Abstracts
OF THE PSYCHONOMIC SOCIETY

39th Annual Meeting

Wyndham Anatole Hotel
2201 Stemmons Freeway
Dallas, Texas 75207

Special Events/Announcements

REGISTRATION
Thursday, 4:30 p.m. – 8:30 p.m., Atrium Registration Area
Friday, 7:30 a.m. – 5:00 p.m., Atrium Registration Area
Saturday, 7:30 a.m. – 3:00 p.m., Atrium Registration Area

SYMPOSIA
Functional Bases of Pavlovian Conditioning
Friday, 1:00 p.m. – 3:15 p.m., Monet Ballroom
The Grand Illusion: Perception as Less Than Meets the Eye
Saturday, 1:30 p.m. – 3:45 p.m., Grand Ballroom E

POSTER SESSIONS
Session I: Thursday, 7:00 p.m. – 8:30 p.m., Khmer Pavilion
Session II: Friday, 5:30 p.m. – 7:00 p.m., Khmer Pavilion
Session III: Saturday, noon – 1:30 p.m., Khmer Pavilion
Session IV: Saturday, 6:00 p.m. – 7:30 p.m., Khmer Pavilion
Authors will be at their posters during the four session times. Posters will be available for viewing from 7:00 p.m. Thursday evening to noon on Friday (Poster Session I), 3:00 p.m. Friday to 9:00 p.m. Friday (Poster Session II), from 9:00 a.m. Saturday to 1:30 p.m. Saturday (Poster Session III), and from 3:00 p.m. Saturday to 9:00 p.m. Saturday (Poster Session IV).

BUSINESS MEETING
Saturday, 5:40 p.m. – 6:00 p.m., Metropolitan Ballroom

HOSPITALITY
Thursday, 6:30 p.m. – 8:00 p.m., Khmer Pavilion
Friday, 5:30 p.m. – 7:00 p.m., Khmer Pavilion
Saturday, 6:00 p.m. – 7:30 p.m., Khmer Pavilion

FUTURE MEETINGS
1999 Los Angeles, November 18–21
2000 New Orleans, November 16–19

Vol. 3 • November 1998
HOTEL

The Wyndham Anatole Hotel, 2201 Stemmons Freeway (I-35), Dallas, TX 75205 (214-678-1700) will be the meeting site. A room reservation form is included in this mailing. It is very important that you make your room reservation as early as possible. In order to ensure room availability, your reservation should be received by the Anatole by October 16, 1998. Either return the enclosed form, call the reservation department at 214-761-7500, or fax 214-761-7807. Be sure to mention that you are with the Psychonomic Society meeting to obtain the S15 single or double room rate. Also be sure to obtain a confirmation number from the hotel.

TRAVEL TO AND FROM DALLAS

Conventions in America, our official travel agency, will provide discounts on travel to and from Dallas. You will receive 5%-10% off the lowest available fares on American Airlines and Southwest Airlines. Ask for the lowest available fare on any other carrier. Take an additional 5% off American if you purchase at least 10 days prior to your departure. Travel between November 14 and 27, 1998. All CTA customers receive free flight insurance of $100,000. Avis Rent A Car is offering special rates starting as low as $44.95/day or $183.90/week, with unlimited mileage.

To obtain these rates, call Conventions in America (CTA) at 1-800-892-4422, ask for Group #528. Outside U.S. & Canada, call 619-453-3088/fax 619-453-7976. Reservation hours: M-F 8:30 a.m. - 3:00 p.m. Pacific time. Visit their website: www.wtrav.com. If you prefer to call direct, refer to these codes: American 1-800-453-1970, Starfile 800-282-8101, Southwest 1-800-366-6700, Delta 1-800-241-3311, AMEX 1-800-967-6500, JAL 00040926.

The cost of a cab from the Dallas-Fort Worth Airport is approximately $30.00 and from Love Field (Southwest Airlines) is $11.00. The Super Shuttle from DFW is $11.00 one way. Parking at the Anatole is free.

REGISTRATION

Registration is free and will be held at the Atirum Registration Area near the Grand Ballroom. Please register. Preprinted name tags will be available for those listed as a presenter in the program. Presenters with a preprinted name tag should fill out a registration card so that the Society may obtain an accurate count of the number of attendees, and information on where individuals are staying.

PROGRAMS

Please bring your program with you. Additional programs will be available at the registration desk for $10.00. Programs may also be purchased in advance by sending a check or bank draft in U.S. funds (made out to the Psychonomic Society) to: Program, Psychonomic Society, 1710 Fort Worth Rd., Austin, TX 78704. The cost of an advance program is $9.00, or $12.00 for addresses outside North America.

MEETING ROOMS

Meeting rooms are located on the lobby and mezzanine levels of the hotel. Poster sessions will be held on the 3rd level. A map showing the locations of these meeting rooms is provided on page 14.
GENERAL INFORMATION

CONFERENCE ORGANIZATION
This year the Psychonomic Society has contracted with a conference organizing group, Conferent Inc., to aid in conference planning and meeting organization. Your hotel room rate includes a small fee ($2.00) to help cover the cost of this service.

OTHER MEETINGS
Participants may be interested in the following meetings scheduled at the Anatole (except for the Symposium on Attention and Memory) immediately prior to or following the Psychonomic Society meeting:
• Society for Computers in Psychology
  Thursday, November 19 (see p. iii)
  (contact: Chris Coyle, CS1 Fullerton, 714-258-5338;
  e-mail: ccoyle@fullerton.edu)
• Judgment/Decision Making Society
  Sunday afternoon and Monday, November 22 and 23
  (contact: Colleen P. Moore/RJM, 1202 W. Johnson St.,
  Madison, WI 53706; e-mail: cmuore@facstaff.wisc.edu)
• Object Perception and Memory (OPAM)
  Thursday, November 19
  (contact: Alice J. O'Toole, e-mail: eotool@udallas.edu;
  and Dan Levin, e-mail: dlevin@kent.edu)
• Facile Research Group
  Thursday, November 19
  (contact: David Horner, Univ. of Wisconsin-Oshkosh,
  920-424-2328; e-mail: dhorner@uwosh.edu)
• Symposium on Attention and Memory
  Hughes-Trigg Student Ctr. at Southern Methodist Univ.
  Thursday, November 19
  (contact: Neil Mulligan, SMU, 214-768-4385;
  e-mail: nmulligan@smu.edu)

OFFICERS OF THE SOCIETY
Chair
Robert killacky (1998)
Rogelio Molina (1996-2001)
Secretary/Treasurer
Rogelio Molina (1998-2001)
Governing Board
James Neely (1994-1999)
Marion Gershon (1996-2001)
Keith Landy (1996-2001)
Randi Martin (1997-2002)
The names of two new members elected to the Governing Board for 1999-2000 will be announced at the Business Meeting on Saturday, November 21.

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Send Registration to:
P. Chris Cozby
Psychology Department
P. O. Box 6846
CSU Fullerton
Fullerton, CA 92834-6846

See the program description on the following page
Society for Computers in Psychology
28th Annual Meeting in Dallas

1998 Program Highlights

World-Wide Web Applications:
  Teaching on the Web
  Web Experiments
  Design and Use of Online Information Resources
  Tutorial on Creating Web Materials
Computers in Undergraduate Laboratories
Computers in Cognitive Research
Computers in Clinical Psychology
Computers in Teaching Statistics
and Research Methods

Presidential Address:
Douglas Eamon
"Distance Education: Has Technology Become a Threat to the Academy?"

Keynote Speaker: Tom Landauer
"How Modern Computation Can Turn Cognitive Psychology into a Real Science"

Invited Symposia:
  Head-mounted Eyetracking: A New Technique for Experimental Psychology Theories
  Applications of High-Dimensional Semantic Models

Commercial Demonstrations and Vendor Displays

Registration Form on the Previous Page

For more information, visit the SCiP Web page:
http://www.lafayette.edu/allanr/scip.html
<table>
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<tr>
<th>Time</th>
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<td>Touch (92-162)</td>
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<td>Language/Dialogue Processing (103-107)</td>
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<td>Cognition (113-118)</td>
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<td>Neuropsychology and Learned (119-124)</td>
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<td>Attention: Spatial and Temporal Representations (125-129)</td>
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<td>Repetition/Printing Effects I (141-145)</td>
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<td>Attention: Psychological Refractory Period and Dual-Task Performance (156-166)</td>
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<td>False Memories (174-179)</td>
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<td>Invited Symposium: Functional Bases of Pavlovian Conditioning (186-191)</td>
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<td>Attentions to Objects and Features (226-228)</td>
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SCHEDULE C

SATURDAY AFTERNOON

Information Processing II (491-494), Grand Ballroom A
1:36-2:10 Remington, Rothwell, & Johnson (491)
1:25-2:10 Fagan, Holland, & Davis (492)
1:25-2:10 Geisler, Albert, Kastens, Bashore, & Hadius (493)
1:25-2:10 Kastens (494)

Speech Perception (495-506), Grand Ballroom D
1:30-2:30 Baldauf & Marston-Wilson (495)
1:55-2:10 Roeder, Shaver, & Chase (496)
1:55-2:10 Sawoch, Menier, & Gagnon (497)
2:20-2:30 Nishimura & Francis (498)
3:00-3:15 Ngayand & Quenn (499)
3:20-3:40 Vitale & Lane (500)

Invited Symposia: The Grand Illusion: Perception as Less Than Meets the Eye (501-507), Grand Ballroom E
1:30-1:35 Palmer (501)
1:35-1:50 Rossetti (502)
1:55-2:10 Smet & Lewis (503)
1:55-2:10 Smet & Lewis (504)
2:10-2:30 Irwin (505)
2:20-3:20 Di Lollo & Enns (506)
2:25-3:30 Mack (507)
2:30-3:30 Wolf (507)

Human Learning/Memory II (508-513), Metropolitan Ballroom
1:30-1:45 Jo, Leka, Chang, & Wilson (508)
1:30-1:45 Levi, Grieve, & Willison (509)
1:30-1:45 Levi, Grieve, & Willison (510)
1:40-2:00 Ericsson (510)
1:45-2:30 Howse & Wadsworth (511)
1:50-2:10 Shea & Wolf (512)
1:55-2:30 Schweickert & Purves (512)

Animal Cognition II (514-518), Monist Ballroom
1:30-1:45 Pisig, Young, Wasserman, & Bieredman (514)
1:30-1:45 Shanks, Philpott, & Waisman (515)
1:30-1:45 Gery & Karpi (516)
1:30-1:45 Clowes, Weissner, Shoben, & Zentall (517)
1:30-1:45 Cook, Kelli, & Katz (518)

Judgment/Decision Making II (519-523), Grand Ballroom B
1:30-1:45 Lewin, Gaeth, Schneider, Philip, & Redlich (519)
1:40-2:00 Schneider & Washburn (520)
1:45-2:10 Wolman & Gu (521)
2:00-2:10 Catanese & Guillaume (522)
2:55-3:00 Freedman, Brinten, Woodrow, & Verrano (523)

Perception: Audition (524-529), Grand Ballroom A
3:15-3:25 Wright, Riera, Huber, Shayan, & Nusworth (524)
3:30-3:50 Ristow, Kollin, Whittier, Leman, & Naugel (525)
3:55-4:10 Fagan & Strelcyk (526)
4:15-4:30 Raymon & D'Ossantos (527)
4:35-4:55 Neff (528)
4:50-5:05 Mcbath & Wyan (529)

Letter/Writing Processing III (530-534), Grand Ballroom D
4:40-4:55 Bolsta, Correa, Watson, & Stavros (530)
4:55-5:05 Lederberg, Gilchrist, & Irwin (531)
4:55-5:05 Fonten, Davies, & Lewis (532)
5:00-5:15 Gorlen & Mertan (533)
5:10-5:20 Feldman (534)

Picture Memory/Processing III (535-538), Grand Ballroom E
4:00-4:20 McKeon & Bar (536)
4:25-4:50 Bickner & Scarty (536)
4:55-5:05 Sarnicki (537)
5:10-5:20 Taylor & Scott (538)

Implicit Memory (539-542), Metropolitan Ballroom
4:00-4:20 Robin (539)
4:25-4:40 Kremen, Wells, & Stamos (540)
4:45-5:05 Muen, Sinistro, Peel, & Koeh (541)
5:00-5:15 Barber & Weppler (542)

Attention III (543-548), Monist Ballroom
2:30-2:40 Dowler, Han, & Lu (543)
2:45-3:00 Davis & Peterson (544)
3:05-3:15 Wolfe (545)
3:20-3:40 Goeke, Anthony, Dewar, & Schiklich (547)
3:50-4:15 Tschak & Kuhl (548)

Judgment/Decision Making III (549-553), Grand Ballroom B
3:30-3:50 Chastek & Bulcke (549)
3:35-3:50 Irasova & Resta (550)
3:40-3:50 Wang (551)
3:45-3:50 Weil & Schor (552)
3:50-3:55 Steger, Bruce, & Dobbins (553)

POSTER SESSION IV (554-651), KEMNER PATOMEN

SATURDAY EVENING, 6:00-7:30
CONSENSUS SCHEDULE C

SUNDAY MORNING

Posters 1–10
Thursday Evening

Papers and Posters Presented at the 39th Annual Meeting of the Psychonomic Society
Wyndham Anatole Hotel, Dallas, Texas
November 19-22, 1998

POSTER SESSION I
Kimmer Pavlica, Thursday, Evening, 7:00-9:30

**VISION**

(1) Syntactic Constraints in Early Word Perception. WILLIAM T. FARRAR IV, Arizona State University—Many researchers have sug- gested that syntactic constraints affect language comprehension only after word perception has been completed. The set of studies pre- sented here manipulate readers' reading strategies in a lexical deci- sion task. Readers' response time was manipulated by presenting some words before their target, and by systematically chang- ing the quality of the noun-verb filler items. These experiments suggest that syntactic constraints have a small influence on reader perfor- mance even during word perception.

(2) Modulation of Early ERPs by Spatial Attention and Figure-Ground Organization. SHAWN F. VIEIRA, University of Utah—Early N1 in response to the item was larger when the target appeared on an attended region and when the probes appeared on figure rather than background regions. These results indicate that both spatial attention and figure-ground organization may modulate sensory processing within visual cortex in a top- down manner.

(3) Multiple Sources and Unilateral Mechanism of Suppression in Visual Masking. CHARLES Q. WU, St. Louis—Using a variant of metacognitive masking, I demonstrate that the suppression mech- anism in visual masking is monococular. Based on this evidence, I suggest that in visual masking, many of the supposed sources of suppression, such as attentional and peripheral as well as other biconocu- late, could converge at a local cortical site (layer 4C) and then project to the extrastriate cortex. Further, I suggest that the neural mechanism directly respon- sible for masking suppression within each visual processing system is descortication.

(4) Perception of Visual Center of Mass. JAY D. FRIEDENBERG & BRIAN LIBBY, Michigan State University—Undergraduates estimated the vi- sual center of mass (C) between two black filled circles. Three size ratios (equal, unequal, and equal of larger circle (R)) divided by the radius of the smaller (r), and distances (D) employed. The physical equation C = D^2(1-r^2)/2r, provided a very good fit to the data when distances were between 1.5 and when the dimension- ality of the circles was one. Performance on this task suggests inter- nalization of this physical law.

(5) Near-Bilateral Symmetry Impairs Symmetry Discrimination. JUAN S. TIAN, NEC Research Institute, & ZHENG LIU, Rutgers University—Previous studies on bilateral symmetry discrimination found in performance of left and right-handers were nearly symmetrical. However, when we introduced asymmetry by smooth deformations, rather than random displacement, as was typical of the previous stud- ies, we found the opposite result—stimuli that were laterally symmet- rical incurred symmetry discrimination. This result held for dot pat- terns and human face stimuli. A computational model based on probability summation of local differences signals can account for these seemingly contradictory results.

(6) Memory for Relational Information across Eye Movements. LAURA A. CARLSON-RADVANSKY, University of Notre Dame—A structural description is a hierarchical representation that codes a visual stimulus in terms of its parts and their relations. Previous re- search focusing on the creation and retrieval of these descriptions has used the ability of image descriptions to be represented across eye movements. These experiments further support the naturalistic use of image descriptions by showing that relational information is also maintained across successes.

(7) “One More Time With Expression”—Recognition of Unfamiliar Faces. MICHAEL POSSENTIER, HERVE ADOL, & B. EDELMAN, University of Texas, Dallas (presented by B. Adol)—We present re- sults from experiments investigating the effect of different facial ex- pressions on unfamiliar face recognition. Four experiments were tested with one expression, one repeated expression, or multiple expressions in dif- ferent viewing angles, and found with a neutral expression. Subjective performance was better when faces were learned with multiple views, but no difference in recognition accuracy was observed between re- peated and multiexpression faces. We also evaluate a neural network's ability to simulate human subject's task.

**PERCEPTION**

(8) Face Superiority as a Function of Task Performance Measure. R. ROUW & A. BEATRICE DE GELDER, Tilburg University (spon- sored by Beatrice De Gelder)–Performance of the Face Superiority effect (relative advantage of normal over scrambled faces) by contrasting two tasks (visual vs. memory) and two performance measures (speed vs. accuracy). A 2X2X2 factorial of face to participant presented full face (memory condition) was more accurate for normal than for scrambled faces. In contrast, matching a face to a previously presented face (visual search) is faster with normal faces.

(9) Change Detection Without Awareness. IAN M. THORNTON, Mississippi State University—Studies of change blindness suggest that visual attention is required for the conscious perception of change. In four experiments we use modified change blindness tasks to demonstrate that sensitivity to change can exist in the absence of awareness and that such sen- sitivity does not appear to rely on the readout of attentional changes.

(10) The Roles of Differentiation and Integration in Face Discrimination. JEFFREY N. ROOSER, Northwestern University—We examined performance (sponsored by Roger Ratcliff) many of the functions of perceptual process- ing that arise from basic structural information over time. These models were tested with a choice response time paradigm in