics and Defining Features	Thomas Shultz, Jean-Philippe Thivierge, Kristin Laurin	531
Two Eras in Learning Theory: Implications for Cognitively Faithful Models of Language Acquisition and Change	Partha Niyogi, Robert C. Berwick	537
Treebank Parsing and Knowledge of Language: A Cognitive Perspective	Sandiway Fong, Robert C. Berwick	539
Advances in Modeling Human Category Learning with Diva	Kenneth J. Kurtz	545
ecision Making (Chair: Daniel Navarro)	Empire Room	
A Test of the Decision-Time Predictions of the 'Take the Best' Model	Benjamin Schultz, Daniel J. Navarro	547
A Bayesian Model of How People Search Online Consumer Reviews	Stelios Lelis, Andrew Howes	553
From Reduction Back to Higher Levels	William Bechtel, Adele Abrahamsen	559
Stopping Rules and Memory Search Termination Decisions	J. Isaiah Harbison, Eddy J. Davelaar, Michael R. Dougherty	565
Problem Solving (Chair: Julie Booth)	Diplomat Room	
Key Misconceptions in Algebraic Problem Solving	Julie L. Booth, Kenneth R. Koedinger	57
The Effects of Disease Category on Diagnostic Problem Solving in Mammography	Roger Azevedo, Gwyneth Lewis, Roberta Klatzky, Emily Siler	57
The Effects of Peer Information on Problem-Solving in a Networked Group	Thomas N. Wisdom, Xianfeng Song, Robert L. Goldstone	583
Cognition & Student Learning Prize: Worked Examples and Tutored Problem Solving: Redundant Or Synergistic Forms of Support?	Ron J. C. M. Salden, Vincent A.W.M.M. Aleven, Alexander Renkl, Rolf Schwonke	589
unguage I (Chair: Nathaniel Smith)	Palladian Room	
Optimal Processing Times in Reading: A Formal Model and Empirical Investigation	Nathaniel J. Smith, RogerLevy	59:
The Advantage of the Ungrammatical	Laura Staum Casasanto, Ivan A. Sag	60
Assessing the Structure of Verbal Protocols	Stacey A. Todaro, Joseph P. Magliano, Keith K. Millis, Danielle S. McNamara, Christopher A. Kurby	60
Are Three Words All We Need? Recognizing Genre At the Sub- Sentential Level	Philip M. McCarthy, Stephen W. Briner, John C. Myers, Arthur C. Graesser, Danielle S. McNamara	61.

## 1:45-3:15 • 6 Track Session (continued)

# Friday, July 25, 2008

Processes of Attention and Control (Chair: Sunny Klemlani)	Blue Room	
Syllogistic Reasoning With Generic Premises: the Generic Overgeneralization Effect	Sangeet Khemlani, Sarah-Jane Leslie, Sam Glucksberg	619
Opponent Process Control in Linked, Dynamical Agents	Ronnie G. Ward, Robert G. Ward	625
A Computational Model of the Visual Oddity Task	Andrew Lovett, Kate Lockwood, Kenneth Forbus	631
Counting Sheep is a Good Way to Get to Sleep, But the Occasional Aardvark Will Wake You Up: How a Salient Event Improves Performance	Bella Z. Veksler, Wayne Z. Gray	631
3:15–3:30 • Coffee Break 3:30–5:00 • 30 <sup>th</sup> Anniversary Symposium (Part I) & 2 Track Se	ssion	
30 <sup>th</sup> Anniversary Symposium	Regency Ballroom	
Cognitive Science: The Past 30 Years and the Next 30 Years	John R. Anderson, James L. McClelland, Linda B. Smith, Edwin Hutchins, Lawrence W. Barsalou, Dedre Gentner, Kenneth D. Forbus, William Bechtel, Elissa L. Newport, Douglas L. Medin	643

Semantic Interference (Chair: Leendert van Maanen)	Ambassador Ballroom	
The Picture-Word Interference Effect is a Stroop Effect After All	Leendert van Maanen, Hedderik van Rijn	645
Priming and Lexical Interference in Infancy	Suzy J. Styles, Natalia Arias-Trejo, Kim Plunkett	651
On the Persistence of Structural Priming: Mechanisms of Decay and Influence of Word-Forms	Gaurav Malhotra, Martin Pickering, Holly Branigan, James A. Bednar	657
Effect of Global Context on Homophone Ambiguity Resolution	Daniel Mirman, James S. Magnuson, Ted J. Strauss, James A. Dixon	663

Children's Understanding of Conceptual Primitives (Chair: John Opfer)	Empire Room	
Representational Change and Numerical Estimation: Effect of Progressive Alignment on the Breadth of Transfer	Clarissa A. Thompson, John E. Opfer	669
Timing of Adults Utterances and Interpretation of Word Meanings in a Discrepant Labeling Situation	Tetsuya Yasuda, Harumi Kobayashi	675
The Structural Alignment and Comparison of Events in Verb Acquisition	Jane B. Childers	681
Will It Float? How Invariance Affects Children's Understanding of Object Density	Heidi Kloos	687

5:00-7:00 • Poster Session II	Exhibit Hall	See page 37 of program
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Pdf No. on CD

Cognitive Science Society Business Meeting

9:15-9:30 • Coffee Break

9:30-11:00 • 6 Track Session		
Symposium	Regency Ballroom	
Understanding Why: the Cognitive Science of Explanation	Tania Lombrozo, Steven Sloman, Michael Strevens, J. D. Trout, Deena Weisberg	693
Symposium	Ambassador Ballroom	
Enhancing Learning Using Adaptive Computerized Tutoring in K-12 Settings	Carol O'Donnell, Robin Harwood, Barry Gholson, Art Graesser, Scotty D. Craig, Wayne Ward, Ronald Cole, Gautam Biswas, Daniel Schwartz, Kefyn M. Catley, Stephanie Siler	695
Computational Approaches to Language Learning (Chair: Julian Mayor)	Empire Room	
Learning to Associate Object Categories and Label Categories: A Self-Organising Model	Julien Mayor, Kim Plunkett	697
Language Modeling Prize: A Probabilistic Incremental Model of Word Learning in the Presence of Referential Uncertainty	Afsaneh Fazly, Afra Alishahi, Suzanne Stevenson	703
A Connectionist Simulation of Structural Rule Learning in Language Acquisition	Aarre Laakso, Paco Calvo	709
Mutual Exclusivity in Cross-Situational Statistical Learning	Daniel Yurovsky, Chen Yu	715
Language II (Chair: Meredith Brown)	Diplomat Room	
Syntax and Discourse Constraints Interact At the Level of Structural Representation: Evidence From On-Line Sentence Comprehension	Meredith Brown, Virginia Savova, Edward Gibson	72 I
Language Abstraction: Consolidation of Language Structure During Sleep	Michelle C. St. Clair, Padraic Monaghan	727
Generalization and Systematicity in Echo State Networks	Stefan L. Frank, Michal Čerňanský	733
Mechanisms of Verb Inflection — Regular Vs. Irregular Or Easy Vs. Hard?	Gert Westermann, Vanja Kovic, Nicolas Ruh	739
Models of Conceptual Structure (Chair: Lei Shi)	Palladian Room	
Performing Bayesian Inference With Exemplar Models	Lei Shi, Naomi H. Feldman, Thomas Griffiths	745
Learning a Hierarchical Organization of Categories	Steven Verheyen, Eef Ameel, Timothy T. Rogers, Gert Storms	751
Modeling Typicality: Extending the Prototype View	Wouter Voorspoels, Wolf Vanpaemel, Gert Storms	757
Principles of Generalization for Learning Sequential Structure in Language	Michael C. Frank, Denise Ichinco, Joshua B. Tenenbaum	763

#### 9:30-11:00 • 6 Track Session (continued)

## Saturday, July 26, 2008

#### Problem Solving (Chair: Ming Ming Chiu)

#### Blue Room

Statistical Discourse Analysis of Group Problem Solving: Evaluations, Wrong Ideas, Rudeness, Justifications, and Micro-creativity	Ming Ming Chiu	769
Upsides and Downsides of Gesturing in Problem Solving:	Patrick J. Cushen, Jennifer Wiley	775
Compound Analogical Design, or How to Make a Surfboard Disappear	Michael E. Helms, Swaroop E. Vattam, Ashok K. Goel	781
Social Science: Complex Cognition in Early Aids Research	Katherine D. Lippa, Valerie L. Shalin	787

#### 11:00-11:15 • Coffee Break

#### 11:15-12:15 • 7 Track Session

#### Language Comprehension & Processing

(Chair: Alexia Toskos Dils)

#### Regency Ballroom

Motion Language Shapes People?S Interpretation of Unrelated Ambiguous Figures	Alexia Toskos Dils, Lera Boroditsky	793
Does Social Information Influence Sentence Processing?	Laura Staum Casasanto	799
The Role of Cognitive Functions in Communication: the Case of Traumatic Brain Injury	Romina Angeleri, Francesca M. Bosco, Katiuscia Sacco, Marina Zettin, Livia Colle, Bruno G. Bara	805

#### Practice, Practice (Chair: Aryn Pyke)

#### Ambassador Ballroom

Why Do the Math? the Impact of Calculator Use on Participants' Actual and Perceived Retention of Arithmetic Facts	Aryn Pyke, Jo-Anne LeFevre, Ruby Isaacs	811
To Understand Your Understanding, You Must Understand What Understanding Means	Jennifer Wiley, Thomas D. Griffin, Keith W. Thiede	817
The Role of Deliberate Practice in Expertise: Necessary But Not Sufficient	Fernand Gobet	823

#### Reasoning (Chair: Thomas Shultz)

#### Empire Room

A Computational Developmental Model of the Implicit False Belief Task	Vincent G. Berthiaume, Kristine H. Onishi, Thomas R. Shultz	825
The Strategy Behind Belief Revision: a Matter of Judging Probability Or the Use of Mental Models?	Ann G. Wolf, Markus Knauff	831
Training a Bayesian: Three-And-A-Half-Year-Olds' Reasoning about Ambiguous Evidence	Elizabeth Baraff Bonawitz, Adina Fischer, Laura Schulz	837

#### Mental & Spatial Representations (Chair: Thomas Hills)

#### Diplomat Room

Evidence for Generalized Cognitive Search Processes At Multiple Levels in a Hierarchical Problem Solving Task	Thomas T. Hills, Robert L. Goldstone, Peter M. Todd	843
The Role of Internal Information in the Spatial Learning Task Through Path Integration:	Kayoko Ohtsu	845
Situated and Prospective Path Planning: Route Choice in an Urban Environment	Jan M. Wiener, Thora Tenbrink, Jakob Henschel, Christoph Hölscher	851

## Saturday, July 26, 2008

#### Higher-Order Cognition (Chair: Janet Hui-Wen Hsiao)

#### Palladian Room

Hemispheric Asymmetry in Visual Perception Arises From Differential Encoding Beyond the Sensory Level	Janet Hui-Wen Hsiao, Reza Shahbazi, Garrison Cottrell	857
Can Relationality Be Distinguished From Abstractness in Noun Mutability?	Dedre Gentner, Jennifer Asmuth	863
Tracks in the Mind: Differential Entrenchment of Common and Rare Liturgical and Everyday Multiword Phrases in Religious and Secular Hebrew Speakers	Jonathan Berant, Catherine Caldwell-Harris, Shimon Edelman	869

#### The Nature of Human Capacity Limitations (Chair: Brad Love) Blue Room

Predicting Information Needs: Adaptive Display in Dynamic Environments	Bradley C. Love, Matt Jones, Marc T. Tomlinson, Michael Howe	875
Decoupling of Intuitions and Performance in the Use of Complex Visual Displays	Mary Hegarty, Harvey S. Smallman, Andrew T. Stull	881
Efficient Coding in Visual Short-Term Memory: Evidence for an Information-Limited Capacity	Timothy F. Brady, Talia Konkle, George A. Alvarez	887

#### Culture, Cognition, and Mathematics (Chair: Lindsey Richland) Executive Room

Gesturing to Promote Higher-Order Thinking: Cross-Cultural Differences	Lindsey E. Richland	893
Cultural Mixture Modeling: Identifying Cultural Consensus (And Disagreement) Using Finite Mixture Modeling	Shane T. Mueller, Elizabeth S. Veinott	899
Extending the Limits of Counting in Oceania: Adapting Tools for Numerical Cognition to Cultural Needs	Andrea Bender, Sieghard Beller	905

#### 12:15-1:45 • Lunch (on your own)

#### **NOTES:**

#### 1:45-3:15 • 6 Track Session

# Saturday, July 26, 2008

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Symposium	Regency Ballroom	
Rules and Exemplars in Language Acquisition	Rens Bod, Gideon Borensztajn, Daniel Freudenthal, Julian Pine, Fernand Gobet, Carla L. Hudson Kam, Alexander Clark, Willam G. Sakas	911
Symposium	Ambassador Ballroom	
Integrating Cognitive Architectures With External Environments: Approaches and Contributions to Validation	Glenn Gunzelmann, Art Pope, Robert Wray, Bradley Best, J. Trafton	913
Inalogy and Reasoning (Chair: Iris van Rooij)	Executive Room	
Identifying Sources of Intractability in Cognitive Models: An Illustration Using Analogical Structure Mapping	Iris van Rooij, Patricia Evans, Moritz Müller, Jason Gedge, Todd Wareham	915
Similarity Between Propositional Elements Does Not Always Determine Judgments of Analogical Relatedness	Ricardo A. Minervino, Nicolás Oberholzer, Máximo Trench	921
Mapping and Inference in Analogical Problem Solving — As Much As Needed Or As Much As Possible?	Eva Wiese, Uwe Konerding, Ute Schmid	927
Human Logic in Spatial Reasoning	Marco Ragni	933
Using Multiple Information Sources in Language Planning and Understanding (Chair: Austin F. Frank)	Diplomat Room	
Speaking Rationally: Uniform Information Density as an Optimal Strategy for Language Production	Austin F. Frank, T. F. Jaeger	939
What Tunes Accessibility of Referring Expressions in Task-Related Dialogue?	Ellen Gurman Bard, Robin L. Hill, Mary Ellen Foster	945
Anticipatory Eye Movements Mediated by Word Order Constraints	Paul E. Engelhardt, Ming Xiang, Fernanda Ferreira	951
Speakers Communicate Their Perceptual-Motor Experience to Listeners Nonverbally:	Susan Wagner Cook, Michael K. Tanenhaus	957
The Use (and Lack Thereof) of Visual and Verbal Information Chair: Gary Lupyan)	Palladian Room	
Now You See It, Now You Don't: Verbal But Not Visual Cues Facilitate Visual Object Detection	Gary Lupyan, Michael J. Spivey	963
Musical Change Deafness: The Inability to Detect Change in a Non-speech Auditory Domain	Kat R. Agres, Carol L. Krumhansl	969
Picture Perception and the Two Visual Subsystems	Bence Nanay	975
Action Anticipation and Interference: A Test of Prospective Gaze	Erin Cannon, Amanda L. Woodward	981

#### 1:45-3:15 • 6 Track Session (continued)

# Saturday, July 26, 2008

Action &	Explanations	(Chair: Lisa	M. Oakes)
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Blue	Room
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How Outcomes of Actions Influence Infants' Representation of Those Actions	Lisa M. Oakes, Sammy Perone, Kelly L. Madole	987
Thinking by Doing and Doing by Thinking: A Taxonomy of Actions	Hansjörg Neth, Thomas Müller	993
The Pragmatics of Explanation	Seth Chin-Parker, Alexandra Bradner	999
Who Framed Roger Rabbit: the Effect of Legal Role and Frame on the Outcome of Civil Disputes	Victoria Gilliland, John C. Dunn, Daniel J. Navarro	1005

#### 3:15-3:30 • Coffee Break

# 3:30-5:00 • 30<sup>th</sup> Anniversary Symposium (Part II) & 2 Track Session

# 30th Anniversary Symposium

#### Regency Ballroom

Cognitive Science: The Past 30 Years and the Next 30 Years	John R. Anderson, James L. McClelland, Linda B. Smith, Edwin Hutchins, Lawrence W. Barsalou, Dedre Gentner, Kenneth D. Forbus, William Bechtel, Elissa L. Newport, Douglas L. Medin	643

#### Approaches to Language Learning (Chair: Luca Onnis)

#### Blue Room

Variation Sets Facilitate Artificial Language Learning	Luca Onnis, Heidi Waterfall, Shimon Edelman	1011
Grounding Word Learning in Multimodal Sensorimotor Interaction	Chen Yu, Linda B. Smith, Alfredo F. Pereira	1017
What You Learn is What You See: Using Eye Movements to Study Infant Cross-Situational Word Learning	Chen Yu, Linda B. Smith	1023
How Features Create Knowledge of Kinds	Shohei Hidaka, Linda B. Smith	1029

#### Modeling Cognition (Chair: Fermín Moscoso Del Prado Martín)

#### Empire Room

A Fully Analytical Model of the Visual Lexical Decision Task	Fermin Moscoso Del Prado Martin	1035
A Rational Analysis of Confirmation With Deterministic Hypotheses	Joseph L. Austerweil, Thomas L. Griffiths	1041
Fluency and Psychological Distance	Daniel M. Oppenheimer, Anuj K. Shah, Adam L. Alter	1047
Optimal Predictions in Everyday Cognition: The Wisdom of Individuals or Crowds?	Michael C. Mozer, Harold Pashler, Hadjar Homaei	1051

5:00–7:00 • Poster Session III	Exhibit Hall	See page 45 of program
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## New books from The MIT Press

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# AND THE FUTURE OF COGNITIVE SCIENCE

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On the nature of minds, or: Truth and consequences

Shimon Edelman, Cornell University

SAL: An explicitly pluralistic cognitive architecture

David J. Jilk, eCortex, Inc.

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Guy C. Van Orden, University of Cincinnati

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Eric Dietrich, Binghamton University

On a compatibility between emergentism and reductionism

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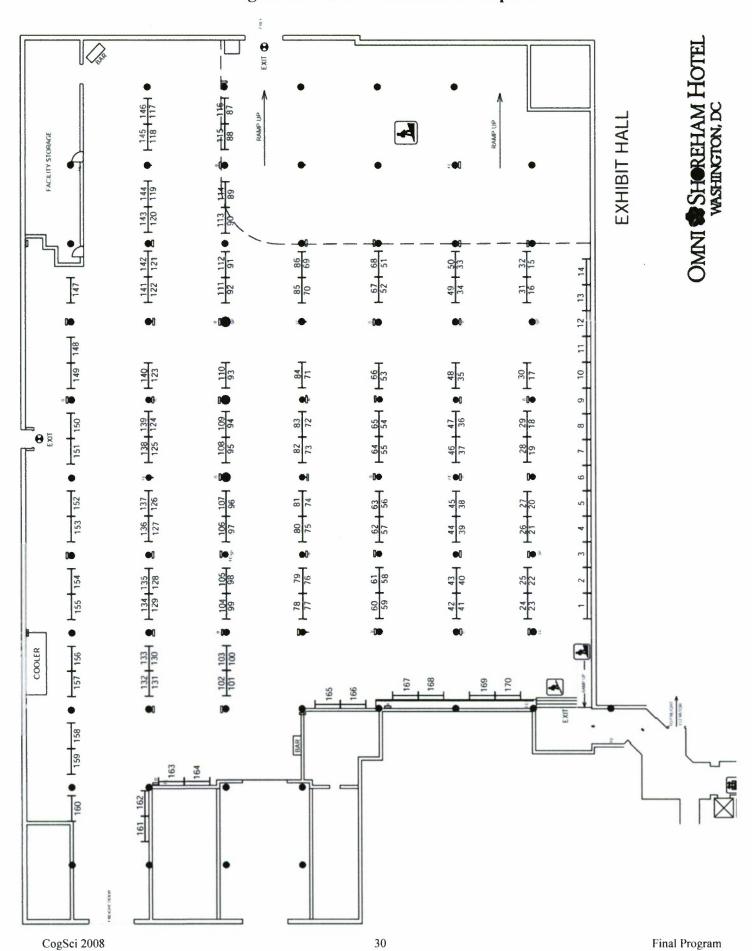
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Patrick Suppes, The Plurality of Science (1978)



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20	Autobiographical Memory and Motor Action	Katinka Dijkstra, Daniel Casasanto	1549
22	A Memory Model for Cognitive Agents	Guilherme Bittencourt	1550

Deve	opmental Perspectives on Learning, Culture, & Cognition	Friday, July 25 • 5:00-7:00 PM Exhibit Hall	Pg No. on CD
23	Evaluation of the Efficacy of the Delacato's Neuropsychological Method in the Treatment of 7-12 Years Old Boys With Adhd	Farzad Momeni, Farzaneh Mehrabi Mansour	1551
24	Stretching to Learn: Ambiguous Evidence and Variability in Preschoolers' Exploratory Play	Hyowon Gweon, Laura E. Schulz	1552
25	Children's Attention to Property Likelihood as a Guide to Property Projection	Chris A. Lawson, Anna V. Fisher	1557
26	Trait or Situation? Cultural Differences in Judgment of Emotion	Megumi Kuwabara, Ji Y. Son, Linda B. Smith	1562
27	Preschoolers Use Sampling Information to Infer the Preferences of Others	Tamar Kushnir, Fei Xu, Henry M. Wellman	1563
28	Using Perceptually Rich Objects to Help Children Represent Number: Established Knowledge Counts	Lori A. Petersen, Nicole M. Mcneil	1567
29	Context and Induction: The Impact of Background Context on Children's Category Learning	Haley A. Vlach, Catherine M. Sandhofer	1573
30	Children's Counterfactual Reasoning Strategy in Belief Contravening Problems	Nicole Van Hoeck, Kristien Dieussaert, Russell Revlin	1574
31	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	Vicente Melgoza, Amanda Pogue, David Barner	1580
32	Bridging the Gap: Children?S Developing Inferences about Objects? Labels and Insides From Causality-At-A-Distance	David W. Buchanan, David M. Sobel	1586
33	Do Preschoolers Track a Character?S Mental Perspective While Listening to a Story?	Agnieszka M. Fecica, Daniela K. O'Neill	1592
34	Development of Synonym-Based Induction	Bryan Matlen, Anna Fisher	1593
35	Causal Supports for Early Word Learning	Amy E. Booth	1594
36	Can Analogy Help Children Make Transitive Inference?	Milena Mutafchieva, Boicho Kokinov	1595
37	Easy or Not Easy: Young Children?S False Belief Understanding in Communicative Situations	Kensuke Sato	1601
Lear	ning Friday, July 25	5:00-7:00 PM Exhibit Hall	Pg No. on CD
38	Theory Acquisition and the Language of Thought	Charles Kemp, Noah D. Goodman, Joshua B. Tenenbaum	1606
39	Temporal Continuity in Cross-Situational Statistical Learning	George Kachergis, Chen Yu	1612
40	Cognitively Based Assessment Of, for and As Learning: A 21st Century Approach for Assessing Reading Competency	Tenaha O'Reilly, Kathleen M. Sheehan	1613
41	An Embodied Approach to Achieving Mastery and Learning While You Work	Brian Krisler, Richard Alterman	1619
42	A Bayesian Model of the Acquisition of Compositional Semantics	Steven T. Piantadosi, Noah D. Goodman, Benjamin A. Ellis, Joshua B. Tenenbaum	1620
43	Analysing Problem Structuring in a Collaborative Explanation Dialogue to Capture Conceptual Change	Michael Tscholl, John Dowell	1626
44	Teaching Games: Statistical Sampling Assumptions for Learning in Pedagogical Situations	Patrick Shafto, Noah Goodman	1632

45	The Importance of Ordinary Experience: Providing Girls With Time for Regular Practice of Mathematical Cognition	Robin C. Flanagan, Theresa Canada	1638
46	Connectionist Model of Artificial Grammar Learning: Simulations Based on Higham (1997) Indexes of Knowledge Representation  Michal Wierzchon, Jakub Barbasz		1639
47	The Stability and Strength of Knowledge Representation Acquired During Artificial Grammar Learning	Michal Wierzchon, Dariusz Asanowicz	1645
48	Guided Learning by Reading (Lbr) As a Cognitive Growth Model	Alexei V. Samsonovich	1646
49	An Alternative View of the Relation Between Finger Gnosis and Math Ability: Redeployment of Finger Representations for the Representation of Number	Marcie Penner-Wilger, Michael L. Anderson	1647
50	Learning Composable Signals for a Cognitive Substrate	Jacob Beal	1653
51	Learning Abstract Principles Through Principle-Case Comparison	Julie Colhoun, Dedre Gentner, Jeffrey Loewenstein	1659
52	A Model-Based Approach to Second-Language Learning of Grammatical Constructions	Gwen Alexandra Frishkoff, Lori Levin, Phillip Pavlik Jr., Kaori Idemaru, Cornelia De Jong	1665
53	Sub-Functions of Human Learning Process During a Sequential Task	Sergey Tarasenko, Toshio Inui, Abdikeev Niyaz	1671
54	Learning the Form of Causal Relationships using Hierarchical Bayesian Models	Christopher Lucas, Thomas Griffiths	
55	Coding by Demand: Identifying the Dimensions of Student Dialogue That Underlie Theories of Learning  Gwendolyn Campbell, Natalie Steinhauser, Myroslava Dzikovska, Johanna Moore, Charles Callaway		1672
Ехре	ertise and Explanation Friday, July 25 • 5:0	0-7:00 PM Exhibit Hall	Pg No. on CD
56	Effects of Scaffolding Problem Formulation Phase During Multifaceted Physics Problem-Solving	Serkan Toy, Dale Niederhauser, John Jackman, Craig Ogilvie, Sarah Ryan, Aliye Karabulut	1673
57	Conceptual Coherence in Philosophy Education: Visualizing Initial Conceptions of Philosophy Students with Self-Organizing Maps	Anna-Mari Rusanen, Otto Lappi, Timo Honkela, Mikael Nederström	1674
58	The Content of Self-Explanations While Studying Incomplete Worked-Out Examples	Robert G.M. Hausmann, Brett Van De Sande, Kurt Vanlehn	1680
59	Knowledge Integration in Creative Problem Solving:	Sebastien Helie, Ron Sun	1681
60	Physicians' Use of Deep Features: Expertise Differences in Patient Categorization	Sarah L. Devantier, John Paul Minda, Wael Hadarra, Mark Goldszmidt	1687
61	How Expert Tutors Revise Tutoring Policies and Strategies When Students Make Mistakes	Evelyn Lulis, Shlomo Argamon, Martha Evens	1693
62	Development of Conceptual Understanding and Problem Solving Expertise in Chemistry	Jodi L. Davenport, David Yaron,	
		Kenneth Koedinger, David Klahr	1699
63	Conditions for Selection and Conceptualization in Diagrams and Sentences	Rossano Barone, Peter Cheng	1699
63			

66	A Functional Taxonomy of Discourse Moves for Conversation Management During Cognitive Clinical Interviews about Scientific Phenomena	Victor R. Lee, Rosemary S. Russ, Bruce Sherin	1723
67	Comparing Similar Or Dissimilar Examples for Analogical Transfer	Young Hoan Cho	1729
68	"Is the Missing 1 Dollar in the Cheater's Hand?" The Cheater Detection Module As a Constraint within Insight Problem Solving	Keiga Abe, Masanori Nakagawa	1730
69	Diagram Interaction During Intelligent Tutoring in Geometry: Support for Knowledge Retention and Deep Understanding	Kirsten R. Butcher, Vincent Aleven	1736
70	Examining First Grade Students' Reading Skill Growth Through a Culturally-Responsive Vocabulary Intervention	Phyllis Swann Underwood, Carol McDonald Connor	1742
71	The Effects of Skill Diversity in Peer Feedback: It's What You Don't Know	Melissa M. Nelson, Brandi N. Melot, Christopher A. Stevens, Christian D. Schunn	1743
72	What Does it Take to Learn from Natural Tutorial Instruction? Some Implications for the Design of Electronic Students	Yolanda Gil	
73	Toward a Process Model of Explanation	John E. Hummel, David H. Landy, Derek Devnich	1744
74	Transitions, Analogical Processes, and Expertise in Contemporary Art: a Detailed Case Study	Jude Leclerc, Takeshi Okada, Sawako Yokochi, Frederic Gosselin	1745
Judg	rement and Reasoning Friday, July 25	• 5:00-7:00 PM	Pg No. on CD
<b>Judg</b> 75	Extending and Testing the Bayesian Theory of Generalization	• 5:00-7:00 PM Exhibit Hall  Daniel J. Navarro, Michael D. Lee,  Matthew J. Dry, Benjamin Schultz	
		Daniel J. Navarro, Michael D. Lee,	on CD
75	Extending and Testing the Bayesian Theory of Generalization  Laws and Makeups in Context-Dependent Reduction	Daniel J. Navarro, Michael D. Lee, Matthew J. Dry, Benjamin Schultz	on CD 1746
75 76	Extending and Testing the Bayesian Theory of Generalization  Laws and Makeups in Context-Dependent Reduction Relations  Approaches on Neurocomputational Self-Organizing	Daniel J. Navarro, Michael D. Lee, Matthew J. Dry, Benjamin Schultz Jan Treur	1746 1752
75 76 77	Extending and Testing the Bayesian Theory of Generalization  Laws and Makeups in Context-Dependent Reduction Relations  Approaches on Neurocomputational Self-Organizing Behavioral Modeling	Daniel J. Navarro, Michael D. Lee, Matthew J. Dry, Benjamin Schultz  Jan Treur  Spyridon Revithis	1746 1752 1758
75 76 77 78	Extending and Testing the Bayesian Theory of Generalization  Laws and Makeups in Context-Dependent Reduction Relations  Approaches on Neurocomputational Self-Organizing Behavioral Modeling  Building Production Systems With Realistic Spiking Neurons Computational Analysis on Graphic Generation: Effects	Daniel J. Navarro, Michael D. Lee, Matthew J. Dry, Benjamin Schultz  Jan Treur  Spyridon Revithis  Terrence C. Stewart, Chris Eliasmith	1746 1752 1758 1759
75 76 77 78 79	Extending and Testing the Bayesian Theory of Generalization  Laws and Makeups in Context-Dependent Reduction Relations  Approaches on Neurocomputational Self-Organizing Behavioral Modeling  Building Production Systems With Realistic Spiking Neurons Computational Analysis on Graphic Generation: Effects of Surface and Structure Similarity  The Fragmented Folk: More Evidence of Stable Individual	Daniel J. Navarro, Michael D. Lee, Matthew J. Dry, Benjamin Schultz  Jan Treur  Spyridon Revithis  Terrence C. Stewart, Chris Eliasmith  Junya Morita	1746 1752 1758 1759 1765
75 76 77 78 79 80	Extending and Testing the Bayesian Theory of Generalization  Laws and Makeups in Context-Dependent Reduction Relations  Approaches on Neurocomputational Self-Organizing Behavioral Modeling  Building Production Systems With Realistic Spiking Neurons  Computational Analysis on Graphic Generation: Effects of Surface and Structure Similarity  The Fragmented Folk: More Evidence of Stable Individual Differences in Moral Judgments and Folk Intuitions: Inhibition Needs No Negativity: Negative Links	Daniel J. Navarro, Michael D. Lee, Matthew J. Dry, Benjamin Schultz  Jan Treur  Spyridon Revithis  Terrence C. Stewart, Chris Eliasmith  Junya Morita  Adam Feltz, Edward T. Cokely	1746 1752 1758 1759 1765
75 76 77 78 79 80 81	Extending and Testing the Bayesian Theory of Generalization  Laws and Makeups in Context-Dependent Reduction Relations  Approaches on Neurocomputational Self-Organizing Behavioral Modeling  Building Production Systems With Realistic Spiking Neurons Computational Analysis on Graphic Generation: Effects of Surface and Structure Similarity  The Fragmented Folk: More Evidence of Stable Individual Differences in Moral Judgments and Folk Intuitions: Inhibition Needs No Negativity: Negative Links in the Construction-Integration Model:	Daniel J. Navarro, Michael D. Lee, Matthew J. Dry, Benjamin Schultz  Jan Treur  Spyridon Revithis  Terrence C. Stewart, Chris Eliasmith  Junya Morita  Adam Feltz, Edward T. Cokely  Michael P. Rowe, Danielle S. Mcnamara	1746 1752 1758 1759 1765 1771
75 76 77 78 79 80 81 82	Extending and Testing the Bayesian Theory of Generalization  Laws and Makeups in Context-Dependent Reduction Relations  Approaches on Neurocomputational Self-Organizing Behavioral Modeling  Building Production Systems With Realistic Spiking Neurons  Computational Analysis on Graphic Generation: Effects of Surface and Structure Similarity  The Fragmented Folk: More Evidence of Stable Individual Differences in Moral Judgments and Folk Intuitions:  Inhibition Needs No Negativity: Negative Links in the Construction-Integration Model:  When Do We Stop Calling Them Mirror Neurons?	Daniel J. Navarro, Michael D. Lee, Matthew J. Dry, Benjamin Schultz  Jan Treur  Spyridon Revithis  Terrence C. Stewart, Chris Eliasmith  Junya Morita  Adam Feltz, Edward T. Cokely  Michael P. Rowe, Danielle S. Mcnamara  Sebo Uithol, Pim Haselager, Harold Bekkering	1746 1752 1758 1759 1765 1771 1777
75 76 77 78 79 80 81 82 83	Extending and Testing the Bayesian Theory of Generalization  Laws and Makeups in Context-Dependent Reduction Relations  Approaches on Neurocomputational Self-Organizing Behavioral Modeling  Building Production Systems With Realistic Spiking Neurons  Computational Analysis on Graphic Generation: Effects of Surface and Structure Similarity  The Fragmented Folk: More Evidence of Stable Individual Differences in Moral Judgments and Folk Intuitions: Inhibition Needs No Negativity: Negative Links in the Construction-Integration Model:  When Do We Stop Calling Them Mirror Neurons?  Mental Space Mapping Applied to Argument  The Bayesian Logic of Conjunction Fallacies: Probability	Daniel J. Navarro, Michael D. Lee, Matthew J. Dry, Benjamin Schultz  Jan Treur  Spyridon Revithis  Terrence C. Stewart, Chris Eliasmith  Junya Morita  Adam Feltz, Edward T. Cokely  Michael P. Rowe, Danielle S. Mcnamara  Sebo Uithol, Pim Haselager, Harold Bekkering  Marcello Guarini	1746 1752 1758 1759 1765 1771 1777 1783 1789
75 76 77 78 79 80 81 82 83	Extending and Testing the Bayesian Theory of Generalization  Laws and Makeups in Context-Dependent Reduction Relations  Approaches on Neurocomputational Self-Organizing Behavioral Modeling  Building Production Systems With Realistic Spiking Neurons  Computational Analysis on Graphic Generation: Effects of Surface and Structure Similarity  The Fragmented Folk: More Evidence of Stable Individual Differences in Moral Judgments and Folk Intuitions:  Inhibition Needs No Negativity: Negative Links in the Construction-Integration Model:  When Do We Stop Calling Them Mirror Neurons?  Mental Space Mapping Applied to Argument  The Bayesian Logic of Conjunction Fallacies: Probability Rating Tasks and Pattern-Sensitivity  A Parallel Distributed Processing Model of Accessibility	Daniel J. Navarro, Michael D. Lee, Matthew J. Dry, Benjamin Schultz  Jan Treur  Spyridon Revithis  Terrence C. Stewart, Chris Eliasmith  Junya Morita  Adam Feltz, Edward T. Cokely  Michael P. Rowe, Danielle S. Mcnamara  Sebo Uithol, Pim Haselager, Harold Bekkering  Marcello Guarini  Momme Von Sydow	1746 1752 1758 1759 1765 1771 1777 1783 1789

88	Specific Impairments in Cognitive Development: A Dynamical Systems Approach	Frank D. Baughman, Michael S.C. Thomas	1819
89	Finding Feature Representations of Stimuli: Combining Feature Generation and Similarity Judgment Tasks  Matthew D. Zeigenfuse, Michael D. Lee		1825
90	Modeling Two Kinds of Reasoning Evan Heit, Caren M. Rotello		1831
91	Logical Thinking, Deontic Reasoning, and the Fairness Principle: Exploring the Relationship Between Selection Tasks and the Ultimatum Game	Kuninori Nakamura	1837
92	Probability Estimates in Diagnostic Reasoning: Variations of Causal Links and Modeling Uncertainty	Franziska Bocklisch, Georg Jahn, Katja Mehlhorn, Josef F. Krems	
93	Truth-Based Or Possibility-Based Compatibility Judgments and Handley Et Al.?S (2006) Litmus Test of the Suppositional Conditional	Walter Schroyens	1838
94	Memory Judgments of Relative Order in Short Lists: Multiple Strategies Are Available, Depending on Wording of Instructions:	Michelle Chan, Jeremy B. Caplan	1839
Lang	nuage and Concepts Friday, July 25	• 5:00-7:00 PM	Pg No. on CD
95	Similarity Between Vowels Influences Response Execution in Word Identification:	Jason D. Zevin, Thomas A. Farmer, Bruce D. McCandliss	1840
96	Presentation Modality in Age of Acquisition Rating Reflects Mode of Acquired Knowledge: Evidence From Category- Specific Effects:	Armina Janyan, Elena Andonova	1841
97	The Duck/Rabbit Illusion: Re-examination of Information Encapsulation	Aysu Suben, Michael Anderson, Tony Chemero	
98	Top-Down and Bottom-Up Processes in Web Search Navigation:	Shu-Chieh Wu, Craig S. Miller	1848
99	Examining the Hidden Factors That Underpin Semantic Representation: What Functional Brain Imaging Reveals about the Neuroarchitecture of Object Knowledge:	Kai-Min Kevin Chang, Tom Mitchell, Marcel Adam Just	
100	Different Mechanisms Control the Allocation of Perceptual Processing Resources and Decisional Resources in Perceptual Categorization:	Duncan Guest	1855
101	Classifying Objects Based on Their Visual Similarity to Target Categories:	Wei Zhang, Dimitris Samaras, Gregory J. Zelinsky	1856
102	Category Labels Highlight Feature Interrelatedness in Similarity Judgment:	Na-Yung Yu, Takashi Yamauchi, Jay Schumacher	1862
103	Autonomous Perceptual Feature Extraction in a Topology- Constrained Architecture:	Sylvain Chartier, Gyslain Giguère	1868
104	The Ideal Representation of Role-Governed Categories:	Micah Goldwater, Hunt Stilwell, Arthur Markman	1874
105	ls Prototypical Typical?:	Wolf Vanpaemel, Eef Ameel, Gert Storms	1875
106	The Effect of the Internal Structure of Categories on Perception:	Todd M. Gureckis, Rob L. Goldstone	1876
107	Does Functional Knowledge Have a Privileged Status in the Speeded Computation of Word Meaning?:	Ada Le, Renante Rondina II, George S. Cree	1882

108	Representational Formalism in Which Syntax and Semantics Are Congruent: Towards the Resolution of Searle?'s Chinese Room Challenge	Lev Goldfarb	1888
109	acillation and Hesitation in Category Rating:Evidence From Cursor Trajectories:  Kenpei Shiina		1894
110	Viewing Anthropomorphic Animals Increases Anthropocentrism	Patricia Herrmann, Douglas Medin, Sandra Waxman	
Word	s and Word Learning Friday, July 25	• 5:00-7:00 PM	Pg No. on CD
111	Vocabulary Development in English and Chinese: a Comparative Study With Self-Organizing Neural Networks:	Xiaowei Zhao, Ping Li	1900
112	Lsa As a Measure of Coherence in Second Language Natural Discourse:	Scott Crossley, Thomas Salsbury, Philip McCarthy, Danielle Mcnamara	1906
113	Sound Symbolism in Word Learning:	Lynne C. Nygaard, Allison E. Cook, Laura L. Namy	1912
115	A Stochastic Model for the Vocabulary Explosion	Colleen C. Mitchell, Bob McMurray	1918
116	Learning Words From Context	Vladimir Sloutsky, Xin Yao	1924
116	Identifying Cognitive and Linguistic Strategies in Successful Nonfiction Writing	Gregory Aist	1929
117	Prior Knowledge Bootstraps Cross-Situational Learning	Krystal A. Klein, Chen Yu, Richard M. Shiffrin	1930
118	Words Or Word Boundaries? Examining Performance on Statistical Word Segmentation Tasks:	Jeremy J. Glick, James L. McClelland	1936
119	Structuring the Vowel Space: an Investigation of Turkish and Inuktitut:	Brian Dillon, William Idsardi, Colin Phillips	1937
120	Cross-Situational Statistical Learning From Noisy Input:	Brian Riordan, Chen Yu	1938
121	Sound Versus Meaning: What Matters Most in Early Word Learning?	Sarah Devi Sahni, Timothy T. Rogers	1939
122	The Automaticity of Statistical Word Learning	George Kachergis, Chen Yu, Richard M. Shiffrin	1940
123	Inferring a Probabilistic Model of Semantic Memory From Word Association Norms:	Mark Andrews, David Vinson, Gabriella Vigliocco	1941
124	On the Utility of Conjoint and Compositional Frames and Utterance	Daniel Freudenthal, Julian Pine, Fernand Gobet	1947
125	Gradations in Phonological Learning	Stephanie Packard, Prahlad Gupta	1953
126	Acquisition and Representation of Grammatical Categories: Grammatical Gender in a Connectionist Network	Jelena Mirkovic, Mark Seidenberg, Maryellen Macdonald	1954
127	If You Haven't Got a Head, Get a Label	Vanja Kovic, Kim Plunkett, Gert Westermann	1960
128	Word Sense and Sensibility: Mental Representations of Polysemy	Susan Brown	1961
129	ERPs and Evolved Gamma-band Oscillations in a Single-Word Translation: Concreteness Effect in Cognates and Non-Cognates	Armina Janyan, Ivo Popivanov, Elena Andonova	
130	Statistical Co-Learning of Visual and Linguistic Regularities to Improve Word-Learning	Brian Riordan, Chen Yu	1962
131	Mutual Exclusivity in Adjective Learning: the Case of Bilingual Children and Monolingual Children	Hanako Yoshida, Megumi Kuwabara, Maria Guerrero	1963

Mod	eling and Experimental Approaches to Cognitivie Processing	Friday, July 25 • 5:00-7:00 PM Exhibit Hall	Pg No. on CD
132	The Amorphous Fixation Measure Revisited: With Applications to Autism	Frederick Shic, Katarzyna Chawarska, Brian Scassellati	1964
133	The Phylogenetic Roots of Cognitive Dissonance	Jennifer Vonk, Samantha West, Stephanie E. Jett	1970
134	Predicting Cognitive Driver Distraction With Threaded Cognition Theory	Dario D. Salvucci, Joanna Beltowska	1971
135	A Graphical Chunk Production Model: Evaluation Using Graphical Protocol Analysis With Artificial Sentences	Peter C-H. Cheng, Hector Rojas-Anaya	1972
136	When Do Standard Approaches for Measuring Vocabulary Difficulty, Syntactic Complexity and Referential Cohesion Yield Biased Estimates of Text Difficulty?	Kathleen M. Sheehan, Irene Kostin, Yoko Futagi	1978
137	The Interaction Between Information and Intonation Structure: Prosodic Marking of Theme and Rheme	Max Louwerse, Patrick Jeuniaux, Bin Zhang, Jie Wu, Ehsan Hoque	1984
138	Perception of Direction and Its Influence on Geometric Discoveries	Francisco Lara-Dammer, Douglas R. Hofstadter	1990
139	Storage and Recall in Simple Recurrent Neural Networks	Christo N. Kirov	1995
140	One of These Greebles is Not Like the Others: Semi-Supervised Models for Similarity Structures	Rachel Stephens, Daniel Navarro	1996
141	How Perception and Mapping Interact During the Analogy- Making Process and the Process of Reinterpretation	Boicho Kokinov, Svetlin Kosev	2002
142	A Fast Computational Model of Analogical Retrieval (And Mapping)	Dervla O'Keeffe, Fintan Costello	2003
143	Timecourse of Recovery From Interruptions: Searching for Common Trends Across Multiple Environments	David Cades, Raj Ratwani, J. Gregory Trafton, Deborah Boehm-Davis	2009
144	Toward a Model of Differential Influence in Discussions: Negotiating Quality, Authority, and Access Within a Heated Student Argument	Randi A. Engle, Jennifer Langer-Osuna, Maxine Mckinney De Royston	2010
145	An Integrated Model of Action Video Game Play	Marc Destefano, Wayne D. Gray	2016
146	Individual Differences in Sustained Vigilant Attention: Insights From Computational Cognitive Modeling	Glenn Gunzelmann, L. Richard Moore, Kevin A. Gluck, Hans P. A. Van Dongen, David F. Dinges	2017
147	Spatial Modeling Using a Bimodal Cognitive Architecture	Unmesh Kurup, B Chandrasekaran	2023
148	A Computational Model of Repetition Blindness Using a Liquid State Machine	Patrick Michael Hynes, Ronan Reilly	2024
149	A Single Layer Network Model of Center Embedding and Hierarchical Phrase Structure in Sentence Processing	Simon Dennis, Dennis Mehay	
150	Computational Perception of Sizes	Julia Taylor, Lawrence Mazlack	2025
151	The Speed/Accuracy Tradeoff in Estimating Means: the Role of Data Characteristics	Bradley Morris, Anty Masnick, Christa Natschke, Adrianne Spenner, Stephanie Hammond, Deardra Kearney	2026
152	An Analysis of the Human Processing of Verbal Humour through Eye-Tracking Experiments	Rada Mihalcea, Stephen Pulman, Vanja Kovic, Kim Plunkett	
153	Discrete Measurement of Sensory Information Using Bayesian Networks	Chris Thornton	2027

Spati	al Cognition	Friday, July 25	• 5:00-7:00 PM	Exhibit Hall	Pg No. on CD
154	Effects of Social Information on Distance Es	stimation	Justin L. Matthews, Teen	nie Matlock	2028
155	Encoding Spatial Layout in the Dark: Robus Spatial Learning	stness of Visual	Naohide Yamamoto, Joh	n W. Philbeck	2029
156	The Impact of Attentional Shifts on Spatial I Childhood	Memory in Early	Anne R. Schutte, Brian K Chelsie Kobza-Guerrero		2030
157	The Integration of Spatial Information Across Perspectives	ss Different	Jan M. Wiener, Tobias M	feilinger, Alain Berthoz	2031
158	Segmention of Inside-Outside Relations and Contours in the Parietal Lobes	l Complex	Nabeela Akhtar, M Jane Glyn W W. Humphreys	J. Riddoch,	2037
159	The Role of Animacy in Imagined Spatial To	ransformations	Alfred B. Yu, Jeffrey M. 2	Zacks	2038
160	Spatial Location Uncertainty As Modifier of Asymmetries	Attentional	Dariusz Asanowicz, Piot	tr Wolski	2039
161	Pointing Out the Role of Gesture in Spatial I	Development	Megan Sauter, David Ut Susan Goldin-Meadow, S		2040
162	How Visual Information Affects a Spatial Ta	ısk	Peter Khooshabeh, Mar	y Hegarty	2041
163	Spatial Skills As Predictors of Geometry Ac	hievement	Yvonne S. Kao, John R. A	Anderson	2047
164	You Drive All the Way to?!! Effects of Pro Environment and Travel Patterns on Spatial		Penney Nichols-Whitehe Paige Werner, Tara Ama Tiffany Rowe		2048
165	The Relationship Between the Perception of and Spatial Memory	Symmetry	Margaret R. Ortmann, A	Inne R. Schutte	2049
166	Mental Rotations and Spatial Cognition: Co Between Vision and Touch	mparisons	André F. Caissie, Lucette Yannick Blandin	e Toussaint,	2050
167	Spatial Reasoning in Cognitive Architecture	s	Michael Matessa		2051
168	Around the World in 80 Steps or How to Re From Within	present Space	Brian Milligan, Jun Luo		2052
169	Spatial Cognition in Different Spaces		Harry Haroutioun Hala Carlos Montemayor	djian,	2058
170	Regularities of Shapes in Visuospatial Imag Evidence from Drawings	ination:	Jim Davies		

### **NOTES:**

## CogSci 2008 Poster Session III

High	er-Order Cognition: Problem Solving, Reasoning, and Decision Saturday, July 26, 2008		Pg No. on CD
1	Faith: Serving Emotional Epistemic Goals Rather than Evidence-Coherence	Thomas D. Griffin	2059
2	Bayesian Modeling of Human Sequential Decision-Making on the Multi-Armed Bandit Problem	Daniel Acuna, Paul Schrater	2065
3	Investigating Distributed Decisions Using Bandit Problem Environments	Sheng Kung Michael Yi	2071
4	Mistaking the Instance for the Rule: a Critical Analysis of the Truth-Table Paradigm and Implications for Theories of Conditional Reasoning	Walter Schroyens	2077
5	Activation Or Inhibition? Why Reasoners Are Not Blind for Alternative Explanations	Katja Mehlhorn, Martin R. K. Baumann, Franziska Bocklisch	2083
6	Ageing, Plasticity, and Cognitive Reserve in Connectionist Networks	Michael S. C. Thomas	2089
7	Problem Representations in Multitasking: an Additional Cognitive Bottleneck	Jelmer P. Borst, Niels A. Taatgen, Hedderik Van Rijn	2095
8	Incongruity of Premise Content and Type Affects Reasoning Performance	Sharon Lee Armstrong	2096
9	Modeling Ancient and Modern Arithmetic Practices: Addition and Multiplication With Arabic and Roman Numerals	Dirk Schlimm, Hansjoerg Neth	2097
10	Understanding Complex Problem Solving: the Case of Ethics Decision-Making	Russell W. Robbins, William A. Wallace	2103
10	Deontic Reasoning Squared	Sieghard Beller	2104
11	How the Appearance of an Operator Affects Its Mathematical Precedence	David H. Landy, Michael N. Jones, Robert L. Goldstone	2110
13	A Critical Review of Thinking about What is True, Possible and Irrelevant in Reasoning From Or Reasoning about Conditional Propositions	Walter Schroyens	2116
14	Goal-Driven Hypothesis Testing in a Rule Discovery Task	Frederic Vallee-Tourangeau, Teresa Payton	2122
15	Illusory Inferences about Embedded Disjunctions	Sangeet Khemlani, Philip Johnson-Laird	2128
16	Coincidences and the Encounter Problem: a Formal Account	Jean-Louis Dessalles	2134
17	Questioning Chase and Simon's (1973) Perception in Chess	Alexandre Linhares	2140
18	Distributed Cooknition: Problem Solving in Professional Kitchens	Aras Bilgen, Nancy J. Nersessian, Wendy C. Newstetter	2141
19	The Potential of Collaboration and Knowledge Awareness for Supporting Analogical Problem Solving	Antonia Baumeister, Tanja Engelmann, Friedrich W. Hesse	
20	The Relationship Between Self-Reflection and Performance on Cognitive Tasks	Xu Xu	2142
21	Meaning Negotiation and Situational Interest:	Marco Cruciani	2143

Infor	mation Processing in Problem Solving and Language Tasks Saturday, July 26, 2008	• 5:30-7:00 PM	Pg No. on CD
22	Complex-Arithmetic Problem Solving: Differences Among Belgians, Canadians, and Chinese	Ineke Imbo, Jo-Anne Lefevre	2144
23	The Production of Free Standing and Bound Morphemes in Language Production: a Task Comparison	Niels Janssen, Niels Schiller, FXavier Alario	2150
24	Does Verbalization Always Impair Insight Problem Solving?	Sachiko Kiyokawa, Mariko Kirihara	2151
25	The Difference in Brain Activity by the Difference in Reading Speed: A Psychological Experiment and NIRS Measurements	Kazuhiro Ueda, Naoya Kato, Haruaki Fukuda, Toyofumi Sasaki, Masaharu Kato	2152
26	Entropy and Set Size in Free Association	Lance W. Hahn	2153
27	Effects of Constituency on the Processing of Lexicalized and Novel Compound Words	Robert Fiorentino, Ella M. Fund-Reznicek	2154
28	Is It Better to Give than to Receive? the Assistance Dilemma As a Fundamental Unsolved Problem in the Cognitive Science of Learning and Instruction	Kenneth R. Koedinger, Phillip Pavlik, Bruce Mclaren, Vincent Aleven	2155
29	Concepts Are Not ?Webs of Sensation?: Evidence From Motion Words	Marina Bedny, Alfonso Caramazza, Emily Grossman, Alvaro Pascual-Leone, Rebecca Saxe	2161
30	Evidence for the Early Detection of Voicing Mismatch in Obstruent Consonant Clusters	So-One Hwang, Philip J. Monahan, William J. Idsardi	2167
31	An Act-R Representation of Information Processing in Autism	Michael Matessa	2168
32	Brain Interactions of Language and Attention: Neurocomputational and Neurophysiological Studies	Max Garagnani, Yury Shtyrov, Thomas Wennekers, Friedemann Pulvermüller	2174
33	How Do Bilingual Speakers Deal With Phonological Similarity Across Languages? an Investigation of Syllable Production Processes: Syllable Production in Bilingual Speakers	FXavier Alario, Violaine Michel, Carla Castellano, Jeremy Goslin, Marina Laganaro	2175
34	When and How Often Should Worked Examples Be Given to Students? New Results and a Summary of the Current State of Research	Bruce M. Mclaren, Sung-Joo Lim, Kenneth R. Koedinger	2176
35	Phonological and Orthographic Consistency Effects in Cortex for Normal and Impaired Readers	Donald J. Bolger, Jennifer Minas, Fan Cao, Douglas D. Burman, James R. Booth	2182
36	Category Properties and the Category-Order Effect	Jordan Schoenherr, Robert H. Thomson	2183
37	Online Ill-structured Problem-solving Strategies	Serkan Toy, Dale Niederhauser	
38	Dissimilarity and Blending:Bases for the Concept - Synthesizing Process- Comparison Between the Linguistic Interpretation and Design Processes	Yukari Nagai, Futoshi Mukai, Toshiharu Taura	2189
39	Multimodal Text-graphics Comprehension: The Role of annotation position in causal attributions	Cengiz Acarturk, Christopher Habel	
40	When do Temporal Expectancies Guide Retrospective Judgments of Waiting Time?	Florian Klapproth	
41	When do Subjects Falsify?	Jonathan D. Nelson, Flavia Filimon, Garrison W. Cottrell	

Lang	uage Processing Saturday, July 26, 2008	• 5:30-7:00 PM	Pg No. on CD
42	A Connectionist Account of Grammatical Category Deficits in Aphasia	Christine E. Watson, David C. Plaut	2190
43	Prosodic Correlates of Linguistic and Extra-Linguistic Information in Dutch	Diana Dimitrova, Gisela Redeker, Markus Egg, John C. J. Hoeks	2191
44	Individual Differences in Language Processing: an Embodied Approach	Xu Xu	2197
45	Reversed Concreteness Effect and Differentiated Cognate Processing Determined by Direction of Translation and L2 Proficiency	Marina Hristova, Armina Janyan	2203
46	A Single-Mechanism Dual-Route Model of German Verb Inflection	Nicolas Ruh, Gert Westermann	2209
47	New Perspective for Verb Learning	Hanako Yoshida, Linda Smith, Brian Weisinger	2215
48	What Does a Shopper Expect to Save the Role of Event Knowledge in Verb Interpretation	David Race, Natalie Klein, Mary Hare, Michael Tanenhaus	2219
49	Online Expectations for Verbal Arguments Conditional on Event Knowledge	Klinton Bicknell, Jeffrey L. Elman, Mary Hare, Ken Mcrae, Marta Kutas	2220
50	Individuals Vary in the Conception of Input-Output Feature of Mental Processes	Xu Xu	2226
51	Event Knowledge Vs. Verb Knowledge	Jon A. Willits, Rachel Shirley Sussman, Michael S. Amato	2227
52	Dissociation Patterns Between Schizophrenic Patients and Their Controls in Theory of Mind and Language Comprehension Tasks	José M. Gavilán, José E. García-Albea	2233
53	Word Order in Japanese Sentences Biases the Interpretation of Ambiguity	Keiko Nakamoto	2234
54	Verb-Generation Priming is Based on Verb-Concept Selection and Verb Production	Eva M. De La Riva Lopez, Wendy S. Francis, Julisa Caraballo	2235
55	Schematisation of the Lexical Meanings: A Case Study	Mbame Nazaire	2236
56	Identifying Emotional Characteristics from Short Blog Texts	Alastair J. Gill, Robert M. French, Darren Gergle, Jon Oberlander	2237
57	Associative Interference Links Memory for Pairs with Memory for Serial Lists	Mayank Rehani, Jeremy B. Caplan	2243
58	Early and Late Effects of Morphological Decomposition: Brain correlates of family size effects on complex words and pseudowords	Miguel Lazaro, Javier S. Sainz	
59	Discourse Relations in Context: Structural Effects in the Comprehension of Texts	Eyal Sagi	2244
60	Position of Complements and Complementation Frames Within Lexical Representation of Verbs	Stanislava Antonijevic	2245
61	How Different Are Familiar Metaphors from Unfamiliar Ones?	Tomohiro Taira, Takashi Kusumi	2246
Spat	ial Cognition and Spatial Language Processing Saturday,	July 26, 2008 • 5:30-7:00 PM	Pg No. on CD
62	Hypothetical Drawing in Embodied Spatial Reasoning	Atsushi Shimojima, Yasuhiro Katagiri	2247
63	On the Path to Understanding the On-Line Processing of Grammatical Aspect	Sarah Anderson, Teenie Matlock, Caitlin Fausey, Michael Spivey	2253
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64	Using Diagrams to Design Information Systems	James E. Corter, Jeffrey V. Nickerson, Barbara Tversky, Doris Zahner, Yun Jin Rho	2259
65	Temporal Concepts and Frames of Reference: Thinking about Time Between Language and Space:	Alexander Kranjec, Laraine Mcdonough	2265
66	The Cognitive Plausibility of the Use of Cognitive Maps and the Mental Simulation of Others:	William G. Kennedy	2266
67	Comparing the Utility of Pairwise and Feature-Derived Similarity Measures for Generating Spatial Representations of Semantic Concepts:	Matthew J. Dry, Gert Storms	2267
68	The Influence of Perceptual Difficulty on Family Resemblance Sorting:	Fraser Milton, Andy Wills	2273
69	Good Times, Bad Times: Valence Influences the Adoption of Spatio-Temporal Metaphors	Christopher H. Ramey, Evangelia G Chrysikou, Christopher H Ramey	2279
70	Role of Imagistic Simulation in Creative Scientific Thought Experiments	John J. Clement	2280
71	A Model of Language Processing and Spatial Reasoning Using Skill Acquisition to Situate Action	Scott Douglass, John Anderson	2281
72	Integrating Semantic and Visual Aspects of Online Information Search	Hansjoerg Neth, Evan W. Patton, Steven Banas, Michael J. Schoelles, Wayne D. Gray	2287
73	Structured Meme Theory: How is Informational Inheritance Maintained?	Makoto Toyota, Muneo Kitajima, Hideaki Shimada	2288
74	Aptness is a Bear: Evaluating the Relationship Between Metaphor Quality and Metaphor Comprehension	Brian F. Bowdle	2289
75	The Thermal Qualities of Substance: a Cross-Cultural Account	Srini Narayanan	2290
76	Multimodal Characterization of Breast Cancer Screening Anomalies	Monica Gemo, Olga Vybornova, Benoit Macq	2296
Mem	ory Saturday, July 26, 2008	• 5:30-7:00 PM	Pg No. on CD
77	Working Memory Components in the Wisconsin Card Sorting Task	Pavel Sergey Grebenkov, Jobina Li, Gordon Griffiths, Arman Tajarobi, Abeer Mourad	2297
78	Expertise in a Map Reading Task: the Role of Schemas in the Processing of Topographical Relief Information	Robin Kent, Peter Cheng	2298
79	A Working Memory Simulator for Computational Estimation of Cognitive Load During Learning	François Courtemanche, André Mayers, Mehdi Najjar	2304
80	Memory Processes in Perceptual Decision Making	Manish Saggar, Risto Miikkulainen, David M. Schnyer	2310
81	Practice Effects on Interruption Tolerance in Algebraic Problem-Solving	Diana Woelki, Antti Oulasvirta, Jürgen Kiefer, Robert Lischke	2316
82	Learning From Scrolling Interfaces: Interactions with Working Memory Capacity	Christopher A. Sanchez, Jennifer Wiley	2322
83	Learning Correct Responses and Errors in the Hebb Repetition Paradigm	Daniel Lafond, Mathieu Couture, Sébastien Tremblay	2323
84	Computational Modelling of Mental Imagery in Chess: A Sensitivity Analysis	Fernand Gobet, Andrew J. Waters	2324
85	Induction and Recollection in Explicit and Implicit Category Learning	Michael Romano	2330

86	Investigating Limited Perception Effects from a Cognitive Science Perspective	Eshaa Alkhalifa	2331
87	Crossover Effect As Observed in Individuals with Learning Disabilities	Beth M. Hartzler, Richard B. Anderson, Frederick Parente, Bryan Devan, Herbert Petri	2336
88	Linking Target Estimation and Cued Recall Through Common Working and Long Term Memory Processes	Evelina Dineva, John P. Spencer	2337
89	Can Unsuccessful Tests Enhance Learning?	Lindsey Richland, Liche Sean Kao, Nate Kornell	2338
90	The Influence of Stimulus Frequencies and Task Instruction in Artificial Grammar Learning	Fenna Poletiek, Nick Chater	
91	From List Learning to Semantic Knowledge: Search and Learning of Associative Memory	Greg E. Cox, J. Isaiah Harbison, Eddy J. Davelaar	2344
92	Crossmodal Binding in Working Memory	Anne T. Gilman, Colin Ware	2350
93	Remembrance of Things Tagged: How tagging affects human information processing	Raluca Budiu, Peter Pirolli, Lichan Hong	
Pers	pectives on Learning Saturday, July 26, 2008	• 5:30-7:00 PM	Pg No. on CD
94	The Role of Prior Knowledge and System Structure on Self-Regulated Learning With Hypermedia	Roger Azevedo, Amy M. Witherspoon, Gwyneth Lewis, Emily Siler	2351
95	The Role of Integration Scaffolding in Learners' Self-Regulated Learning With Multiple External Representations	Ainy Witherspoon, Roger Azevedo	2352
96	Does a Lack of Contiguity With Visual Text Cause the Modality Effect in Multimedia Learning?	Anne Schueler, Katharina Scheiter, Peter Gerjets, Ralf Rummer	2353
97	Adolescents' Use of Multiple Representations of Information in Self-Regulated and Externally-Regulated Learning with Hypermedia	Amy Witherspoon, Roger Azevedo, Gwyneth Lewis	2359
98	Coordinating Principles and Examples Through Analogy and Explanation	Timothy J. Nokes, Kurt Vanlehn, Daniel M. Belenky	2365
99	Perceptual Learning in Mathematics Education	Ji Son, Christine Massey, Zipora Roth, Warren Longmire, Timothy Burke, Joel Zucker, Philip J. Kellman	2366
100	Students' Beliefs about Learning English as a Foreign Language	Raquel G Garcia Jurado	2367
101	Learning Disabled Students, Metacognition, and Informative Writing	Delayne Connor	2368
102	Are Self-Explaining and Coached Problem Solving More Effective When Done by Pairs of Students than Alone?	Robert G.M. Hausmann, Brett Van De Sande, Kurt Vanlehn	2369
103	The Effects of Feedback Elaboration on the Giver of Feedback	Ryan S. Wooley, Christopher A. Was, Christian D. Schunn, David W. Dalton	2375
104	Using Teachable Agent Feedback to Support Effective Learning by Teaching	Rod Roscoe, John Wagster, Gautam Biswas	2381
105	The Effect of Concrete and Abstract Manipulatives on Efficient and Innovative Learning	Daniel Belenky, Timothy J. Nokes	2387
106	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	Adélaïde Blavier, Anne-Sophie Nyssen	2388
107	Designing Structured Invention Tasks to Prepare for Future Learning	Ido Roll, Vincent Aleven, Kenneth R. Koedinger	2394
108	Using Self-Explanation to Improve Algebra Learning	Julie L. Booth, Kenneth R. Koedinger, Robert S. Siegler	2395
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Objec	et and Scene Perception Saturday, July 26, 200	08 • 5:30-7:00 PM	Pg No. on CD
109	The Seduction of Symmetry: Bias in the Manual Rotation of a Virtual Object	Andrew T. Stull, Mary Hegarty, Richard E. Mayer	2396
110	Effects of Action Orientation on Coping With Negativity in Prisoners Dilemma Game Playing	Gergana Kusmova, Evgenia Hristova, Maurice Grinberg	2397
111	Incremental Syntactic Disambiguation Using Depicted Events: Plausibility, Co-Presence and Dynamic Presentation	Emilia Ellsiepen, Pia Knoeferle, Matthew W. Crocker	2398
112	Adapting Referring Expressions to the Task Environment	Markus Guhe, Ellen Gurman Bard	2404
113	Active Object Exploration in Toddlers and Its Role in Visual Object Recognition	Alfredo F. Pereira, Karin H. James, Susan S. Jones, Linda B. Smith	2410
114	Processing of First- Vs. Third-Person Narratives	Tristan C. Thomte, Herbert H. Clark	2416
115	Effects of Handedness and Orientation on Tool Naming and Use	Evangelia G. Chrysikou, Shannon Fouse, Sharon L. Thompson-Schill	2417
116	The Recruitment of Language in the Perception of Objects	Kevin J. Holmes, Laura L. Namy, Phillip Wolff	2418
117	Manipulating Sudoku Strategies	Michael Schoelles, Hansjorg Neth, Alison Dennis, Wayne D. Gray	2419
118	Object-Specific Preview Benefit and Multiple Object Tracking: Priming Effects Enhanced During Active Tracking for Both English Letters and Unfamiliar Symbols	Harry Haroutioun Haladjian, Zenon W. Pylyshyn	2420
119	Motivating Use of an Object-Centered Frame of Reference:	Laurie E. Robinette, Michele I. Feist, Michael Kalish	2421
120	The Task Structures the Response: Reference Frame Alignment in Toddlers Emerging Object Search Strategies	Lynn K. Perry, Larissa K. Samuelson, John P. Spencer	2422
121	Cultural Differences in Cognitive Processing Style: Evidence From Eye Movements During Scene Processing	Zihui Lu, Meredyth Daneman, Eyal M. Reingold	2428
122	Theory of Mind and Automatic Processing	Adam Scott Cohen, Tamsin C. German	2433
123	Remembering When Words Are Mutually Exclusive	Emily Mather, Kim Plunkett	2434
124	Seeing Heaviness	Matthew Streit, Kevin Shockley, Michael A. Riley	2440
125	Efficient Expression of 2d Shapes Using Points in Consideration of Human Visual Characteristics	Hiroyo Ishikawa, Hideo Saito	2445
Othe	r Agents, Social Cognition, and Emotion Saturday, July	26, 2008 • 5:30-7:00 PM Exhibit Hall	Pg No on CI
126	Sarcastic Synchronization: Simultaneous Acoustic and Pragmatic Alignment in Pseudo-Interaction	Jennifer Roche, Rick Dale, Gina Caucci	2446
127	Determinants of ?Change Deafness? Rates in an Ecologically Valid Social Scenario	Thomas A. Farmer, Melanie Hamel, Kat Kgres, Sheena Rogers	2447
128	Cascade Effect in Perceiving Onset Timings of Others' Responses and Feeling about Communication	Yuichiro Yoshikawa, Kazunori Yamauchi, Hiroshi Ishiguro	2448
129	Benefits of Using Empirical Data in the Hci Design Process	Sarah Kriz, J. Gregory Trafton	2454
130	Social Responses to Collaborator: Dilemma Game with Human and Computer Agent	Kazuhisa Miwa, Hitoshi Terai, Satoshi Hirose	245
131	Cognitive Knowledge, Skills, Abilities and Others (Ksaos) Extracted From Corporate Mbo Data	Kohei Noda, Micihtsugu Yamauchi, Daisaku Kitamura	246
132	Tuning in to Another Agent's Action Capabilities	Tehran Davis, Veronica C. Ramenzoni, Kevin Shockley, Michael A. Riley	2462

133	Motion Behavior and Its Influence on Human-Likeness in an Android Robot	Michihiro Shimada, Hiroshi Ishiguro	2468
134	Motor Dynamics of Task Switching	Nicholas C. Hindy, Michael J. Spivey	2474
135	The Difference in the Manner of Interacting with a Moving Robot Influences Animacy Perception	Haruaki Fukuda, Kazuhiro Ueda	2480
136	Introducing Emotions in an Analogy-Making Model	Ivan Vankov, Kiril Kiryazov, Maurice Grinberg	2485
137	Coordination and Self-Similarity of Verbal and Nonverbal Behaviors During Face-To-Face Dyadic Conversation	Kathleen T. Ashenfelter, Steven Boker, Jennifer Waddell	2491
138	People's Interpretations of Agents' Attitude From Artificial Sounds Expressed by Agents With Different Appearances	Takanori Komatsu, Seiji Yamada	2492
139	A Robot's Experience of Another Robot: Simulation	Tibor Bosse, Johan F. Hoorn, Matthijs Pontier, Ghazanfar F. Siddiqui	2498
140	A Robot's Experience of Its User: Theory	Johan F. Hoorn	2504
141	Examining the Level of Aggression in Italian Professional Soccer	Franco Zengaro, Sally Zengaro, Asghar Iran-Nejad	2510
142	Associative Symmetry Generalizes to Asymmetric Pairs	Christopher R. Madan, Mackenzie G. Glaholt, Jeremy B. Caplan	2511
143	What Goes on in a Meeting? An Empirical Study	Nik Nailah Binti Abdullah, Elia Tomadaki, Peter Scott, Shinichi Honiden	2512
144	A Gestalt-Base Knowledge Representation for Controlling Cognitive Biases	Fumihito Ikeda	2513
145	Towards a Workload-Performance Prediction Tool	Daniel N. Cassenti, Troy Kelley	2514
146	The Regulatory Self of the Extended Mind	Hsi-Wen Daniel Liu	2515
147	The Cognitive Science of Affect: Toward a Biological Embodiment Perspective	Asghar Iran-Nejad	2516
148	Hunting Harvey: Imaginary Companion Analogs in Adults	Deborah J. O. Hendersen	2517
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### **NOTES:**

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