



*The Tenth Annual*  
**STANFORD UNDERGRADUATE**  
**PSYCHOLOGY CONFERENCE**

*May 21-22, 2010*

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James L. McClelland DEPARTMENT OF PSYCHOLOGY STANFORD  
UNIVERSITY

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April 12, 2010

Greetings,

The Stanford Psychology Department is delighted to welcome you to the 10<sup>th</sup> Annual Stanford Undergraduate Psychology Conference. We take great pride in this conference, started by our undergraduate majors in 2001. We are particularly pleased the conference has grown to include outstanding undergraduates from across the nation and around the world.

Conferences like this one serve an important function by allowing young scientists to engage in all facets of the process involved in the creation and dissemination of new knowledge. The undergraduates organizing and participating in this meeting will each have the opportunity to acquire new scientific skills, both directly and through facilitating the work of other young scientists. The conference will provide an opportunity to present and discuss research findings, leverage the benefits of diverse perspectives from a community of scholars, and to begin the formation of networks that will serve as the groundwork for future discussions and collaborations.

The success of the Stanford Undergraduate Psychology Conference this year is due to the extraordinary efforts of Kyonne Isaac, the Executive Director of the conference, as well as Janet Bill, Lisa Yang, Ravneet Uberoi, and Lleyana Jack who serve collectively as the Team of Directors for this event. Thanks also go to twelve other students who helped review the abstracts that were submitted to the conference as well as Roz Grayson and George Slavich, the conference's founder, for their continued support each year.

My colleagues and I welcome all of you and wish you a stimulating and productive day.

Sincerely yours,

James L. McClelland  
Chair, Department of Psychology, Stanford University



DEPARTMENT OF PSYCHOLOGY  
STANFORD UNIVERSITY  
450 Serra Mall, Jordan Hall, Bldg. 420  
Stanford, California

May 21, 2010

Dear Presenters, Faculty, and Guests,

It is my pleasure and honor to welcome you to the Tenth Annual Stanford Undergraduate Psychology Conference (SUPC)! Thank you all for participating today and sharing your ideas and interests with everyone.

I have been impressed by the innovative ideas and dedication of the presenters just from reading the abstracts. Their strong interest in psychology and determination in doing excellent research inspire me to strive for further excellence in my own work. Their works pique my interest in other dimensions of psychology I have not explored.

Beyond the celebration of our 10<sup>th</sup> Anniversary with an unprecedented banquet dinner the evening before today's conference, this year was also a record-breaking one for abstract submissions. Only 118 of the strongest submissions were accepted, making this year the most competitive yet.

I feel extremely honored to share with you today the top undergraduate research in the nation, as well as the result of a year's planning and efforts from a highly-motivated group of Stanford students – this year's wonderful group of Directors. I would also like to acknowledge the dedication that our support and administrative staff have put into the conference. Without them, this conference is not possible – thank you!

Please, take advantage of this weekend we have together. Speak with professors whose areas of study excite you. Learn from and challenge the presenters. Enjoy the speeches from Dr. Obradovic and Dr. Boroditsky. And please, whatever you do, make yourself at home. Welcome to Stanford!

Sincerely,

Kyonne Isaac  
Executive Director, SUPC 2010

# Conference Schedule

Friday May 21, 2010

**5:00 – 7:00**

*Anniversary Banquet dinner*

*Speaker: Dr. George Slavich, SUPC founder*

*Keynote: Dr. Jelena Obradovic, School of Education*

*Linguistics Courtyard*

Saturday May 22, 2010

**7:30 – 8:00**

*Registration*

*Front of Jordan Hall*

**8:00 – 9:15**

*Poster Session I & Breakfast*

*Math and Linguistics Courtyards*

**9:30 – 9:45**

*Introductory Address*

*420-040*

**10:00 – 11:30**

*Paper Session I*

*420-040, -041 &  
380-380 C, W, X, Y*

**11:45 – 12:45**

*Lunch*

*Math Courtyard*

**1:00 – 2:15**

*Keynote Address*

*Dr. Lera Boroditsky, Department of Psychology*

*420-040*

**2:30 – 4:00**

*Paper Session II*

*420-040, -041 &  
380-380 C, W, X, Y*

**4:15 – 5:15**

*Poster Session II*

*Math and Linguistics Courtyards*

**5:30 – 6:00**

*Closing/Social*

*420-040 & Surrounding Courtyard*

## *Keynote Speaker Biographies*

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### **Friday May 21: Jelena Obradovic, Ph.D.**

A recent addition to the School of Education's faculty, Dr. Obradovic has been an Assistant Professor in the Child and Adolescent Development Program for the School of Education at Stanford University since 2009. She received her PhD in Developmental Psychology with a minor in Statistics from the University of Minnesota, Minneapolis in 2007. Her research focuses on how contextual risk and adversity influence children's adaptation across multiple domains of functioning over time; looking to identify the biological, behavioral, and environmental processes that enable some highly disadvantaged children to demonstrate remarkable resilience, while placing others at risk for maladaptive outcomes. She has received a number of distinctions for her work, including distinction as a current Junior Fellow in the Canadian Institute for Advanced Research's Experience-based Brain and Biological Development Program.

In her Friday address, Dr. Obradovic will speak on her latest research on maladaptive behavior amongst at-risk students, connecting the research to Psychology's unique capacity to spark and move towards real social change.

### **Saturday May 22: Lera Boroditsky, Ph.D.**

Dr. Boroditsky has been an Assistant Professor of Cognitive Psychology at Stanford University since 2004. She received her PhD in Cognitive Psychology from Stanford University in 2001. Her research focuses broadly on mental representations, cross-linguistic similarities and differences in thought and the acquisition, meaning and use of language. She has received numerous awards and honors for her research, including the Sundra Foundation Research Award, the Searle Scholars award for three years and the National Science Foundation's Career Award for five years. Her and her work have also been featured numerous times in such news and TV media outlets as National Public Radio, the British Broadcasting Corporation, the LA Times, The Boston Globe and The Economist.

Having a tremendous reputation among Stanford undergraduates for her engaging and animated lecturing-style, Dr. Boroditsky's keynote address will highlight recent and interesting findings both in the field broadly as well as in her own fascinating research.

## *Presentation Schedule*

& Naomi I. Eisenberger  
University of California, Los Angeles

### **REGISTRATION/BREAKFAST**

**7:30-8:00am**

Front of Jordan Hall  
& Math Courtyard

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THE EFFECT OF THE ORDER OF POSITIVE  
AND NEGATIVE PERSONALITY TRAITS ON  
AN INDIVIDUAL'S FORMED IMPRESSIONS

Nicholas Schumaker  
Yosemite High School

### **POSTER SESSION I**

**8:00-9:15am**

Math Courtyard

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DIFFERENCES IN COMPUTER MEDIATED  
VERSUS FACE TO FACE NEGOTIATION

Melissa Oates  
California Polytechnic State University,  
San Luis Obispo

POSITIVE AND NEGATIVE EMOTIONAL  
STATES AND THEIR RELATIONSHIP WITH  
SPIRITUALITY IN THE ELDERLY

Kelli Anderson, Jordan Kinney, Shaina  
Olsen, & Allison Keuning, Ph.D.  
Northwestern College

CAN CHILDREN REJECT ADVICE FROM  
DECEIVERS?

Lalida Sritanyaratana, Gail D. Heyman,  
Kimberly E. Vanderbilt  
University of California, San Diego

THE EFFECT OF SUBGROUP RESPECT ON  
MINORITIES

Heather Cavion  
University of California, Los Angeles

GROOMING PATTERNS AND HUMAN  
ATTACHMENT: A COMPARISON OF TWO  
CULTURES

Bryan Suechting, Kailyne Van Stavern,  
& Seinenu M. Thein  
University of California, Los Angeles

STUDENTS' EXPECTATIONS FOR MARRIAGE  
AND STYLES OF LOVE

Katie M. Warnke  
University of the Pacific

TODDLERS' LEARNING FROM OBSERVING  
RECIPROCAL AND NON-RECIPROCAL  
THIRD-PARTY INTERACTIONS

Jillian K. French  
University of California, Santa Cruz

AN FMRI INVESTIGATION OF GIVING  
SOCIAL SUPPORT

Amber C. Ocampo, Tristen K. Inagaki,

GENDER, PEER PRESSURE, AND SCHOOL  
BELONGING IN MIDDLE SCHOOL

Gabriela Kattan, Guadalupe Espinoza,  
M.A., & Jaana Juvonen, PhD.  
University of California, Los Angeles

SIBLINGS OF CHILDREN WITH AUTISM  
AND THEIR RESPONSIVENESS TO  
NEGATIVE EMOTION

Mandeep K. Chela  
University of California, Los Angeles

QUALITATIVE EXPLORATION OF THE  
GRIEVING PROCESS: SOCIAL SUPPORT,  
POST-TRAUMATIC GROWTH AND  
RELATION TO DECEASED

Alissa Johnson, Luke Molnar, Emily  
Zugnoni, April Zariczny, Michelle  
Sanders, & Lawrence Segroe  
Humboldt State University

PSYCHIATRIC COMORBIDITIES IN HIGH-  
RISK ADOLESCENTS AND IN ADOLESCENTS  
WITH SCHIZOPHRENIA

Wendy Lau, Peter Bachman Ph.D,  
Tyrone D. Cannon Ph.D  
University of California, Los Angeles

SNAPSHOTS OF SELF: SELF-ESTEEM OF  
GIRLS IN A KIJABE, KENYA CHILDREN'S  
GROUP HOME

Janelle S. Summerville  
Wake Forest University

PERSONALITY FACTORS AND FIRE  
EVACUATION

Rose E. Knapp  
Dominican University of California

DOES ANXIETY IMPACT MEMORY  
PERFORMANCE IN OLDER ADULTS?

Megan E. Anders, Steven A. Rogers,

& Deborah A. Lowe  
Westmont College

OLFACTORY PRIMING AND SELF-  
PERCEIVED EMPATHY RATINGS

Colton B. Christian & Jeffrey D.  
Whitaker  
Southern Oregon University

AN EXPERIMENT TO INVESTIGATE  
MATHEMATICALLY PROPORTIONED  
PERFECT AND IMPERFECT FACES AND  
MEMORY RECALL

Hillary E. Prince  
Yosemite High School

THE EFFECT OF COGNITIVE SCAFFOLDING  
AS EVIDENCED IN THE SCORES OF TESTS  
OF VARYING QUESTION DIFFICULTY

Jameson Schwab & Sterling Ripley-  
Phipps  
Yosemite High School

THE ROLE OF SPEECH IN ACTION

Killian Kleffner-Canucci, Ulrich Mayr  
University of Oregon

OPTIMIZING INDUCTION LEARNING BY  
MANIPULATING LEARNING SEQUENCES

Brenda Gonzalez, Mia Nunez, John  
Nestojko, Elizabeth L. Bjork, Ph.D.,  
& Robert A. Bjork, Ph.D.  
University of California, Los Angeles

DIRECTIONAL ORIENTATION IN DRAWING  
OBJECTS AND SCENES: EFFECTS OF  
HANDEDNESS AND READING/WRITING  
DIRECTION

Rebecca Rhodes, Jyotsna Vaid,  
& Zohreh Eslami

## Linguistics Courtyard

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DIRECTIONAL ORIENTATION IN DRAWING  
OBJECTS AND SCENES: EFFECTS OF  
HANDEDNESS AND READING/WRITING  
DIRECTION

Rebecca Rhodes, Jyotsna Vaid,  
& Zohreh Eslami  
Texas A&M University

PERCEPTIONS OF SOCIAL AND TANGIBLE  
SUPPORT DURING WORK-FAMILY  
CONFLICT EXPERIENCES.

Jennifer A. Ludvigsen, Kristen M.  
Shockley, & Tammy D. Allen  
University of South Florida

SELF-AFFIRMATION AND ACADEMIC  
ENGAGEMENT OF INTERDEPENDENT  
IDENTITIES: A SOCIAL-PSYCHOLOGICAL  
INTERVENTION

Sarah Herrmann, Stephanie Fryberg,  
& Rebecca Covarrubias  
The University of Arizona

WORK-FAMILY CONFLICT AND EMOTIONS

Danielle Pascarella, Kristen M.  
Shockley, Tammy D. Allen  
University Of South Florida

THE ROLE OF EPISTEMIC BELIEF  
STRATEGIES IN THE NEED FOR IMPLICIT  
SELF-ESTEEM DURING MORTALITY  
SALIENCE

Kacie N. Gebhardt, & Matt S. Leonard  
Saint Louis University

SOCIAL COMPARISON AND BODY  
SATISFACTION IN ASIAN AMERICAN AND  
CAUCASIAN WOMEN

Janet F. Park & James A. Kulik  
University of California, San Diego

BODY IMAGE AND ITS RELATION TO  
PSYCHOLOGICAL AND SOCIAL  
ADJUSTMENTS AMONG ADOLESCENT  
FEMALES

Solveig Deranteriasian\*, Elizabeth  
Harvey, Michael Giang, Sandra  
Graham, Ph.D  
University of California, Los Angeles

THE STORIES CHILDREN SHARE IN  
CONVERSATION WITH THEIR PEERS

Jessica M Winterstern  
New York University

PROCESSING NEWLY-LEARNED VERBS:  
EVIDENCE FROM TODDLERS

Melissa Hansen, Sudha Arunachalam,  
Sandra Waxman  
Northwestern University

THE EFFECTS OF METACOGNITIVE  
STRATEGIES ON TEST ANXIETY

Chun M. Yeung, Daniel E. Glenn,  
Michelle G. Craske, Ph.D.  
University of California, Los Angeles

AFFECTIVE PROCESSING DIFFERENCES  
INFLUENCE EXPOSURE THERAPY  
OUTCOMES

Rebecca MacAulay, Najwa Culver, M.A.  
and Michelle Craske, Ph.D.  
University of California, Los Angeles

EMOTION REGULATION AND  
INTERPERSONAL PERCEPTION: HOW  
EMOTION REGULATION AFFECTS HOW  
PEOPLE ARE SEEN BY OTHERS

Adrian Yupanqui & Sanjay Srivastava  
University of Oregon

THE EFFECTS OF INTROVERSION,  
EXTRAVERSION, AND DISTRACTION ON  
SOCIAL PERFORMANCE

Kristina M. Puzino  
Siena College

AUDITORY STREAM SEGREGATION IN  
SCHIZOPHRENIA PATIENTS

Aaron S. Boren, David M. Weintraub,  
Joel S. Snyder, PhD.  
University of Nevada, Las Vegas

COGNITIVE IMPAIRMENTS IN SPATIAL  
MEMORY (BARNES MAZE) AND SPATIAL  
PROCESSING (METRIC AND TOPOLOGICAL  
SPATIAL INFORMATION TASKS) AFTER  
TRAUMATIC BRAIN INJURY IN RATS

J.D. Gahan, M.M. Folkerts\*, B.G. Lyeth  
and R.F. Berman  
University of California Davis,  
Neurological Surgery Department &  
\*Pepperdine University, Department of  
Psychology

CATEGORY LEARNING AND VISUAL  
WORKING MEMORY

Brittany J. Dungan, Andrew  
McCullough, and Edward Vogel, PhD  
University of Oregon

THE EFFECT OF TASK RELATED AUDITORY  
DISTRACTORS ON MEMORY RECALL  
PERFORMANCE

Peter D. Russell  
Missouri Southern State University

THE EFFECTS OF MOVEMENT ON  
LEARNING TASKS AND MEMORY RECALL

Bethany D. Davenport, Elise K. Maggio  
Yosemite High School

THE EFFECT OF REWARD VALUE ON  
ATTITUDE TOWARD A GIVEN TASK

Rachel L. Hughes  
Yosemite High School

IS THE N170 RESPONSIBLE FOR PROCESSING  
EMOTIONS IN FACIAL STIMULI?

Jennifer Zelaya  
University of California, Los Angeles

## WELCOME ADDRESS

**9:30-9:45am**

420-040

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## PAPER SESSION I

**10-11:30am**

Social a

420-040

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ETHNIC GROUP DIFFERENCES IN THE  
EXPERIENCE AND EXPRESSION OF  
ANXIETY DURING A STRESSFUL TASK

Xiaojun A. Jiang, Shu-wen Wang,  
& Anna S. Lau  
University of California, Los Angeles

PERSUASION ATTEMPTS ON POLARIZING  
ISSUES: THE ROLE OF MESSAGE-FRAME  
AND MESSAGE-SOURCE

Veronica M. Heiskell, Natalya C. Maisel,  
M.A., and L. Anne Peplau, Ph.D.  
University of California, Los Angeles

ESL AND CONFLICT RESOLUTION: AN  
INVESTIGATION OF THE RELATIONSHIP  
BETWEEN ENGLISH LANGUAGE  
EXPERIENCE AND CONFLICT RESOLUTION  
STYLE AMONG HIGH SCHOOL STUDENTS

Erin M. Brittain  
Cal Poly State University,  
San Luis Obispo

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**Social b** **380-380Y**

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COMMUNITY GREEN: COMPARING  
INDIVIDUAL AND SOCIAL FINANCIAL  
MOTIVATIONS IN ENERGY CONSERVATION

Stephanie Vezich, Greg M. Walton,  
& Dave Paunesku

CULTURAL INTERSUBJECTIVITY BETWEEN  
LATINA ADOLESCENTS AND THEIR  
MOTHERS

Claudia M. Hernandez  
Wellesley College

ARE CULTURAL BACKGROUND AND SELF-  
EXPRESSION RELATED TO SOCIAL SUPPORT  
SEEKING?

Rachel Pan Hu  
University of California, Los Angeles

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**Clinical** **380-380C**

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PREDICTORS OF HOARDING TENDENCIES  
AMONG FILIPINO PROFESSIONALS

Marie Angelyn Cabuquit, Paola Nicolle  
Santos, Hannah Lois Tarroja  
Miriam College, Philippines

IMPULSIVITY AS A PREDICTOR OF  
SMOKING CESSATION OUTCOME

Peter Radu & James J. Gross  
Stanford University

ETHNIC DIFFERENCES IN BODY  
EVALUATION AND PREFERENCE FOR  
PLASTIC SURGERY

Rachel P. So  
Wellesley College

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**Developmental a** **380-380W**

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VISUAL STATISTICAL LEARNING OF  
SHAPES: AN EVENT-RELATED POTENTIAL  
STUDY

Laura Hawkins, Paola Escudero Ph.D.,  
& Scott P. Johnson Ph.D.  
University of California, Los Angeles

INFANTS' PREFERENCE FOR ANIMATE  
PICTURES IN COMPLEX DISPLAYS

Lorraine A. Becerra, Maxie Gluckman  
University of California, Los Angeles

EVALUATING AN EYE-TRACKING  
MEASURE OF RESPONSE TO JOINT  
ATTENTION IN INFANTS AT RISK FOR  
AUTISM

Anahita D. Navab, Kristen Gillespie-  
Lynch, Dr. Ted Hutman, Dr. Marian  
Sigman  
University of California, Los Angeles

**Developmental b 420-041**

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CAN WE TALK? PARENT-CHILD  
COMMUNICATION ABOUT CHILDREN'S  
ACADEMIC LIVES

Joelle I. Broffman\*  
and Rena Repetti, Ph.D.  
University of California, Los Angeles

PROACTIVE COPING AS PREDICTOR OF  
SUCCESSFUL AGING IN FILIPINO ADULTS

Amantha Alfonso, Beatriz Carino,  
Diane See, Meg Torres  
Miriam College, Philippines

GROOMING PATTERNS AND HUMAN  
ATTACHMENT: A COMPARISON OF TWO  
CULTURES

Bryan Suechting, Kailyne Van Stavern,  
and **Seinenu M. Thein**  
University of California, Los Angeles  
FPR-UCLA Center for Culture, Brain,  
and Development

**Cognitive/Neuroscience 380-380X**

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PLANNING TIME AS A PREREQUISITE FOR  
STRATEGY CHANGE: WHO PLANS AND  
WHEN?

Karl Fike, Jenna Fielding, James Arnett,  
Brent Morgan  
University of Memphis

STRATEGY CHANGE IN A PROCEDURAL-  
MOTOR TASK USING INDIVIDUAL  
DIFFERENCE MEASURES

Jenna Fielding, James Arnett, Karl Fike,  
& Brent Morgan  
University of Memphis

PSYCHOLOGICAL ESSENTIALISM AND  
STEREOTYPE THREAT

Elizabeth Scharnetzki, Tara C. Dennehy,  
and Avi Ben-Zeev  
San Francisco State University

**LUNCH**

**11:45-12:45pm**

Math Courtyard

**KEYNOTE ADDRESS**

**1:00-2:15pm**

by Dr. Lera Boroditsky

## PAPER SESSION II

2:30-4:00pm

**Social a** **420-040**

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AMERICAN IDENTITY AFFIRMATION:  
WHEN THE "AMERICAN DREAM" GETS IN  
THE WAY OF GROUP RACIAL HARMONY

Kyonne Isaac, Tiffany Brannon,  
Hazel Markus, Ph.D.  
Stanford University

PREDICTING STOCK SUCCESS: COMPANY  
NAME COMPLEXITY, PROCESSING  
FLUENCY, AND CONSUMER CONFIDENCE

Carly Hennessy, & David A. Armor  
San Diego State University

TRANSETHNIC FOSTER PLACEMENT: THE  
ROLE OF ETHNIC IDENTITY IN  
MODERATING LONELINESS AND  
DEPRESSION

Maurice Anderson  
New York University

**Social b** **380-380Y**

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DIVERSE ENVIRONMENTS: ENOUGH TO  
INDUCE IMPLICIT MULTICULTURALISM?

Hafsa Mohamed & Thierry Devos, Ph.D.  
San Diego State University

CAN'T TAKE THE SOUTH OUT OF THE BOY:  
REGION, SELF, AND MOBILITY BELIEFS

Taylor Phillips, & Aneeta Rattan  
Stanford University

PERCEPTIONS OF FEMALE LEADERS: IS  
THERE A GENERATIONAL EFFECT?

Kaitlin Thomas  
University of California, Santa Cruz

**Clinical** **380-380C**

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AUTHENTICITY IN RELATIONSHIPS AS A  
MEDIATOR BETWEEN CHILD  
MALTREATMENT AND NEGATIVE  
OUTCOMES

Sally A. Theran & Sohyun C. Han  
Wellesley College

THE EFFECT OF PARENTS' LOCUS OF  
CONTROL BELIEF ON CHILDREN'S HEALTH  
CARE UTILIZATION

Adriana Miu  
Stanford University

**Personality** **380-380W**

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FINDING HEALTH AND HAPPINESS IN  
MOTIVATION: CONFLICTS BETWEEN  
INTIMACY AND ACHIEVEMENT MOTIVES  
AFFECT PHYSIOLOGICAL STRESS AND  
SELF-REPORTED AFFECT DISPARATELY

Tara Chouake  
Barnard College, Columbia University

CONSTRUCTION OF THE PANUKAT NG  
KUSANG-LOOB (PNKL) FOR FILIPINOS

Jamie Neal H. Abuel,  
Paula Angelica G. Gonzales  
& Roxanne Carla C. Mangibin  
Miriam College, Philippines

## Developmental

420-041

THE EFFECTS OF NEGATIVE PARENTAL  
AFFECT ON INFANT RESPONSES TO  
FAMILIAR AND UNFAMILIAR TOYS

Daisy Cruz  
University of California, San Diego

INFLUENCE OF OUTCOME ON  
SUBSEQUENT RISK-TAKING: IDENTIFYING  
ADOLESCENT TENDENCIES

Adriana Campos, Adriana Galvan,  
Linda Van Leijenhorst  
University of California, Los Angeles

DEMOGRAPHIC AND RELATIONAL  
PREDICTORS OF SOCIAL SELF-AWARENESS  
IN URBAN ELEMENTARY CLASSROOMS

Neha Sahu  
New York University

## Cognitive/Neuroscience 380-380X

THE PREDICTABILITY AND ABSTRACTNESS  
OF LANGUAGE: A STUDY IN  
UNDERSTANDING AND USAGE OF THE  
ENGLISH LANGUAGE THROUGH  
PROBABILISTIC MODELING AND  
FREQUENCY

Revanth Kosaraju, Michael Ramscar,  
& Melody Dye  
The Harker school  
& Stanford University

SCHIZOPHRENIA AND ERROR  
PROCESSING: A META-ANALYSIS

David D. Rackham  
Brigham Young University

THE INFLUENCE OF PRIOR KNOWLEDGE  
ON RECALL FOR HEIGHT

Pernille Hemmer, Jenny Shi,  
& Mark Stevyers  
University of California, Irvine

## **POSTER SESSION II** **4:15-5:15pm**

### Math Courtyard

YES I CAN! A CLOSER EXAMINATION OF  
SUCCESS AND BARRIERS TO SUCCESS  
AMONG AFRICAN AMERICAN AND WHITE  
MEN, AGES 18 TO 30

Julia Sewell  
Augsburg College

EFFECT OF PHYSICIANS' EXPRESSIONS OF  
UNCERTAINTY AND PHYSICIAN SEX ON  
PATIENT PERCEPTIONS

Janna Tassop and Paul C. Price  
California State University, Fresno

EFFECTS OF PARTISAN MEDIA ON  
ATTITUDES TOWARDS LGBT GROUPS

Brian Werter  
Cal Poly, San Luis Obispo

LANGUAGE ABILITY AND  
RELIGIOUSNESS/SPIRITUALITY IN THE  
ELDERLY

Jordan Kinney, Kelli Anderson, Dan  
Schumann, and Allison Keuning, Ph.D.  
Northwestern College

MINORITY ON MINORITY  
DISCRIMINATION: IMPACT OF MAJORITY  
SOCIAL NORM PERCEPTION

Christine Chen  
Carnegie Mellon University

SUBCONSCIOUS PRIMING AS A MEASURE  
OF SOCIAL COMPARISON IN MALE BODY  
SATISFACTION

Sarah Jurick, Shiloh Krieger, Jim Kulik  
University of California San Diego

THE PROCESS OF DIALOGUE-BASED  
INTERGROUP CONTACT AMONG ISRAELI,  
PALESTINIAN, AND AMERICAN YOUTH:  
NATIONALITY AND SEX-BASED  
DIFFERENCES IN PARTICIPATION

Eric P. Windell, Elena P. Ricks, Phillip L.  
Hammack, & Andrew Pilecki  
University of California, Santa Cruz

INACTIVATION OF THE DORSAL RAPHE  
NUCLEUS REDUCES THE ANXIOTIC  
RESPONSE OF RATS RUNNING AN ALLEY  
FOR INTRAVENOUS COCAINE

Oren A. Ofer, Carl L. Mueller, Stephanie  
Waldroup, Ami Cohen, Osnat Ben  
Shahar, & Aaron Ettenberg  
University of California, Santa Barbara

TAKING LANGUAGE FOR GRANTED: ON  
THE COMPREHENSIBILITY OF  
MALAPROPISMS

Michael Ramscar, Ariel James,  
Melody Dye  
Stanford University

THE EFFECTS OF CAFFEINE ON IMPLICIT  
AND EXPLICIT MEMORY PERFORMANCE IN  
YOUNGER ADULTS

Stephanie M. Sherman & Lee T. Ryan  
University of Arizona

THE EFFECTS ON MEMORY AFTER  
MULTIPLE PRESENTATIONS

Cameron M. Rabideau, Charles F.  
Chubb, Gig W. Phoong,  
& Gregory A. Sanchez  
University of California, Irvine

AN ACQUIRED TASTE: HOW READING  
LITERATURE AFFECTS SENSITIVITY TO  
WORD DISTRIBUTIONS WHEN JUDGING  
LITERARY TEXTS

Justine Kao, Robert Ryan, Melody Dye,  
Michael Ramscar  
Stanford University

THE INFLUENCE OF GEOGRAPHICAL  
SOFTWARE ON EDUCATION AND SPATIAL  
ABILITY

Maria Ptouchkina, Cara O'Brien, and  
David Uttal  
Northwestern University

BOOK READING STYLES IN BILINGUAL  
HEAD START CLASSROOMS

Silvia Niño  
New York University

HOW PATTERN KNOWLEDGE GENERALIZE  
ACROSS MODALITIES: MONOLINGUAL  
VERSUS BILINGUAL CHILDREN

Sharon Hou, Giselle Navarro, Mariel  
Kyger, M.A., and Cathy Sandhofer,  
Ph.D.  
University of California, Los Angeles

OWN-FACE FIXATION IN THE FORMATION  
OF FIRST GRADER'S FACE PROTOTYPES

Andrew R. Taylor  
Grand Valley State University

YOUNG INFANTS' PREFERENCE FOR HAPPY  
FACES

Ana Maria Mejia, & Ho Jin Kim  
University of California, Los Angeles

FACILITATING CATEGORIZATION IN  
INFANTS: HOW MUCH INFORMATION IS  
TOO MUCH?

Laura Hawkins, Paola Escudero Ph.D.,  
Scott Johnson Ph.D.  
University of California, Los Angeles

CULTURAL DIFFERENCES OF GRIEF AND  
COMPLICATED GRIEF

Kristina Y. Cho, & Dr. Sidney Zisook  
University of California, San Diego

THE ROLE OF EXTRACURRICULAR  
ACTIVITY PARTICIPATION ON  
ADOLESCENT DEPRESSION MODERATED  
BY PARENT INVOLVEMENT

Joseph Michael Nelson, AJ Cabradilla,  
Ashley Ellen Pasewalk  
University of Oregon

THE RELATIONSHIP BETWEEN BLOWS TO  
THE HEAD AND PROBLEMS WITH  
ATTENTION, HYPERACTIVITY, SELF-  
ESTEEM AND ANXIETY

Brittany Cunningham, Camille  
Gonzalez, Timothy Heitzman PhD.  
Fairfield University

FAMILY HISTORY AS A PREDICTOR IN  
LONG VS. SHORT TERM OUTCOME IN  
ADOLESCENT SUBSTANCE USE

Rubin Khoddam  
University of California, San Diego

Linguistics Courtyard

THE ROLE OF GUILT IN COOPERATION

Marvin Guemo  
University of California, Santa Barbara

STUDENT RESPONSES TO STIGMATIZED  
AND NEUTRAL MEDIA IN REGARDS TO  
SEXUALLY TRANSMITTED DISEASES

Rachael M. Hernandez  
Yosemite High School

REAL-IDEAL SELF CONGRUENCE AND  
PERFORMANCE: TESTING THROUGH  
INTERACTIVE VIDEO GAMES

Christine Stalie, Megan Simmons, Elise  
Guelich, Nick Davenport, & Jill Cole  
Seattle Pacific University

CULTURAL AND SOCIETAL FACTORS  
INFLUENCE THE DEVELOPMENT OF  
BULIMIA NERVOSA IN YOUNG WOMEN: A  
REVIEW OF THE LITERATURE

Sequana Tolon, Jeanette Whitmore,  
Dennis Romero  
The University of Michigan-Flint

RELIGIOUS/SPIRITUAL COPING WITH  
HEALTH/PSYCHOSOCIAL STRESSORS IN  
THE ELDERLY

Jon Jore\*, Dan Schumann\*, Nicola  
Rodwell\*, and Allison Keuning, Ph.D.  
Northwestern College

COPING AND SELF-COMPASSION IN  
COLLEGE-AGED GIRLS' RELATIONAL  
AGGRESSION

Emily Weinstein, Dawn E. Schrader,  
& Jess Matthews  
Cornell University

DOES JUROR AND DEFENDANT ETHNICITY  
AND SCORES ON THE PREJUDICE AGAINST  
HISPANICS SCALE MODERATE CAPITAL  
DECISIONS? AN EXAMINATION OF  
JUROR BIAS

Hayley Tews, Wendy Gutierrez,  
& Dr. Russ Espinoza  
California State University, Fullerton

EFFECT OF NICOTINE ON GABA NEURONS  
NACHR SUBTYPES IN THE VTA

Burman, P., Taylor, D.D., Wilcox, R.,  
Wilcox, J.D., Hansen, D.M. and  
Steffensen, S.C.  
Brigham Young University

NEUROANATOMICAL MEDIATORS OF  
ATTENTION DEFICITS IN AUTISM

Alan Romero, J. David Jentsch,  
Shawn Aarde  
University of California, Los Angeles

THE STABILITY BIAS IN EDUCATIONAL  
ENVIRONMENTS

Mia Nuñez, John Nestojko,  
& Robert A. Bjork Ph.D  
University of California, Los Angeles

THE MOZART EFFECT ON READING  
COMPREHENSION

Laura R. Derry, & Wyatt J. Hanft  
Yosemite High School

THE EFFECT OF EXPOSURE TO MEANING  
THREATS ON IMPLICIT PATTERN  
LEARNING

Riley Lambertsen  
Yosemite High School

THE EFFECTS OF MASKING ON JUST  
NOTICEABLE DIFFERENCES OF FREQUENCY

Colton B. Christian  
Southern Oregon University

PSYCHOLOGICAL ESSENTIALISM AND  
STEREOTYPE THREAT

Elizabeth Scharnetzki, Tara C. Dennehy,  
and Avi Ben-Zeev  
San Francisco State University

BILINGUALISM AND ACADEMIC  
ACHIEVEMENT

Jenna Joo  
University of California, Los Angeles

FATHER INVOLVEMENT IN ETHNICALLY  
DIVERSE POPULATIONS

Ryann McNeil,  
Dr. Catherine S. Tamis- LeMonda  
New York University

INTERACTIONS OF PHONOLOGY AND  
MORPHOLOGY IN CHILDHOOD READING  
ABILITY

Brent Cannons & Karina Muro  
Loyola Marymount University

CORRELATION BETWEEN WORKING  
MEMORY PERFORMANCE AND  
CLASSROOM BEHAVIOR IN  
KINDERGARTENERS

Allison M. McFarland, Yvette A.  
Aranas, Karina Muro, Yuki Sei, &  
Tyonna P. Adams  
Loyola Marymount University

ENHANCED VISUAL SEARCH BY INFANTS  
OF SIBLINGS WITH AUTISM

Devora Beck-Pancer, Emmy Goldknopf,  
& Kristen Gillespie  
University of California, Los Angeles

MARRIAGE AND HEAVEN: THE  
RELATIONSHIP BETWEEN  
RELIGIOUSNESS/SPIRITUALITY AND  
MARRIAGE SATISFACTION IN THE  
ELDERLY

Shaina Olsen, Nicola Rodwell,  
Kelli Anderson,  
& Dr. Allison Keuning, Ph.D.  
Northwestern College

FRIENDSHIPS: DIFFERENCES BETWEEN  
ADOLESCENTS WITH TYPICAL  
DEVELOPMENT AND THOSE WITH  
DEVELOPMENTAL DELAYS

Margaret Kaiser, Connie Wong, Irene  
Tung, Giselle Navarro, Barbara Caplan,  
Lisa Christensen, M.A., Leigh Ann  
Tipton, B.A., and Bruce Baker, Ph.D.,  
University of California, Los Angeles

AN EXPLORATION OF SPIRITUALITY,  
EMOTIONAL FUNCTIONING, AND LIFE  
STRESS IN THE ELDERLY

Nicola Rodwell\*, Shaina Olson\*,  
Jon Jore\*,  
and Allison Keuning, Ph.D.  
Northwestern College

CULTURAL DIFFERENCES IN PAIN  
EXPERIENCE: A COMPARISON BETWEEN  
CHINESE, CHINESE AMERICANS AND NON-  
HISPANIC WHITES

Yuen-Pik Chan, Kristin Janschewitz,  
& Barbara Knowlton  
University of California, Los Angeles,  
& The Chinese University of Hong Kong

**CLOSING/SOCIAL**

**5:30 -6:30pm**

**420-040**

## Poster Session I Abstracts

### Math Courtyard

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#### POSITIVE AND NEGATIVE EMOTIONAL STATES AND THEIR RELATIONSHIP WITH SPIRITUALITY IN THE ELDERLY

Kelli Anderson, Jordan Kinney, Shaina Olsen,  
& Allison Keuning, Ph.D.  
Northwestern College

Psychological research has demonstrated a robust relationship between spirituality, spiritual coping, and positive emotion states (Cole, Hopkins, Tisak, Steel, & Carr, 2008). However, very minimal research has been done to examine the relationship between positive and negative emotional states and their relationship with various dimensions of spirituality, which is the purpose of the current study. The goal of this study is to recruit at least 60 participants over the age of 60 from senior living centers in the Twin Cities metropolitan area; approximately 30 elderly have already completed the study. Confidentiality will be maintained through an identification numbering system. Participants will be administered a two-hour battery of tests including the Positive and Negative Affect Schedule (PANAS), the Brief Symptom Inventory (BSI), the Fetzer Brief Multidimensional Measure of Religiousness/Spirituality, Brief Religious Coping Inventory (RCOPE), and the Duke Religion Index (DUREL). Results from the current study will be presented, as well as their implications for future research.

#### THE EFFECT OF SUBGROUP RESPECT ON MINORITIES

Heather Cavion  
University of California, Los Angeles

Minorities often disengage from the majority, and subgroup respect has been shown to be a factor that tries to re-engage these individuals back into society. Subgroup respect is a feeling that one's own ethnic group is recognized, accepted, and valued by the dominant population. Previous research suggests subgroup respect is positively correlated to an individual's level of social engagement (e.g. involvement within the community). However, this research is unclear, since subgroup respect affects ethnic groups differently. This study brings in two moderators to try to clear this up. One prediction is that ethnic identity is more salient for minority groups. In other words, members of minorities are more concerned with their own ethnic identity. Secondly, minorities place more value on their social standing. In our study, a survey from a diverse group of students will shed light on the asymmetry of subgroup respect for majority and minority groups. Understanding this asymmetry can help determine what factors affect the behavior (social engagement) of individuals within a society.

#### STUDENTS' EXPECTATIONS FOR MARRIAGE AND STYLES OF LOVE

Katie M. Warnke  
University of the Pacific

People experience love in many different and unique ways. Stereotypically, college students are seen as engaging in loving relationships overcome with passion and intimacy. This helps support the idea that college students are not ready to marry because they are too engaged in the passion and intimacy of the relationship. This can prohibit them from properly understanding what it actually takes to maintain a happy marriage. The current study seeks to identify a relationship between college student's style of loving and current expectations of marriage. Ninety-nine participants completed a paper-pencil survey consisting of a demographic questionnaire, the Marriage

Expectation Scale (Jones, 1954), and the Love Attitudes Scale (Hendrick & Hendrick, 1986). It is expected that college students with realistic expectations for marriage will report higher levels of storge (friendship based), pragma (factual), and agape (selfless) love styles, where as those with unrealistic expectations for marriage (pessimistic or idealistic) will report higher levels of eros (passionate), ludus (game-playing), and mania (obsessive) love styles.

#### AN FMRI INVESTIGATION OF GIVING SOCIAL SUPPORT

Amber C. Ocampo, Tristen K. Inagaki,  
& Naomi I. Eisenberger  
University of California, Los Angeles

Although research has demonstrated a relationship between social support and health most have assumed that these benefits stem from receiving social support. However, new research suggests that the act of giving support may be just as important as receiving support. Still, little is known about the processes associated with support giving that contribute to beneficial health outcomes. One possibility is that giving support is emotionally rewarding for the support giver. Based on work showing activity in the ventral striatum (VS), a reward-related neural region, in response to voluntarily giving money to charity (Moll et al., 2006), we hypothesized that support giving would also be associated with increased VS activity. To this end, couples were recruited to participate in an experimental session in which the female partner underwent an fMRI scan while the male partner received unpleasant electric shocks. During the scan, the female was told whether or not her partner was about to be shocked and was directed to either hold his arm (support-giving) or to hold a ball (no support-giving). We found support-giving activated the VS more than no support-giving. These results suggest another possible contributor to the support-health link is via giving support to another.

#### THE EFFECT OF THE ORDER OF POSITIVE AND NEGATIVE PERSONALITY TRAITS ON AN INDIVIDUAL'S FORMED IMPRESSIONS

Nicholas Schumaker  
Yosemite High School

This experiment is designed to investigate the effect of the order of equal numbers of positive and negative adjectives describing an unknown person on an individual's impression of said person. The experiment was carried out in one International Baccalaureate high school classroom (n=28) and one college preparatory high school classroom (n=28). It consisted of primarily Caucasian male and female students aged 16-18 in rural central California. The hypothesis stated that participants would adhere to their first impressions of the described individual. In the first class, a list of ten adjectives (five being positive and five being negative) were read in order from positive to negative. In the second class, the same list was read in reverse order. Participants were then asked to respond to a questionnaire requesting they rate their personal impressions of the individual's personality on a scale of one to five, ranging from 'Very Unfavorable' to 'Very Favorable.' The independent variable was the order of the ten adjectives, and the dependent variable was the responses collected from the participants. A t-test revealed the results were not conclusive in showing that the order of adjectives has a significant effect on a person's impression of an individual.

#### DIFFERENCES IN COMPUTER MEDIATED VERSUS FACE TO FACE NEGOTIATION

Melissa Oates  
California Polytechnic State University,  
San Luis Obispo

Ninety Cal Poly students participated in a study to test the hypothesis that e-negotiators would be more likely than face-to-face (FTF)

negotiators to employ unethical or competitive negotiation styles in a subsequent negotiation after being lied to in a previous negotiation. Sixty-four Cal Poly students were randomly assigned to partake in a computer mediated or FTF negotiation over the sale of a car. After the initial negotiation was completed, buyers in each condition were led to believe they had been lied to about the accident history of the car. Participants then completed The Incidents in Negotiation Questionnaire by Robinson, Lewicki, and Donahue (2000) and The Conflict Behaviors Questionnaire (Rahim, 1983). These questionnaires were used to compare e-negotiators' view of unethical behavior and competitive negotiation styles to views of FTF negotiators. Twenty-six participants did not negotiate but completed surveys and acted as a comparison group. An independent means t test was conducted, and a significance level of  $p < .05$  was used. Contrary to the hypothesis, FTF negotiators reported a higher likelihood of using competitive negotiation styles, competitive bargaining, misrepresentation, and overall unethical behavior in future negotiations.

#### CAN CHILDREN REJECT ADVICE FROM DECEIVERS?

Lalida Sritanyaratana, Gail D. Heyman,  
Kimberly E. Vanderbilt  
University of California, San Diego

Prior studies have shown that 3-year-old children take advice from deceptive individuals, a phenomenon not fully explained. Of primary interest was whether young children could reject this advice and whether the ability to do so relates to general inhibitory control skills. In Study 1, we investigated this by asking 40 preschool-aged children to locate a sticker which was hidden in one of two boxes after being advised by the Big Bad Wolf (BBW), who, children were taught, provides incorrect information because he is mean. Results showed that 3-year-olds trusted the BBW almost all the time when he vocalized and tapped the box the

sticker was in, but were able to act on their distrust as age group increased. Study 2 (in progress) eliminated the salience of tapping and had the BBW only vocalize which box the sticker was in. If 3-year-olds do not reject the BBW's suggestions, Study 3 will eliminate vocalization from the BBW altogether and will have him indicate the sticker location through placement of a pointer object. Inhibitory tasks were altered in each study to investigate if failure to distrust is related to inhibitory control and if so, which component of the task is held responsible.

#### GROOMING PATTERNS AND HUMAN ATTACHMENT: A COMPARISON OF TWO CULTURES

Bryan Suechting, Kailyn Van Stavern,  
& Seinu M. Thein  
University of California, Los Angeles

Grooming has long been considered to have a variety of adaptive social functions for non-human primates (and other lower-order animals), being linked to such things as reciprocal altruism, coalition-building, emotion regulation, parental investment, and attachment (de Waal, 1986). Surprisingly, however, the current literature is scant on the subject as it relates to social bonds between humans. Developmental psychology, especially, has neglected to consider the relationship between grooming patterns and children's learning and social development. Yet, receiving, giving, and witnessing grooming likely plays a crucial role in how children learn about attachment relationships (Bowlby, 1969). The following study will seek to address the gap in the psychological literature by comparing patterns of grooming during family mealtimes in two distinct cultures across multiple age groups. Video focal follows were performed on Burmese and American children between the ages of 2 and 6 during mealtimes. Frequency, rates, and types of grooming behavior between children and caretakers were examined. Preliminary analysis shows that the grooming practices

found in each group reflect adaptive patterns of attachment found in each eco-cultural setting.

#### TODDLERS' LEARNING FROM OBSERVING RECIPROCAL AND NON-RECIPROCAL THIRD-PARTY INTERACTIONS

Jillian K. French  
University of California, Santa Cruz

Previous research has shown that children as young as 14-months can imitate novel actions in direct interactions (Meltzoff, 2006; Gergely, Bekkering, & Kiraly, 2002). One published study has demonstrated that 18- to 20-month-old toddlers can learn novel actions with salient effects from third-party interactions (Herold & Akhtar, 2008). The focus of this study was to determine whether toddlers would imitate novel actions without salient effects from third party interactions. Novel actions were modeled to 18- and 24-month-old children in one of two third-party conditions: reciprocal or nonreciprocal. Preliminary results indicate that both age groups imitate the actions, and that observing a reciprocal interaction may increase the frequency with which they do so.

#### GENDER, PEER PRESSURE, AND SCHOOL BELONGING IN MIDDLE SCHOOL

Gabriela Kattan, Guadalupe Espinoza, M.A.,  
& Jaana Juvonen, PhD.  
University of California, Los Angeles

Adolescents' sense of school belonging, the extent to which they feel a part of their school community, has been implicated as one reason for behavior problems and low achievement among youth. Yet little is known about factors that contribute to a lack of belonging. This study tested whether middle school boys and girls' perception of the overall level of peer pressure in school (compliance pressures) was related to lower levels of belonging. Survey data was collected from 55 boys and 71 girls in 6th and

7th grades. Hierarchical linear regressions (gender and grade controlled) revealed that higher levels of compliance pressures predicted lower levels of belonging. Further analyses revealed that the negative association between compliance pressures and belonging was significant only for girls,  $F(1,56)=-.294, p<.05$ . These findings suggest that girls' awareness of peers wanting to "fit in" can partly account for decreases in their feelings of belonging during middle school. Subsequent analyses will follow the current sample and thus allow us to examine changes in perceptions of compliance pressures and belonging over one year. Future studies should further examine gender differences in perceived norms during adolescence and their influence on other indicators of school adjustment.

#### SIBLINGS OF CHILDREN WITH AUTISM AND THEIR RESPONSIVENESS TO NEGATIVE EMOTION

Mandeep K. Chela  
University of California, Los Angeles

Response to others' emotions emerges in the first days of life. Behaviors like joint attention and shared affect and the ability to interpret emotions helps children maintain social interactions and learn about the environment. This is apparent in children with social deficits like autism. Autistic children have difficulties understanding the perspective of those around them and do not show appropriate affective and empathic responses. More specifically, infants with autism are relatively unresponsive to other people's distress. Participants in the study were 12-month-old siblings of children with autism who were diagnosed with autism at 36 months (group 1), siblings of children with autism who did not meet criteria for autism (group 2), and control infants with no family history of autism (group 3). Looking patterns were coded for 15sec after an examiner pretended to hurt herself. Preliminary analyses indicate that group 1 looks less to the examiner and caregiver and

more to toys than groups 2 and 3, which do not differ. Thus, using a micro-level system indicates features of autism are apparent as early as 12 months and evident at levels of discrete looking behaviors. Understanding behavioral differences like these can help clinicians improve early intervention and screening.

QUALITATIVE EXPLORATION OF THE  
GRIEVING PROCESS: SOCIAL SUPPORT,  
POST-TRAUMATIC GROWTH AND  
RELATION TO DECEASED

Alissa Johnson, Luke Molnar, Emily Zugnoni,  
April Zariczny, Michelle Sanders,  
& Lawrence Segrue  
Humboldt State University

Thanatologists recognize that individual responses to bereavement are nuanced and varied (e.g. Kastenbaum, 2008), so at times qualitative data analysis is preferred over quantitative approaches for gaining a deeper understanding of the complexities of individuals' bereavement experiences (Carverhill, 2002). The present study investigates the grieving process and how it can differ based on who an individual is grieving for (spouse, parent, child, etc.). Utilizing qualitative methods, we are examining how a survivor's relationship to his or her deceased loved one(s) relates to two aspects of the grief experience: perceived social support, and post-traumatic growth or change. As part of a larger study on grief, participants (N=30) completed a semi-structured interview about their grief experience. Textual coding techniques within ATLAS.ti 6.1.11, a qualitative data analysis program, are being applied to these recorded interviews. Through this exploratory research, we expect to unveil commonalities among grievers based on their relationship to the deceased. With additional understanding of bereaved individuals' particular experiences and how they vary by type of loss, more effective treatments for grieving individuals

may be developed. Additional benefits may include increasing awareness about the grieving process and applying qualitative data about grief to design improved quantitative measures.

PSYCHIATRIC COMORBIDITIES IN HIGH-  
RISK ADOLESCENTS AND IN ADOLESCENTS  
WITH SCHIZOPHRENIA

Wendy Lau, Peter Bachman Ph.D, Tyrone D.  
Cannon Ph.D  
University of California, Los Angeles

Recent research in adolescents at high risk for schizophrenia has highlighted the need to improve prediction of conversion to full-blown psychosis. This study sought to explore the rates of psychiatric co-morbidity in high risk adolescents (N=76) and to test whether a similar pattern appeared in their counterparts who already meet criteria for psychosis (N=38) or in controls (N=51). Both prodromal and psychosis groups were found to have significantly higher percentages of non-psychosis disorders than controls. However, prodromal and psychosis groups did not have significantly different prevalence distributions, suggesting that the two groups are drawn from equivalent populations. Moreover, the distribution of disorders in high risk patients who later developed psychosis was found to be different from that seen in non-converters - particularly for anxiety - supporting the hypothesis that co-morbidity may be useful in predicting psychosis onset. Future research should investigate co-morbidity of anxiety and psychosis to further explore the predictive potential of this relationship.

## SNAPSHOTS OF SELF: SELF-ESTEEM OF GIRLS IN A KIJABE, KENYA CHILDREN'S GROUP HOME

Janelle S. Summerville  
Wake Forest University

Individual interviews were used to examine self-concepts/psychosocial concerns of twenty 7-16 year old Kenyan girls. Interview sessions gave insight into the culturally unique definition of self-esteem and potential discrepancies between ideal and real selves as defined by Carl Rogers(1951) and operationalized by Harter(1999). Sessions provoked detailed narratives on participants' lives and self-views. Mixed-method exercises probed the children's understanding of the self and of specific traits that contribute to self-esteem, serving as starting ground for further discussion. In addition to interviews, a participatory photovoice project provided insight when participants took and subsequently discussed photographs of daily life central to their concept of self. Factors that consistently affected reports of self-esteem included: 1) Time elapsed/level of trauma associated with parental loss, 2) Academic/task performance, 3) Degrees of social support, 4) Perceived attractiveness, and 5) Ethnic/racial perceptions. Over half of the participants reported negative ethnic perceptions.

## PERSONALITY FACTORS AND FIRE EVACUATION

Rose E. Knapp  
Dominican University of California

Although wildfires are one of the most unpredictable and dangerous natural disasters, posing a growing threat to California and the western U.S., they have not been researched to the extent of tsunamis, volcanoes, hurricanes, or earthquakes. The purpose of the present study is to explore how gender, locus of control, and optimistic bias may be related to choosing to evacuate during a wildfire. Participants will

consist of approximately 40 students at a private university in northern California. Participants will complete a series of demographic questions, as well as the Spheres Locus of Control Scale (Paulhus and Van Selst, 1990) which measures personal control, interpersonal control, and socio-political control. Participants will then read a vignette about a fictionalized wildfire taking place near their campus, and will answer a number of follow up questions, including items that will measure Optimistic Bias. My hypotheses are that male participants and those with a strong internal locus of control will be less likely to say they would evacuate than women or those with an external locus of control. It is also expected that participants who have a strong optimistic bias will be less likely to say they would evacuate.

## DOES ANXIETY IMPACT MEMORY PERFORMANCE IN OLDER ADULTS?

Megan E. Anders, Steven A. Rogers,  
& Deborah A. Lowe  
Westmont College

Numerous studies have attempted to uncover the relationship between anxiety and a number of cognitive processes. Studies have shown that anxiety has a significant impact on the frontal-executive processes of working memory and set shifting. Other studies have revealed that increasing age exacerbates the effects of anxiety on recall performance. This study attempts to converge these lines of research by examining the relationship between anxiety and memory performance among older adults. Recruited through flyers in various retirement homes and churches, a total of 52 participants were tested (35 women and 17 men), with a mean age of 80.19 (SD = 8.72) and a mean formal education of 15.88 years (SD = 2.93). Participants completed a comprehensive battery of neuropsychological tests to assess cognitive functioning, as well as the Beck Anxiety Inventory to determine current anxiety level. Significant negative correlations were found between the BAI scores and a

variety of memory scores relating to story learning, list learning, and recall aided by semantic cueing ( $r_s < -.28$ ,  $p_s < .05$ ). These findings call for future research regarding what specific cognitive domains are impacted by elevated anxiety, and what the long-term implications may be when these neuropsychological tests are translated into everyday activities.

#### OLFACTORY PRIMING AND SELF-PERCEIVED EMPATHY RATINGS

Colton B. Christian & Jeffrey D. Whitaker  
Southern Oregon University

Past research has examined olfactory priming and activation of areas of the brain related to empathy. More recent studies have examined positive and negative olfactory priming in relation to facial recognition and fMRI activation. The present study is examining self-perceived empathy ratings both with and without an olfactory stimulus comprised of an androstenone containing substance. Participants shall read a script designed to detail a character experiencing a specific emotion. We expect that the resulting ratings of self-perceived empathy among the group presented with the olfactory prime will be stronger than the group in which no prime is presented to participants. Overall this study should comply well with past research, as the idea that olfactory stimulation increases the intensity of empathic reactions will be supported.

#### AN EXPERIMENT TO INVESTIGATE MATHEMATICALLY PROPORTIONED PERFECT AND IMPERFECT FACES AND MEMORY RECALL

Hillary E. Prince  
Yosemite High School

This experiment is designed to investigate memory recall and the Golden Ratio which compares mathematically perfect and

mathematically imperfect facial proportions. The experimental and control group ( $n=30$ ) consisted of an opportunity sample of students whose ages ranged from 16 to 18 years, from a small rural, predominantly Caucasian high school in Central California. The experiment was carried out over one class period. The students were shown a slideshow of thirty faces, then shown a second slideshow with twenty of the same faces with an additional ten faces students had not seen. The participants recalled whether or not they remembered the faces shown. The independent variable, using the Golden Ratio (1: 1.618), was the mathematically perfect and imperfect facial proportions, while the dependent variable was the ability to recall mathematically perfect facial proportions. The  $t$ -test demonstrated that there was no significant difference in the ability to recall differing facial proportions; therefore the null hypothesis was accepted. It was found that there was no relationship between memory recall of mathematically perfect faces versus the memory recall of mathematically imperfect faces.

#### THE EFFECT OF COGNITIVE SCAFFOLDING AS EVIDENCED IN THE SCORES OF TESTS OF VARYING QUESTION DIFFICULTY

Jameson Schwab & Sterling Ripley-Phipps  
Yosemite High School

This is an experiment designed to investigate the effects of cognitive scaffolding, demonstrated through the item order of questions, on the score received on a math test. The experimental ( $n=33$ ) and control groups ( $n=30$ ) consisted of 16-18 year old, predominately Caucasian male and female students, from a rural high school in central California. All were acquired through an opportunity sample. The experiment was carried out during two class periods with two separate math tests composed of the same ten problems. In the first test on cognitive scaffolding, the questions presented were ordered from high difficulty to low difficulty. In the second test, the question order was exactly

reversed to present cognitive scaffolding to the participant; the questions were ordered from low difficulty to high difficulty. The independent variable was the order of the questions based upon difficulty, and the dependent variable was the score received on the math test. A one tailed t-test demonstrated that there was significance at the  $p < .005$  level, showing that test scores were positively influenced by the presence of cognitive scaffolding.

### THE ROLE OF SPEECH IN ACTION

Killian Kleffner-Canucci, Ulrich Mayr  
University of Oregon

Language is thought to help in preparing and organizing complex, sequential action. However, when people work through memorized sequences of tasks, they show surprisingly little evidence of using inter-trial intervals to retrieve upcoming demands in a proactive manner (e.g., Mayr, 2009, *Cognitive Psychology*). To better understand the role of preparation and speech in organizing and executing complex action plans, we asked participants to work through 6-element sequences of simple response-time (RT) tasks (organized in two chunks of three tasks) while at the same time verbalizing the sequence of task labels without further constraints (Experiment 1). Interestingly, participants almost never used inter-trial intervals to retrieve and articulate upcoming tasks. Instead, speaking and manual responding to each task were almost perfectly synchronized. In Experiment 2, we instructed participants to speak the task labels during the inter-trial interval and found a) they were able to separate speaking and manual responding (with considerable resistance) and b) the RT pattern indicative of retrieval (long RTs between chunk-boundaries) was pronounced in speech RTs but nearly absent in manual RTs. These results suggest that while preparation through speech is in principle possible, there is also a

strong, Gestalt-like tendency to align speech and action in time.

### OPTIMIZING INDUCTION LEARNING BY MANIPULATING LEARNING SEQUENCES

Brenda Gonzalez, Mia Nunez, John Nestojko,  
Elizabeth L. Bjork, Ph.D.,  
& Robert A. Bjork, Ph.D.  
University of California, Los Angeles

Past research has shown that presenting items of multiple categories mixed with one another (interleaving) is more beneficial for inductive learning than presenting items consecutively and uninterrupted (massing). Interleaving inherently allows for more discrimination between categories by juxtaposing exemplars across categories, thus facilitating inductive learning. However, theory predicts that massing may also enhance inductive learning through comparison of items within a category. Across a variety of sequences, we vary the frequency of comparisons within categories and juxtapositions across categories to tease apart the relative influences of those mechanisms. Also, in some conditions, we strategically implant distractor tasks either between or within category pairings to further isolate the relative influence of discrimination and comparison, respectively. We predict that both discrimination and comparison will benefit inductive learning; that discrimination is the primary mechanism driving induction; and that sequences utilizing both mechanisms will be optimal. Findings will further enhance our understanding of study schedules for induction learning.

DIRECTIONAL ORIENTATION IN DRAWING  
OBJECTS AND SCENES: EFFECTS OF  
HANDEDNESS AND READING/WRITING  
DIRECTION

Rebecca Rhodes, Jyotsna Vaid,  
& Zohreh Eslami  
Texas A&M University

This study examined the influence of hand preference and reading/writing habits on the spatial orientation of drawings. While past studies have examined the influence of hand preference and reading/writing habits on drawing separately, few have considered the interaction of the two variables. This study predicted that both hand preference and reading/writing habits would influence the final orientation of a drawing, and the strength of this influence would vary according to the inherent nature of the object/scene to be drawn. One hundred and thirty English readers (90 right-handed, 40 left-handed) and 25 Arabic readers (15 right-handed, 10 left-handed) were asked to draw a series of 15 objects/scenes. For each object/scene, the final facing direction (leftward vs. rightward), order of drawing (left-to-right vs. right-to-left), and hand used (dominant vs. non-dominant) were considered. Results showed that reading/writing habits had a significant influence on the order in which items were drawn/arranged in horizontally arrayed scenes (e.g., a near house vs. a far house), whereas hand preference had a significant influence on the facing direction of individual objects (e.g., facial profiles and circles). Understanding the factors that influence the orientation of drawings will elucidate the way people perceive, organize, and represent their visual world.

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**Linguistics Courtyard**

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THE EFFECT OF TRADITIONAL AND NON-  
TRADITIONAL GENDER ROLE PRIMING ON  
AMBIVALENT SEXISM

Christina Jones, Karissa Locke,  
Karimi Mbogori-Turner, Alex Shennum  
Seattle Pacific University

Current research has shown that “homemaker image” priming increases participants’ tendency to stereotype (Johar, Moreau, & Schwarz, 2003). Our study investigated how activation of gender stereotypes can influence benevolent and hostile sexism scores in men and women. Benevolent sexism is holding positive views and stereotypes toward women that still restrict them to certain behaviors and traits (Glick & Fiske, 1996). Using a series of photographs, 126 participants were primed in traditional or non-traditional gender roles, or were in a control condition with no priming. There was a main effect of gender on hostile and benevolent sexism, such that men scored higher than women on both sexism measures overall. There was also a crossover interaction of priming and gender, such that men showed higher levels of sexism in the non-traditional prime condition, while women showed lower levels of sexism in that condition. Future research could examine the mechanisms of this priming effect, to understand why non-traditional gender images would increase levels of sexism amongst men, but not amongst women.

PERCEPTIONS OF SOCIAL AND TANGIBLE  
SUPPORT DURING WORK-FAMILY  
CONFLICT EXPERIENCES.

Jennifer A. Ludvigsen, Kristen M. Shockley,  
& Tammy D. Allen  
University of South Florida

Providing social support for a partner is an important part of a relationship, especially when that partner is experiencing conflict between work and family life. According to Greenhaus and Beutell (1985), social support can act as a buffer between work-family conflict (WFC) and psychological well being. Given the crucial role of support, it is important to examine the congruence between romantic partners' perceptions of the support they are giving and receiving. Westman (2004) notes some gender differences in support; thus, we paid special attention to the role of gender in these processes. Using a daily diary methodology with the daily reports from 57 participants and their partners over 10 days, we examined gender differences in the amount of support for WFC that one partner perceived receiving and the amount of support that the other perceived giving. Consistent with expectations, the results of a dependent sample t-test showed that partners perceived giving significantly more social and tangible support than the main participants reported receiving ( $t(58)=2.45, p<.05$  and  $t(58)=3.18, p<.05$ , respectively). Using the general linear model, gender was tested as a moderator but effects were non-significant ( $F(57,1)=.24, p>.05$  and  $F(57,1)=.68, p>.05$ ). Practical and theoretical implications will be discussed.

SELF-AFFIRMATION AND ACADEMIC  
ENGAGEMENT OF INTERDEPENDENT  
IDENTITIES: A SOCIAL-PSYCHOLOGICAL  
INTERVENTION

Sarah Herrmann, Stephanie Fryberg,  
& Rebecca Covarrubias  
The University of Arizona

Cohen, Garcia, Apfel, and Master (2006) demonstrated that providing students a self-affirmation in classroom contexts significantly reduced the racial achievement gap. In the study presented here, we explored whether providing students with a culture-relevant affirmation enhanced the positive effect created by self-affirmation. In Mexican-American cultural contexts, which reflect interdependent models of self, family is central. At a predominantly Mexican-American middle school in Tucson, we recruited 98 students (56 girls,  $M$  age = 12.75,  $SD = 0.98$ ), and examined whether an interdependent affirmation (i.e., a family affirmation) increased persistence on math and tangram tasks more than an independent affirmation (self-affirmation) or a control (no affirmation) condition. Persistence was measured using math and tangram tasks and academic engagement and interdependence were measured with surveys. Initial analyses reveal that the interdependent affirmation condition increased academic engagement, belonging, and math persistence compared to the self-affirmation condition, and self-affirmation increased measures compared to control condition. This implies that the original self-affirmation design is more valuable with this additional cultural component. The research demonstrates the ways in which affirmations varies for students from interdependent cultures and has important implications for developing identity safe learning environments for all students.

WORK-FAMILY CONFLICT AND EMOTIONS

Danielle Pascarella, Kristen M. Shockley,  
Tammy D. Allen  
University Of South Florida

Research suggests that conflict between work and family life is prevalent for many employed individuals. Despite the large amount of research in the area (Eby et al., 2005) there have been few studies conducted on the role of emotions during experiences of WFC (WFC).

The few previous studies examined WFC on a daily basis and found that it is associated with guilt and hostility (Judge, Ilies, & Scott, 2006; Livingston & Judge, 2008) The present study extends this work in two ways. First, we examine the relationship between WFC episodes and additional negative emotions (irritable, ashamed, upset, distressed). Second, we explore the role of social and tangible support for WFC episodes in these relationships.

The sample for the study was 57 employed participants who were married or living with a partner. For ten days participants reported their WFC, support and emotions, resulting in a total of 598 data points. As hypothesized, participants experienced more guilt ( $t=4.82$ ,  $p<.05$ ), irritability ( $t=5.66$ ,  $p<.05$ ), hostility ( $t=2.98$ ,  $p<.05$ ), shame ( $t=3.67$ ,  $p<.05$ ), upset ( $t=5.79$ ,  $p<.05$ ), distress ( $t=7.17$ ,  $p<.05$ ) on days when WFC was experienced compared to days when it was not. Among those who experienced WFC, support significantly and negatively related to irritability, upset, and distress.

THE ROLE OF EPISTEMIC BELIEF  
STRATEGIES IN THE NEED FOR IMPLICIT  
SELF-ESTEEM DURING MORTALITY  
SALIENCE

Kacie N. Gebhardt, & Matt S. Leonard  
Saint Louis University

One's beliefs can be a powerful tool in many areas, such as when forced to think of one's morals, values, and mortality. Research shows that an individual made aware of their impending death will cling to their beliefs and experience an increase in implicit self-esteem, to counter negative effects to the self (Greenberg, Pyszczynski, & Solomon, 1986; Landau et al. 2004; Schmeidel et al. 2009; Sowards, Moniz, & Harris, 1991). Implicit self-esteem is most noted for its ability to buffer negative effects, such as fear and anxiety of mortality salience at high levels (Bosson, Swann, & Pennebaker, 2000; Landau et al.; Schmeidel et al.; Sowards et al.

1991). The current study is measuring the effects of certain epistemic beliefs (i.e., metaphorism, empiricism, or rationalism) on implicit self-esteem. Following the Personal Epistemological Profile, participants are being primed with mortality salience or dental pain then complete the Name-Letter-Effect task, measuring implicit self-esteem. As rationalists are more likely to view death logically, it is hypothesized as the most efficient buffer, showing the lowest increase in implicit self-esteem and least vulnerability to mortality salience than metaphorism or empiricism (Lyddon, 1989; Wilkinson & Migotsky, 1993). Data is currently being collected.

SOCIAL COMPARISON AND BODY  
SATISFACTION IN ASIAN AMERICAN AND  
CAUCASIAN WOMEN

Janet F. Park & James A. Kulik  
University of California, San Diego

This study sought to investigate how body satisfaction of Asian American and Caucasian women are influenced by social comparisons with peers who are similar versus dissimilar in ethnicity. The study also examined the extent adherence to traditional Asian values moderates this relationship in Asian Americans. Female Asian and Caucasian subjects viewed a photograph of a thin, average or overweight woman that was either Asian or Caucasian and answered questions about their body satisfaction and adherence to various Asian values. The study hypothesized that Asian American and Caucasian women should feel more dissatisfied after viewing a thin versus average or overweight peer who was ethnically similar to them. A similar but weaker pattern was expected when the peer was of dissimilar ethnicity. In addition, because thinness is valued in Asian culture and Asian values place emphasis on conformity and referencing others in the construction of the self, we expected participants who more strongly adhere to Asian values would be particularly likely to experience

body dissatisfaction after viewing a thin Asian peer. Findings of this study should provide insight into ethnicity and its possible role in social comparison and yield a better understanding of acculturation and body image in Asian American women.

#### BODY IMAGE AND ITS RELATION TO PSYCHOLOGICAL AND SOCIAL ADJUSTMENTS AMONG ADOLESCENT FEMALES

Solveig Deranteriasian\*, Elizabeth Harvey,  
Michael Giang, Sandra Graham, Ph.D  
University of California, Los Angeles

As adolescent girls transition to high school, body image becomes an important and prominent aspect of who they are. While previous studies have focused on body image and its psychological correlates, the present study examines the relationship between adolescent girls' negative body image and their social and psychological adjustments. Participants were 636 ninth grade female students from a longitudinal survey study on peer relations. As expected, correlation results revealed that negative body image was associated with increased depression and lower self-esteem. In addition, negative body image was also associated with social adjustments that related to greater social anxiety and lower friendship support. These results suggest that negative body image brings about social inhibitions and psychological distress. These findings can guide prevention programs aimed at strengthening adolescent girls' body image through positive social dialog and developing positive friendship support strategies.

#### THE STORIES CHILDREN SHARE IN CONVERSATION WITH THEIR PEERS

Jessica M Winterstern  
New York University

Narratives are essential in a child's life promoting growth in socio-emotional and cognitive areas. Yet, the current research does not sufficiently investigate all critical contributors who influence children's narrative development, such as peers. Storytelling interactions influence the development of children's unique narrative styles and the bonds that develop between peers. However, there exist gaps in our understanding of how peer interactions support the development of children's storytelling abilities, in particular how this relationship develops with age and the role gender plays in such development. The present study examined the personal narratives shared between friends across age groups and gender. Forty-eight children between the ages of five and ten were asked to share stories with a same-sex friend. Stories were audio-recorded, videotaped and transcribed. Narrative interactions were coded for interactional features and themes. Interactional and thematic features were submitted to analyses of variance determining gender and age-group differences. Preliminary results showed that children told more elaborative narratives with age. Boys utilized agency themes whereas girls highlighted communion themes. Finally, girls overlapped and interrupted more so than did boys. Results are discussed in relation to the role peers and friendship play in language development.

#### PROCESSING NEWLY-LEARNED VERBS: EVIDENCE FROM TODDLERS

Melissa Hansen, Sudha Arunachalam,  
Sandra Waxman  
Northwestern University

"To acquire a new verb's meaning, toddlers use the verb's syntactic context along with observation of a referential scene. But acquiring a new verb also requires integrating its representation into the parsing machinery. The current study (a) demonstrates that 21-month-old toddlers infer a novel verb's meaning from

syntactic context even in the absence of a referential scene and (b) sheds light on how quickly toddlers process the novel verb and orient their attention toward its referent once candidate events are displayed. We exposed forty toddlers (average 21.21 months) to novel verbs. Toddlers first watched a two-actor conversation featuring a novel verb in either Transitive or Intransitive sentences. They then viewed two side-by-side videos: a causative action and a synchronous action. After a baseline period, during which no novel word was presented, toddlers heard, e.g., "Where's mooping?" We analyzed the time-course of toddlers' looking to determine when looking patterns in the two conditions began to diverge. In the baseline period, looking patterns did not differ across conditions. But 2.5 secs after the onset of the novel word in the question "Where's mooping?", toddlers in the Transitive condition reliably preferred the causative scene compared to toddlers in the Intransitive condition, ( $t(40)=2.7, p=.0102$ ).

#### THE EFFECTS OF METACOGNITIVE STRATEGIES ON TEST ANXIETY

Chun M. Yeung, Daniel E. Glenn,  
Michelle G. Craske, Ph.D.  
University of California, Los Angeles

"Test anxiety is a problem that undermines test performance for many people. Test anxiety lowers test scores, and prevents affected individuals from achieving their academic potential. The present study examined the effects of a metacognitive strategy, derived from the metacognitive model of anxiety disorders, on counteracting test anxiety. On Day 1, college students were divided into 3 groups to be trained in using different strategies (metacognitive strategy, alternative strategy, no strategy) to cope with test anxiety when a tone is presented. On Day 2, all subjects will be reminded of their trained coping strategy before taking a multiple choice math and reading

comprehension test in a simulated classroom environment. A tone will be presented at set time intervals throughout the test to prompt subjects to use their trained strategy. Primary outcomes variables will include test performance, trait and state anxiety, as well as qualitative and quantitative information regarding using the trained strategy. The study is currently in the stage of running subjects and collecting data.

#### AFFECTIVE PROCESSING DIFFERENCES INFLUENCE EXPOSURE THERAPY OUTCOMES

Rebecca MacAulay, Najwa Culver, M.A.  
and Michelle Craske, Ph.D.  
University of California, Los Angeles

Exposure therapy is an effective treatment in extinguishing patients' fears and anxiety. However, patients sometimes experience relapse after therapy. Negative Affectivity (NA) compared to Positive Affectivity (PA) may explain some of the variance in treatment efficacy. NA is associated with increased anxiety, as well as theoretical mediators of anxiety. Within an exposure therapy paradigm, we are examining trait affect's impact on physiological markers of affective response (Skin Conductance Response: SCR and Heart Rate: HR). Subjects, rated in the top quartile on a clinical anxiety measure, undergo classical fear conditioning in which they view shapes (conditioned stimulus: CS) paired with a loud noise (unconditioned stimulus). During extinction, the shape is presented without the loud noise. We predict that high PA participants will show decreased SCR and HR to the CS, in turn enhancing the efficacy of exposure therapy. Conversely, high NA participants will show increased SCR and HR reactivity to the CS. We propose that affect (PA vs. NA) may moderate the efficacy of exposure therapy. Given the heterogeneity of anxiety disorders, it is important to better understand factors that influence treatment outcomes.

EMOTION REGULATION AND  
INTERPERSONAL PERCEPTION: HOW  
EMOTION REGULATION AFFECTS HOW  
PEOPLE ARE SEEN BY OTHERS

Adrian Yupanqui & Sanjay Srivastava  
University of Oregon

Emotion regulation allows people to use strategies that alter emotional experiences and expressive behavior. Prior research has looked into the effects of emotion regulation strategies on social relationships, showing that different strategies have different consequences for closeness and social support. The present study looked at the role of interpersonal perception in explaining these effects. Specifically, it examined how emotion regulation strategies affect the way the regulator perceives the personalities of other people during a social interaction. Participants were put into small groups for a facilitated social interaction. After the interaction, we assessed the participants' perceptions of one another's personalities. Expressive suppression, an emotion regulation strategy in which people try not to show the emotions that they are feeling, predicted others' perceptions of the suppressor. Specifically, we found that people who suppress their emotions are seen as less extraverted, less agreeable, and more neurotic. These perceptions may help explain why suppressors often receive less social support from others.

THE EFFECTS OF INTROVERSION,  
EXTRAVERSION, AND DISTRACTION ON  
SOCIAL PERFORMANCE

Kristina M. Puzino  
Siena College

The purpose of the present study was to evaluate the extent that participation in a helping role offsets the natural personality dispositions of introverts and extraverts. It was

anticipated that the quality of introvert and extrovert interactions would be similar when introverts were distracted from a self-focus by a confederate who needed help. Students participated in social tasks with a confederate where the goal was to call college alumni to encourage their attendance at basketball games. In the helping role condition half of the confederates revealed a crisis near the beginning of the task (a lost dog). Quality and quantity of participants' responses to the crisis and the amount of time spent on the phone task were measured. A 2 (personality type) x 2 (type of role) ANOVA on quality of talk revealed a significant main effect ( $p < .05$ ) for type of role. Participants in the helping condition had a higher quality of conversation regardless of personality type. A second ANOVA revealed a personality type main effect for quantity of talk, where extroverts talked more than introverts on the telephone. Results suggest that the quality of verbal interaction may be positively altered for introverts when in a helping role.

AUDITORY STREAM SEGREGATION IN  
SCHIZOPHRENIA PATIENTS

Aaron S. Boren, David M. Weintraub, Joel S.  
Snyder, PhD.  
University of Nevada, Las Vegas

Prior research has shown that individuals with schizophrenia (SZ) have trouble discriminating sounds based on pitch or frequency. It is not known whether these deficits create problems in forming sound patterns into coherent auditory streams. This study examined whether auditory stream segregation is impaired in SZ patients. Participants were presented with low tones (A), a high tone (B), and silence (-) in repeating ABA-patterns for 6.72 sec. The frequency separations ( $\Delta f$ ) were 3, 6, or 12 semitones. Following the tones the participants responded whether they heard one stream or two streams. SZ patients

were less likely to report hearing two streams. Larger  $\Delta f$  resulted in more perception of two streams in both groups. However, frequency separation had less effect in SZ patients than in controls. The decreased effect of  $\Delta f$  in SZ patients in perception of two streams implies that the reported differences are partially due to sensory level impairments in auditory brain areas critical for classifying sound on the basis of frequency, rather than at a decision-making level of processing.

COGNITIVE IMPAIRMENTS IN SPATIAL MEMORY (BARNES MAZE) AND SPATIAL PROCESSING (METRIC AND TOPOLOGICAL SPATIAL INFORMATION TASKS) AFTER TRAUMATIC BRAIN INJURY IN RATS

J.D. Gahan, M.M. Folkerts\*, B.G. Lyeth and R.F. Berman

University of California Davis, Neurological Surgery Department & \*Pepperdine University, Department of Psychology

Traumatic brain injury (TBI) in humans results in cognitive deficits. Our goal was to model TBI in rats to better understand specific cognitive deficits associated with spatial processing (Metric and Topological Spatial Information Tasks (MSIT, TSIT)) and memory (Barnes Maze (BM)). MSIT measured rats' ability to use distances and angles to recognize changes in distance between objects in space. TSIT evaluated rats' ability to make representations of objects in space in relation to each other and use this to recognize changes in the position of objects. The BM assessed rats' ability to use spatial cues and remember the location of a hidden escape box. Fluid percussion injury (FPI) impaired rats' ability to make metric representations as measured by decreased active exploration of objects during the test period of MSIT. There was no difference in active exploration between sham and FPI rats during TSIT. FPI impaired spatial memory in the BM as measured by increased latency and increased errors. These tasks revealed significant spatial

processing and memory deficits after moderate TBI. This was the first report implementing the MSIT and TSIT post-TBI and together they may be ideal for future experiments linking cell loss with learning and memory impairments after TBI.

CATEGORY LEARNING AND VISUAL WORKING MEMORY

Brittany J. Dungan, Andrew McCollough, and Edward Vogel, PhD  
University of Oregon

Category learning is an important cognitive ability, yet individual differences in category learning have not been extensively studied. Here we extend the Posner, Goldsmith, and Welton (1967) dot pattern distorted prototype task to multiple category set sizes and examine the correlation between working memory capacity and category learning. In Experiment 1, subjects learned 2, 4, or 6 categories (numbers, letters, or shapes consisting of nine dots) in separate blocks. Subjects showed a monotonic decrease in accuracy as set size increased. We then examined the relationship between working memory capacity and categorization in a second experiment where subjects were asked to classify exemplars from 2 categories and then perform a category change detection task. Subjects were presented with an exemplar from one category and then a new exemplar from either the same or different category. Change detection accuracy was greater for learned than new categories. Working memory capacity in all experiments was estimated using a color change detection task (Luck & Vogel, 1997). Working memory capacity was positively correlated with categorization accuracy in set size 2 and 4 and with change detection accuracy for novel but not learned categories, suggesting that learned categories require less online memory resources than novel categories.

## THE EFFECT OF TASK RELATED AUDITORY DISTRACTORS ON MEMORY RECALL PERFORMANCE

Peter D. Russell  
Missouri Southern State University

In learning environments we must be able to attend to auditory and visual materials to properly rehearse and recall in a variety of recall situations. Some of these environments, such as a common study area, may have students discussing a variety of topics. The purpose of the current study is to investigate students' ability to recall information when affected by auditory distractions. The present study had 138 participants (70 females, 68 males) between the ages of 18 to 50 ( $M = 21.74$ ,  $SD = 6.168$ ) who currently attend Missouri Southern State University. The study used a 3 (Task Related Auditory Distractor: no distractor, intermittent distractor, continuous distractor) X 3 (Test Interval: immediately after, one week later, and two weeks after the study phase) mixed factorial design. The task related auditory distractor was manipulated between-subjects, and the test interval was manipulated within-subjects. Analyses revealed a significant main effect of test interval  $F(1,105) = 26.855$ ,  $p < .001$ ,  $\eta^2 = .204$ . Participants who heard no distractors performed better on memory recall than participants who were exposed to intermittent and continuous auditory distractors. Performance is discussed with implications on environments containing auditory distractors relevant to the task and divided attention performance.

## THE EFFECTS OF MOVEMENT ON LEARNING TASKS AND MEMORY RECALL

Bethany D. Davenport, Elise K. Maggio  
Yosemite High School

This is an experiment designed to investigate the effects adrenaline and movement have on learning tasks and memory recall. The

experimental ( $n=25$ ) and control groups ( $n=23$ ) consisted of 16- 18 year old, predominately Caucasian male and female students, from a rural high school in central California. The experiment was carried out during two class periods with two separate learning styles. In the first class, participants worked individually on a silent review packet which was a precursor to carrying out their learning task. In the second class, the participants engaged in an adrenaline/movement producing review game as a precursor to carrying out their learning task. The independent variable was the type of learning style the participants engaged in (i.e. silent versus adrenaline/movement), and the dependent variable was the ability to remember/recall the information they received from the learning task. A t-test demonstrated that there was not significance at the  $p < .05$  level therefore accepting the null hypothesis and showing that adrenaline/movement does not increase the amount of memory recall on said task.

## THE EFFECT OF REWARD VALUE ON ATTITUDE TOWARD A GIVEN TASK

Rachel L. Hughes  
Yosemite High School

The following experiment is designed to investigate the effects of cognitive dissonance and the value of a reward on attitude toward a given task. The experimental group ( $n=24$ ) and control group ( $n=30$ ) consisted of mainly Caucasian students between the ages of 16 and 19 from a rural high school in Central California. The experiment was carried out during two class periods with two differing reward systems (lower and higher rewards). In each class, students were directed to complete a mundane task that involved copying a series of numbers from a printed number sheet to a blank piece of paper for ten minutes. Upon completing the task, students were then presented with their rewards, both lower and higher respectively. The independent variable is the type of reward

(lower or higher), and the dependent variable is the subsequent attitude of each individual regarding the task. Seven t-tests were used to compare the mean rating for each question about attitude toward the task presented on the post-task survey. The tests found three of the seven values to be significant at the 95% level of significance, while the remaining four were not found to be significant.

#### IS THE N170 RESPONSIBLE FOR PROCESSING EMOTIONS IN FACIAL STIMULI?

Jennifer Zelaya  
University of California, Los Angeles

Previous research has found that the N170 event-related potential (ERP) is linked to structural encoding of face stimuli. Facial processing is specifically found to occur in the right hemisphere (google scholar). Studies have also found a difference between anxious individuals and their hypervigilance toward threatening stimuli compared to non-anxious individuals (MacLoeod 1986 et al., Ohman et al. 1994). Because anxious people should be more sensitive to angry faces, we expect that the N170 will be different across valences for them. Research has shown that people with increased levels of anxiety selectively attend to threatening cues, decreasing their ability to inhibit responding when the cues are distracting. The right hemisphere being more active in participants with high anxiety, we would expect that these participants will show greater stimulation for the N170. We would expect to validate the findings that N170 is in fact responsible for facial processing. In order to test our findings we administered the Lateralized Dot Probe Task. The Lateralized Dot Probe task simultaneously presents a neutral cue with a threatening or positive cue and measures reaction times to a spatially congruent or incongruent probe presented directly after the valence cues. This task measures the attention bias in anxiety by measuring reaction times to incongruent probes, compared to reaction times

to congruent probes. Preliminary results show a trend toward larger peak amplitudes for N170s for angry faces in both hemispheres of participants with low anxiety. N170s in participants with high anxiety showed a trend for smaller N170s overall, with no difference in N170 peak amplitude between valences.

### Paper Session I Abstracts

#### Social a

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#### ETHNIC GROUP DIFFERENCES IN THE EXPERIENCE AND EXPRESSION OF ANXIETY DURING A STRESSFUL TASK

Xiaojun A. Jiang, Shu-wen Wang,  
& Anna S. Lau  
University of California, Los Angeles

Previous research has found that Asian Americans value emotional restraint whereas European Americans prioritize emotional assertion. However, few studies have examined group differences using multiple methods to assess experienced versus expressed emotions. The current study compares three groups (N=144), first generation Asian Americans (AA1), second generation Asian Americans (AA2) and European Americans (EA), on three measures of anxiety during a stressful speech task. These measures include self-reported anxiety (Positive and Negative Affect Schedule), coded anxious behavior, and salivary cortisol samples to assess biological stress response. Preliminary results show that AA1 scored significantly higher than AA2 on self-reported anxiety, but no differences were found with EA. Further analysis will test the hypothesis that AA will express less behavioral anxiety than EA, despite experiencing comparable subjective and biological levels of anxiety. Furthermore, we expect that these differences will be larger for AA1 compared to AA2.

PERSUASION ATTEMPTS ON POLARIZING  
ISSUES: THE ROLE OF MESSAGE-FRAME  
AND MESSAGE-SOURCE

Veronica M. Heiskell, Natalya C. Maisel, M.A.,  
and L. Anne Peplau, Ph.D.  
University of California, Los Angeles

Political advertisements often attempt to persuade viewers on controversial issues, but previous research on persuasion has often focused on less-polarizing topics (e.g., product choices). We examined two variables that may be important for persuasion on the polarizing topic of same-sex marriage: the message frame (cognitive, fact-based messages vs. affective, emotion-based messages) and the source of the message. Participants (N =196) were randomly assigned to read a cognitively or affectively-framed message from a gay person, a gay person's parent, or a heterosexual person. Unlike previous research on less-polarizing topics, which finds cognitive messages to be more persuasive, we found that affectively-framed messages were more persuasive than cognitively-framed messages ( $p < .10$ ). In addition, the least persuasive message was the cognitively-framed message from the straight person ( $p < .05$ ). This suggests that for controversial topics, affective messages from a source emotionally connected to the issue (e.g., the gay person's parent) may be most persuasive.

ESL AND CONFLICT RESOLUTION: AN  
INVESTIGATION OF THE RELATIONSHIP  
BETWEEN ENGLISH LANGUAGE  
EXPERIENCE AND CONFLICT RESOLUTION  
STYLE AMONG HIGH SCHOOL STUDENTS

Erin M. Brittain  
Cal Poly State University, San Luis Obispo

With the prevalence of violence in high schools today, interpersonal conflict resolution is a relevant topic for both school administrators

and psychologists. Many conflict resolution training programs emphasize the development of students' emotional vocabulary to encourage mutual self-expression and the promotion of compromising and collaborating solutions. Many students in California schools are classified ESL (English Second Language), and less experience with the majority language, English, may affect conflict resolution behavior. This study tested the hypothesis that greater experience with the English language would be related to greater use of the compromising and collaborating conflict resolution strategies. The survey was administered to high school students, and the results yielded significant results such that less English experience was associated with greater use of the avoiding and accommodating styles, and more English experience was associated with greater use of the collaborating style. These results can be explained by the role of emotional vocabulary in resolving interpersonal conflict, and in some cases, culture and ethnicity also play an important role on conflict behavior. The findings have practical implications for educational policy as this study has shown that experience with emotional vocabulary in English is related to non-violent problem solving in high school students.

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**Social b**

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COMMUNITY GREEN: COMPARING  
INDIVIDUAL AND SOCIAL FINANCIAL  
MOTIVATIONS IN ENERGY CONSERVATION

Stephanie Vezich, Greg M. Walton,  
& Dave Paunesku  
Stanford University

A field experiment demonstrates how individual financial and social motivation incentives to conserve energy affect a community's electricity consumption patterns. Baseline measures of weekly consumption were

taken in a faculty condominium community, followed by either a) no email, b) an email emphasizing an individual's chance to win a financial prize for conserving, along with conservation tips or c) an email emphasizing a whole building's chance to share a financial prize for conserving, along with conservation tips. Individual feedback on consumption relative to baseline use was sent two weeks following the intervention email. Results indicate that social motivation is especially effective among baseline low consumers but elicits reactive effects among baseline high consumers. In contrast, individual financial motivation is especially effective among high consumers. Based on these findings, a theoretical explanation for the boomerang effect among high consumers in the social condition, along with suggestions for interventions tailored toward existing high or low consuming communities and educational interventions, is discussed. In addition, research on attitude change is suggested to resolve reactivity among high consumers.

#### CULTURAL INTERSUBJECTIVITY BETWEEN LATINA ADOLESCENTS AND THEIR MOTHERS

Claudia M. Hernandez  
Wellesley College

In the U.S., Latina adolescents often face problems of acculturation, that is, adaptation to two cultures simultaneously. In addition to typical developmental challenges, they must integrate into mainstream American culture while maintaining a connection to their parents' traditional ethnic values. Clinicians and researchers have begun to document the negative outcomes associated with acculturative stress as well as the beneficial effects of mutual relationships on family functioning and self-esteem. This survey study explores how the shared understanding of cultural knowledge within mother-daughter dyads mediates the relationship between mutuality and

psychological outcomes in a sample of 92 Latina adolescents. Results indicate that these associations vary by the adolescent's mode of acculturation. Among the group of girls who maintain only their ethnic culture, mother-daughter cultural intersubjectivity mediates the relationship between mutuality and family functioning. Findings will be discussed from a relational-acculturation model of adaptation.

#### ARE CULTURAL BACKGROUND AND SELF- EXPRESSION RELATED TO SOCIAL SUPPORT SEEKING?

Rachel Pan Hu  
University of California, Los Angeles

Social support can contribute to physical health, positive affect, and social adjustment. Recent research suggests that cultural norm and self-expression orientation may impact an individual's support-seeking tendencies and the form of support s/he may benefit from. This comparative study examines the relationship among cultural background, self-expression orientation, and social support seeking in European American and Chinese Singaporean undergraduates. A survey was administered to 80 Chinese Singaporean and 80 European American undergraduates to measure their self-expression orientation, tendency to utilize different forms of social support, and reasons for support seeking. Quantitative analyses will be conducted to determine if cultural background and self-expression have main and interaction effects on a) the propensity to seek explicit support, b) the propensity to seek implicit support, and c) the reasons for seeking support. It is predicted that European Americans would be more likely to seek explicit support and to do so with a functional orientation, whereas Chinese Singaporeans would prefer implicit support and manifest an emotional orientation. Further, a strong self-expression orientation is expected to predict explicit support solicitation, and a low self-expression orientation, implicit support seeking. It is hoped that findings from

this study can contribute to the development of effective social support programs.

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## Clinical

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### PREDICTORS OF HOARDING TENDENCIES AMONG FILIPINO PROFESSIONALS

Marie Angelyn Cabuquit, Paola Nicolle Santos,  
Hannah Lois Tarroja  
Miriam College, Philippines

One hundred eight professional male and female Filipinos were gathered through convenience sampling and were asked to answer the following questionnaires at their convenience: (a) Saving Inventory-Revised, (b) Obsessive-Compulsive Scale, (c) Saving Cognitions Inventory, (d) Cognitive-Somatic Anxiety Questionnaire, and (e) Barratt Impulsiveness Scale Version 11, including a demographic questionnaire. Results showed that obsessive-compulsive tendency was not a significant predictor of hoarding tendencies, with a  $p=.654$ . On the other hand, irrational belief, impulse control and anxiety were significant predictors of hoarding tendencies, with a  $p= .000$ ,  $p= .005$ , and  $p =.020$  respectively. The data from the qualitative questionnaire were the thoughts, feelings and behaviors of the participants toward the objects that they collect.

### IMPULSIVITY AS A PREDICTOR OF SMOKING CESSATION OUTCOME

Peter Radu & James J. Gross  
Stanford University

An overwhelming majority of smokers attempting to quit will experience at least one lapse, dramatically increasing odds of eventual relapse. However, the factors contributing to a lapse remain poorly understood. One possibility is that lapsers experience heightened

impulsivity relative to non-lapsers. The present study tested the hypothesis that two baseline measures of impulsivity would be predictive of lapse behavior over the course of a ten-week cessation attempt in an online sample ( $N = 25$ ) of otherwise healthy adult smokers. We defined impulsivity as consisting of two separate but related constructs: (i) impulsive decision-making, indicated by higher discounting rates on a delay discounting of money task; and (ii) impulsive disinhibition, indicated by higher rates of commission errors in a Go/No-go (GNG) task. Contrary to hypothesis, higher baseline rates of delay discounting and higher baseline rates of GNG commission errors did not significantly increase the odds of lapsing over the course of the study. However, baseline delay discounting emerged as a significant predictor of both the length of a smoking-free interval prior to participants' first lapse and the number of lapses a participant reported. Implications for a novel interpretation of the relapse literature and for intervention strategies are discussed.

### ETHNIC DIFFERENCES IN BODY EVALUATION AND PREFERENCE FOR PLASTIC SURGERY

Rachel P. So  
Wellesley College

Research on body image of women around the world has focused on eating disorders thus obscuring other possible cultural differences in body esteem. In particular, the adoption of Western cultural standards may result in disturbance of body image among Asian women because of physical disparities between them and their white counterparts. I propose to investigate the differences in satisfaction with ethnically salient body features among Euro-, Chinese-, and Korean-American college women. In addition to investigating ethnic variability in body image, I aim to ascertain whether these differences are related to the use of plastic surgery, ethnic identification, individualism/collectivism, and social class.

## Developmental a

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### VISUAL STATISTICAL LEARNING OF SHAPES: AN EVENT-RELATED POTENTIAL STUDY

Laura Hawkins, Paola Escudero Ph.D.,  
& Scott P. Johnson Ph.D.  
University of California, Los Angeles

The rapidity and ease in which infants come to acquire language suggests the existence of an innate learning mechanism. Research of this learning mechanism has given evidence that infants extract statistical information from patterns which allows them to decode a sequence, whether the input is auditory or visual. The present study aims to further understand visual statistical learning and the neural processes involved. We recorded Event-Related Potentials while participants, both adults and infants, viewed a continual sequence of shapes that consisted of patterns of pairs as well as violations of these patterns. We expect to find significant differences of the ERPs of the target pattern when compared with the ERP of the violation. We will also examine the ERPs to assess learning as it related to the exposure time of the patterns. We believe the results will contribute to understanding the neural processes of statistical learning.

### INFANTS' PREFERENCE FOR ANIMATE PICTURES IN COMPLEX DISPLAYS

Lorraine A. Becerra, Maxie Gluckman  
University of California, Los Angeles

Current findings in visual perception literature suggest that infants prefer "face-like" patterns over a variety of other non-face-patterns (Turanti, Simion, Milani, & Umiltà, 2002). The present investigation examined 6-month-olds'

(N=30) preferential looking times at 48 slides containing a human face, human body part or non-human animal. Amongst an animate picture, participants also viewed a complex visual array of inanimate objects (i.e., tree, pizza, hammer). Looking preferences were recorded using a 1750 Tobii eye tracker. Initial results support the hypothesis that on average infants significantly prefer looking at an animate picture longer than other inanimate ones. Moreover, infants showed a strong preference for pictures of human body parts as compared to pictures of non-human animals. Future research will explore the latter preference by determining to which animate features infants' direct their attention.

### EVALUATING AN EYE-TRACKING MEASURE OF RESPONSE TO JOINT ATTENTION IN INFANTS AT RISK FOR AUTISM

Anahita D. Navab, Kristen Gillespie-Lynch,  
Dr. Ted Hutman, Dr. Marian Sigman  
University of California, Los Angeles

Response to joint attention (RJA), or recognition of referencing behaviors in an interpersonal interaction, is a key predictor of language skills in typically developing children and those with autism. Eye-tracking assessments are also validated measurements of RJA. Eye-tracking offers added precision, but has not been evaluated for relationships with in-person RJA or language. This study compares eye-tracking and in-person RJA (assessed by the Early Social Communication Scales or ESCS) in 73 infant siblings of children with autism. The study also examines the relationship between both measures of RJA and language skills at 12 and 18 months. Analyses of RJA at 12 months revealed a negative correlation between the two RJA measures ( $n=11$ ,  $p<0.05$ ). While eye tracking and language did not correlate, data analyses indicated that RJA measured by ESCS for both age groups positively correlated with prospective language skills 6 months after

assessment ( $n=21$ ,  $p < 0.05$ ). These results suggest that either one measure is more effectively assessing RJA, or that they are assessing different aspects of RJA. Results also indicate that in-person RJA skills may be the better predictor of positive language outcomes. Further 18-month data analyses will be presented. Implications for intervention and future studies will be discussed.

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## Developmental b

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### CAN WE TALK? PARENT-CHILD COMMUNICATION ABOUT CHILDREN'S ACADEMIC LIVES

Joelle I. Broffman\* and Rena Repetti, Ph.D.  
University of California, Los Angeles

Educators have long noted the importance of parental involvement in their children's academic lives, which has been shown to affect children's objective achievement levels and their scholastic self-esteem. Research, however, has yet to examine the primary mechanism through which parents sustain involvement in their children's lives: parent-child communication. The present study analyzed parent-child conversations videotaped in the homes of 30 families in order to begin to examine what parent-child communication looks like in its natural social context. Two coders reviewed and coded 284 parent-child conversations about academics for recurring themes in dyadic interaction. We found that requests for help ( $n=53$ ), problem-solving ( $n=133$ ), planning ( $n=144$ ), and discussions of emotion ( $n=88$ ) comprise a notable portion of the conversations parents and children have about academics. Furthermore, girls are more likely than boys to have discussions with their parents in which planning ( $c2(1, N = 284) = 4.02$ ,  $p=0.05$ ) and expressions of emotion ( $c2(1, N = 284) = 8.0$ ,  $p=0.005$ ) take place.

### PROACTIVE COPING AS PREDICTOR OF SUCCESSFUL AGING IN FILIPINO ADULTS

Amantha Alfonso, Beatriz Carino, Diane See,  
Meg Torres  
Miriam College, Philippines

This study sought to find out whether proactive coping is a predictor of successful aging in the Philippines, whether dispositional optimism, self-efficacy and social support are indeed the resources of proactive coping, and if Filipinos proactively cope. Ninety-three Filipino adults from Metro Manila participated in this study. This study revealed that proactive coping is a predictor of successful aging,  $R^2 = .117$ ,  $F(1, 92) = 12.01$ ,  $p = .001$ . However, it is not the only predictor because there are other factors that contribute to successful aging. Results showed that the psychological resources are significantly correlated with proactive coping (dispositional optimism = .818, self-efficacy = .919, social support = .820) and that Filipinos proactively cope.

### GROOMING PATTERNS AND HUMAN ATTACHMENT: A COMPARISON OF TWO CULTURES

Bryan Suechting, Kailyne Van Stavem,  
and **Seinenu M. Thein**  
University of California, Los Angeles  
FPR-UCLA Center for Culture, Brain, and  
Development

Grooming has long been considered to have a variety of adaptive social functions for non-human primates (and other lower-order animals), being linked to such things as reciprocal altruism, coalition-building, emotion regulation, parental investment, and attachment (de Waal, 1986). Surprisingly, however, the current literature is scant on the subject as it relates to social bonds between humans. Developmental psychology, especially, has neglected to consider the relationship between

grooming patterns and children's learning and social development. Yet, receiving, giving, and witnessing grooming likely plays a crucial role in how children learn about attachment relationships (Bowlby, 1969). The following study will seek to address the gap in the psychological literature by comparing patterns of grooming during family mealtimes in two distinct cultures across multiple age groups. Video focal follows were performed on Burmese and American children between the ages of 2 and 6 during mealtimes. Frequency, rates, and types of grooming behavior between children and caretakers were examined. Preliminary analysis shows that the grooming practices found in each group reflect adaptive patterns of attachment found in each eco-cultural setting.

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## Cognitive/Neuroscience

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### PLANNING TIME AS A PREREQUISITE FOR STRATEGY CHANGE: WHO PLANS AND WHEN?

Karl Fike, Jenna Fielding, James Arnett,  
Brent Morgan  
University of Memphis

Within many tasks, multiple strategies may be used to complete the task. Deciding on a strategy may come at a cost, however, in the form of mental effort and planning time. The current study sought to answer (1) whether or not a shift in strategy is preceded by more thought, (2) whether planning time varies as a function of task difficulty, and (3) what types of processes are involved in planning. College students participated in an experiment researching strategy shifting in which they engaged in a procedural-motor task with multiple possible strategies over a series of conditions and trials before completing a battery of cognitive measures. Results indicated a statistically significant increase in planning time on trials preceding a strategy shift. Furthermore,

more difficult versions of the task required more time to plan. A factor analysis of individual differences measures revealed three distinct components expressing executive, verbal, and perceptual flexibility. Perceptual flexibility was positively correlated with planning time while the other two were inversely correlated, a finding supported by neuroimaging research. Overall, these results suggest that: adequate planning is necessary to shift strategies; an increase in task difficulty results in more planning; and planning is governed by multiple cognitive abilities.

### STRATEGY CHANGE IN A PROCEDURAL-MOTOR TASK USING INDIVIDUAL DIFFERENCE MEASURES

Jenna Fielding, James Arnett, Karl Fike,  
& Brent Morgan  
University of Memphis

Previous research has associated various cognitive measures (e.g. reasoning ability, working memory, spatial ability, etc.) with the ability to shift strategies within complex tasks; however, these studies have largely focused on strategies within problem-solving tasks. In the current study, participants completed a line-drawing task on a tablet pc, and afterwards were given a battery of cognitive tests. In a previous experiment, we found that individuals tended to employ a different strategy when asked to draw versus trace a rotated figure-8; these two conditions were the focus of the present study. Strategy adaptivity was defined as the difference in the proportion of the predominant strategy used between the two conditions. A multiple linear regression analysis revealed that spatial ability, sustained attention, the ASRS score (a survey screener for ADHD), and the participant's entropy from a baseline condition were all significant predictors of strategy adaptivity. The analysis indicated that higher levels of spatial ability and sustained attention were associated with more strategy shifting, and those who were more likely to have

adult ADHD or were more likely to explore multiple strategies in a baseline condition exhibited less strategy shifting between the two drawing conditions.

#### PSYCHOLOGICAL ESSENTIALISM AND STEREOTYPE THREAT

Elizabeth Scharnetzki, Tara C. Dennehy,  
and Avi Ben-Zeev  
San Francisco State University

Recently, Prentice and Miller (2007) made a persuasive argument about the importance of exploring the intimate link between psychological essentialism (e.g., the perception that women and other “natural” kinds have an underlying causal essence) and stereotyping phenomena. Following Prentice and Miller’s exhortation, our study was designed to examine the effects of two prominent essentialist beliefs suggested by Haslam and his colleagues (e.g., Bastian & Haslam, 2006): discreteness (category membership is clear cut) and naturalness (category membership is biological/natural) on susceptibility to stereotype threat (e.g., Steele, 1997). Stereotype threat is a social-contextual phenomenon in which people who are highly domain-identified underperform when confronted with reminders of a negative stereotype about their group. In our study, female participants were asked to complete a logical-spatial task under conditions of threat or no-threat. Threat was manipulated by the presence of a male confederate whereas no-threat was manipulated by the presence of a female confederate in the testing environment. Data indicated that while naturalness beliefs did not predict susceptibility to stereotype threat discreteness beliefs were found to moderate performance under threat, such that females who were higher in discreteness performed better under threat. We discuss potential implications of either/or thinking as a potential buffer against stereotyping.

## Paper Session II Abstracts

### Social a

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#### AMERICAN IDENTITY AFFIRMATION: WHEN THE “AMERICAN DREAM” GETS IN THE WAY OF GROUP RACIAL HARMONY

Kyonne Isaac, Tiffany Brannon,  
Hazel Markus, Ph.D.  
Stanford University

A Harris Study poll from the early 90’s revealed that racial minorities can hold stereotypic beliefs about other minorities to a greater extent than whites. In the poll 33% of Latino Americans and 22% of Asian Americans endorsed the statement that African Americans, “even if given a chance, aren’t capable of getting ahead”, which was two to three times more than the 12% of White Americans endorsing that statement. And yet, there remains a dearth of psychological research investigating the mechanisms and motivations responsible for inter-minority racial prejudice. The current research will explore the extent to which our social identities, and the behaviors we use to preserve them, contribute to the continuation of racial animosity amongst groups, even when there is little to no immediate material incentive. It is proposed that identity denial in the form of confrontation with the “perpetual foreigner” stereotype can lead Asian Americans (AAs) to display greater racial bias against African Americans, as an attempt to reassert their American identity. AA and White American (WA) college students will take a survey seemingly looking, at their knowledge of pop culture. Participants (Ps) in the experimental condition will be prompted to answer additional questions about their ethnic and American heritage, seemingly because they indicated “Asian” (or “White”) on a previous demographics page. Ps in the control condition will not be asked these questions. All Ps will then complete a series of seemingly unrelated tasks, including a Resource Allocation task, and

a Feeling Thermometer on groups to gauge their level of bias – as interpreted through discriminatory behavior and explicit attitudes, respectively. It is expected that AAs in the experimental condition will display greater racial biasing against African Americans compared to AAs in the control or to WAs across conditions. The anticipated results from this study will demonstrate how inter-minority conflict, though traditionally couched in single dimensions (such as direct competition for socioeconomic resources) may also be a social discourse among and between multiple groups - prompted by and complicit in the perpetuation of an oppressive racial group-based hierarchy in this country.

#### PREDICTING STOCK SUCCESS: COMPANY NAME COMPLEXITY, PROCESSING FLUENCY, AND CONSUMER CONFIDENCE

Carly Hennessy, & David A. Armor  
San Diego State University

In an influential paper, Alter and Oppenheimer (2006) report that investors are biased by the complexity of company names, expecting that simply-named companies will outperform complexly-named companies. They interpreted this finding in terms of processing fluency, arguing that (a) complex names are harder to process psychologically than simple names, leading to negative performance evaluations, and (b) inferences based on fluency (such as of a company's familiarity) influence performance predictions. The results of Study 1 replicated the name complexity effect, but failed to support fluency-based predictions: (1) drawing attention to the source of disfluency (i.e., pronounceability) did not eliminate the name complexity effect, (2) inducing participants to attribute disfluency to a lack of familiarity did not yield evidence of mediation, and (3) altering the implications of disfluency (i.e., that complexly-named companies may be more creative) did not reverse the name complexity effect. Studies 2 and 3 suggest an alternative

explanation. In Study 2, the magnitude of the name complexity effect varied in proportion to participants' prior belief in the relevance of company name pronounceability to stock performance. Study 3 established the causal effect of these beliefs. Name complexity thus influences stock valuation, but this effect is not explained by processing fluency.

#### TRANSETHNIC FOSTER PLACEMENT: THE ROLE OF ETHNIC IDENTITY IN MODERATING LONELINESS AND DEPRESSION

Maurice Anderson  
New York University

Nearly 500,000 children are in foster care. More than 20% of them are transethnically (with ethnically dissimilar families) placed following the Multiethnic Placement Act (1994). Many exhibit internalizing behaviors (e.g. depression, loneliness). This study investigates whether transethnic foster placement is associated with variation in mental health outcomes of foster children. It is hypothesized that, the degrees of ethnic matching between foster child and caregiver, and the incidence of internalizing behaviors, are negatively correlated. To test this hypothesis, a secondary analysis was conducted on a sample (N=106) of mostly African-American and Hispanic (69%) boys (N=58) and girls (N=48) between the ages of 7 and 15 (M=10.47; SD=1.89) in foster care. A continuous measure of ethnic match, Total Match Index (TMI), was created (based on ethnic self-identification, country of origin, and language), and regressed on child internalizing symptoms, controlling for several confounding covariates. TMI significantly predicted childhood depression even after controlling for potential confounds ( $t=-2.63$ ;  $p<.01$ ; R-squared=.063). Analyses of Covariance (ANCOVAs) helped identify the specific factors that may have moderated the influence of ethnic match on the mental health outcomes of transethnically placed foster children. Suggestions for future

research and potential policy implications will be discussed.

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## Social b

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### DIVERSE ENVIRONMENTS: ENOUGH TO INDUCE IMPLICIT MULTICULTURALISM?

Hafsa Mohamed & Thierry Devos, Ph.D.  
San Diego State University

Despite the growing diversity in the U.S., research shows that European Americans as a group are seen as more American than any other ethnic group (American=White effect, Devos & Banaji, 2005). Multiculturalism, or the idea that group differences should be acknowledged, has been shown to produce positive outcomes with regards to implicit and explicit racial attitudes (Richeson & Nussbaum, 2004). The current study specifically examined whether placing individuals in a complex environment where distinctions are harder to reduce to a majority-minority dichotomy would reduce the American=White effect. We hypothesized that the tendency to associate the concept American more strongly with European Americans than with Asian Americans would decrease as the complexity and diversity of the social environment increases. One hundred and twenty five participants completed a Brief Implicit Association Test (Sriram & Greenwald, 2009) in which they were asked to categorize as quickly as possible pictures of individuals based on their ethnicity (e.g. African, Asian, Latino or European American) and American or foreign symbols. Participants were randomly assigned to one of four conditions. The number of ethnic groups salient was manipulated using a between subjects design and therefore, the Brief IAT required participants to make distinctions either between two, three, or four ethnic groups. Response latencies were measured to assess the strength of the associations between the concept American and the target ethnic groups. In line

with past research, the concept American was more strongly associated with European Americans than with Asian Americans. As predicted, the magnitude of this effect varied as a function of the experimental condition. More precisely, the effect became non significant when the four major ethnic groups in the U.S. were made salient in the task. These findings suggest that inserting people into complex and diverse social environments can help reduce the tendency to equate being American with being White and foster a more inclusive definition of the American identity.

### CAN'T TAKE THE SOUTH OUT OF THE BOY: REGION, SELF, AND MOBILITY BELIEFS

Taylor Phillips, & Aneeta Rattan  
Stanford University

"The American South has long been recognized as having characteristics distinct from other American regions, including fewer resources and more conservative political ideologies. Cultural differences between the South and the Northeast regarding cultures of honor and individualism/collectivism have also been explored. However, psychology has had little to say as to whether these regional differences might include or create differences in regional identity, such as varying centrality of region to individuals' identities. This study investigates regional identity differences between Southerners and Northeasterners, specifically exploring how different regional identities might impact decision making behavior. Our results suggest that home region is an important component of both Southerners' and Northeasterners' identities alike, but that Southerners and Northeasterners vary in the relevance to decision making that they afford their regional identities. Furthermore, when controlling for individuals' perceptions of regional identity relevance, we find that Southern and Northeastern identities differentially impact decisions about inter-regional mobility. Our results show that one

source of this variation may be the strength and distinction of social norms that characterize the South compared to the Northeast. Overall, we find that region is an important component of identity, especially given its ability to influence regional variation in social behavior.

#### PERCEPTIONS OF FEMALE LEADERS: IS THERE A GENERATIONAL EFFECT?

Kaitlin Thomas  
University of California, Santa Cruz

The present study aims to add to the growing field of empirical research on generational differences in the workplace. A generation is a cohort of individuals born during a specific set of years and exposed to a shared social and historical environment, who resultantly share a certain set of values and characteristics. To test the hypothesis that members of Generations X and Y (born 1965-1994) are more accepting of female leadership than Baby Boomers (born 1946-1964), surveys were distributed to 95 male and female organizational employees and managers belonging to either cohort. The Bem Sex-Role Inventory was used to assess participants' perceptions of the masculinity or femininity of the 'good leader', 'typical woman', and 'typical man.' Participants also completed the Ambivalent Sexism Inventory to determine any correlation between benevolent/hostile sexism scores, generation, and attitudes toward men, women, and leaders. The data is currently being analyzed and results, conclusions, and implications are expected to be complete mid-April.

## Clinical

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#### AUTHENTICITY IN RELATIONSHIPS AS A MEDIATOR BETWEEN CHILD MALTREATMENT AND NEGATIVE OUTCOMES

Sally A. Theran & Sohyun C. Han  
Wellesley College

Past clinical case studies and theorists have suggested that early childhood trauma is likely to negatively affect the quality and authenticity of interpersonal relationships. Lower levels of authenticity in relationships in turn have been associated with negative outcomes such as depression and low self-esteem, especially for women. The goal of the current study was to assess authenticity in relationships as a mediator in the relation of early childhood trauma to negative outcomes. Two-hundred and fifty-seven college women from a small liberal arts college were administered questionnaires to examine their authenticity in relationships with their mothers, fathers, best friends, classmates, and teachers, their history of childhood trauma and current depressive symptomatology, low self-esteem and traumatic symptoms. Approximately 30% of the participants experienced some form of physical or emotional abuse and neglect. Mediation analyses using the Sobel test indicated that authenticity with mothers and fathers significantly partially mediated the relations between childhood trauma and depression, self-esteem, and traumatic symptomatology. No significant effects were found with authenticity with best friends, classmates and teachers. These results suggest important clinical implications for intervening and counseling those who have experienced childhood maltreatment.

THE EFFECT OF PARENTS' LOCUS OF  
CONTROL BELIEF ON CHILDREN'S HEALTH  
CARE UTILIZATION

Adriana Miu  
Stanford University

This paper investigates the effect of parents' locus of control belief on their decisions to take their children to have regular health checkups. A person with an external locus of control attributes outcomes to external factors outside of personal control whereas a person with an internal locus of control attributes outcomes to personal actions. Because parents' locus of control affects the perceived effectiveness of resources put into healthcare, external parents may underestimate the effectiveness and thus decrease the use of preventive doctor checkups. Using cross-sectional data on parents' beliefs and their children's health utilization in Los Angeles County, CA, I examine the link between parents' locus of control beliefs and the health care utilization for their children. With a probit analysis controlling for education, family income, and insurance, I found that there is a significant effect of locus of control beliefs on parents' likelihood of taking their children to regular checkup, only when samples are divided by family income levels. Parents with internal beliefs are more likely to take their children to regular health checkups. This has important policy implication because changing their beliefs may be a cost-effective intervention program to ensure that parents are giving their children the necessary preventive care.

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Personality

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FINDING HEALTH AND HAPPINESS IN  
MOTIVATION: CONFLICTS BETWEEN  
INTIMACY AND ACHIEVEMENT MOTIVES  
AFFECT PHYSIOLOGICAL STRESS AND  
SELF-REPORTED AFFECT DISPARATELY

Tara Chouake  
Barnard College, Columbia University

The relationship between intimacy and achievement motives can offer new insights into how individuals experience stress related to goals and decisions. In a college setting there is a limited amount of time to excel both academically (achievement motivation) and socially (intimacy motivation), and thus motivation helps guide behavior toward different decisions. The current study (N=52) examines the way in which intimacy motives and achievement motives can affect physiological stress (BP) and negative affect (PANAS) in individuals with high levels of both intimacy and achievement motivation (conflict-prone individuals). Study I measured awareness of conflict and stress when individuals were faced with a decision between achievement and intimacy related scenarios. Study II measured stress responses in conflict-prone individuals when both intimacy and achievement motives were activated. A significant increase in BP was found after motive activation in conflict-prone individuals as compared to others ( $p=0.031$ ). Other findings on stress measures will be reported, including significant differences in negative affect after motive activation for groups with differing motivations. The study demonstrates that motives and goals interact in specific ways to activate physiological and psychological stress, which has important implications for determining health and happiness.

## CONSTRUCTION OF THE PANUKAT NG KUSANG-LOOB (PNKL) FOR FILIPINOS

Jamie Neal H. Abuel,  
Paula Angelica G. Gonzales  
& Roxanne Carla C. Mangibin  
Miriam College, Philippines

This study developed a personality test that can measure the level of kusang-loob (initiative) of a Filipino in different social settings. An action done out of kusang-loob is defined as unaffected by external compulsion, motivated by positive feelings towards the beneficiary, and with no anticipation of rewards (de Castro, 1998). The items were constructed based on the two questions: a.) Ano ang kusang-loob? (What is initiative?) and b.) Saang aspeto mo nakikita ang kusang-loob? (In what aspect do you observe initiative?) The tests were distributed to 100 samples from different social classes and age group (13 years old and above). The reliability of the test was computed using Cronbach's alpha. Initially, there were 50 items but because of the very high Cronbach's  $\alpha$  (0.926) items were re-checked for some possible collinearity. 11 redundant items were deleted resulting to a Cronbach's  $\alpha$  of 0.900. The over-all instrument possesses good internal consistency.

### Developmental

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#### THE EFFECTS OF NEGATIVE PARENTAL AFFECT ON INFANT RESPONSES TO FAMILIAR AND UNFAMILIAR TOYS

Daisy Cruz  
University of California, San Diego

When infants encounter new situations, they use social referencing as a regulatory strategy. In social referencing, infants look at familiar adults and use the adult's emotion to guide their behavior. In this study, we seek to determine the effect of negative and neutral parental affect on

infant responses to familiar and unfamiliar toys. Social referencing in 40 infants aged 18 months in response to familiar and unfamiliar toys will be looked at in this study. The study will consist of one session divided into two parts. In part 1, the infant will watch a video recording of two remote-controlled toys. One toy will be shown carrying out its full function while the other will be stationary. In part 2, the infant will be observed responding to two familiar toys and two unfamiliar toys. When the infant references the caregiver, the caregiver will respond by providing either negative or neutral emotional information about the toy. We expect this study to show that the infants that will be exposed to the unfamiliar toys will reference the caregiver more often than the group that is familiar with the toys. The effect of negative adult emotion on the infant's behavior will also be analyzed.

#### INFLUENCE OF OUTCOME ON SUBSEQUENT RISK-TAKING: IDENTIFYING ADOLESCENT TENDENCIES

Adriana Campos, Adriana Galvan,  
Linda Van Leijenhorst  
University of California, Los Angeles

Adolescence is often characterized as a period of susceptibility to changes in contextual cues (e.g. peers (e.g. Gardner & Steinberg, 2005)) that have been hypothesized to lead to engagement in risky behaviors that jeopardize their health. Previous work using decision-making tasks have shown that adolescents engage in more risky decisions compared to adults and children. Less is known about the strategies used in these tasks. The purpose of this study was to examine how the outcomes of risky decisions influenced subsequent risk-taking in children and adolescents (ages 8-17), and adults (ages 18-33). We reanalyzed choice data from 27 participants who performed the CUPS task, a child-friendly decision-making task in which participants are asked to choose between a certain and uncertain outcome. We hypothesize that compared to adults and children, adolescents are more likely

to change their behavior following a negative outcome. Findings will help with the interpretation of the findings on adolescent decision-making and have theoretical implications for the treatment of adolescents.

DEMOGRAPHIC AND RELATIONAL  
PREDICTORS OF SOCIAL SELF-AWARENESS  
IN URBAN ELEMENTARY CLASSROOMS

Neha Sahu  
New York University

Elementary school classroom interactions with peers and individual student social competence are important to children's success in school. A key component of social competence is social self-awareness - awareness of one's own behaviors in social interactions. Research has focused on the intra-individual processes predicting social self-awareness. However, as children grow older, peers become increasingly influential in their social development. This study moves beyond the individual, examining the primary peer environment in middle childhood as it relates to social self-awareness. Using social network and peer sociometric methods, the study examined the level of congruence between self-and peer-nominations of prosocial and aggressive behaviors (social self-awareness) as predicted by individual-level social factors (peer network centrality) over and above demographic factors (age and gender). Participants included 418 2nd to 4th grade African-American students facing heightened risk for school disengagement and social problems, from thirty-three classrooms in five Chicago elementary schools, located in high poverty urban neighborhoods. Analyses revealed that increasing age and network centrality predicted increasing levels of social self-awareness. Contrary to expectations, gender normative social behaviors failed to match predictions. Discussion focused on how social contexts facilitate or inhibit internal processes (Bronfenbrennerian approach). Future studies

should examine classroom-level predictors, beyond individual-level predictors.

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**Cognitive/Neuroscience**

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THE PREDICTABILITY AND ABSTRACTNESS  
OF LANGUAGE: A STUDY IN  
UNDERSTANDING AND USAGE OF THE  
ENGLISH LANGUAGE THROUGH  
PROBABILISTIC MODELING AND  
FREQUENCY

Revanth Kosaraju, Michael Ramscar,  
& Melody Dye  
The Harker school & Stanford University

Accounts of language acquisition differ significantly in their treatment of the role of prediction in language learning. In particular, nativist accounts posit that probabilistic learning about words and word sequences has little to do with how children come to use language. We examined the accuracy of this claim by testing whether distributional probabilities and frequency contributed to how well 3-4 year olds were able to repeat simple word chunks. Corresponding chunks were the same length, expressed similar content, and were all grammatically acceptable, yet the results of our study showed marked differences in performance when overall distributional frequency varied. We found that a distributional model of language predicted our empirical findings better than a number of other models, replicating earlier findings and showing that children attend to distributional probabilities in an adult corpus. This suggested that language is more prediction-and-error based, rather than on abstract rules which nativist camps suggest.

## SCHIZOPHRENIA AND ERROR PROCESSING: A META-ANALYSIS

David D. Rackham  
Brigham Young University

The Error-Related Negativity (ERN) is a response-locked Event-Related Potential component, which peaks approximately 50 ms after the commission of an error. Several theories have emerged to explain the changes that occur in ERN amplitude across pathology groups. None of these theories conclusively explain all of the results that have been found, however it appears that the ERN is implicated in a performance monitoring system of the anterior cingulate cortex. Using meta-analytic techniques, this study determined the overall effect size of ERN amplitude for individuals with schizophrenia. A thorough search found eight studies that met the inclusion criteria. Using a random effects analysis a large overall effect ( $d = .64$ ) was found. Existing literature suggests that schizophrenic symptoms may be related to a reduced ability to self-monitor. The results found in this study lend support to this assertion, and establishes the changes in ERN amplitude found in schizophrenia groups as both reliable and large in effect. This suggests a significant impairment of self-monitoring for individuals with schizophrenia. Future research should be conducted to determine ERN amplitude differences between disorganized and paranoid subtypes of schizophrenia.

### THE INFLUENCE OF PRIOR KNOWLEDGE ON RECALL FOR HEIGHT

Pernille Hemmer, Jenny Shi, & Mark Stevyers  
University of California, Irvine

Many aspects of our experiences do not have to be explicitly remembered, but can be inferred based on our knowledge of the regularities in our environment. Such knowledge operates at multiple levels of abstractions. For example, this could lead to recall for the height of a particular

person to be influenced not only by general knowledge about heights of people, but also by specific knowledge about the height of men and women. We assess the relative contribution of this type of prior knowledge on reconstructive memory. In a series of behavioral studies we first assessed people's a priori expectations of the heights of men and women. We show that people's a priori expectations are in line with the true distribution of heights in the population. We then tested memory performance in a continuous recall task in which subjects have to reconstruct from memory the height of people shown earlier in a sequence. The stimuli were either naturalistic images of males and females or gender-ambiguous silhouettes. Our results suggest not only that prior knowledge can improve average recall, but also that knowledge can come from multiple levels of abstraction such as gender and the overall height of people.

## Poster Session II Abstracts

### Math Courtyard

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#### YES I CAN! A CLOSER EXAMINATION OF SUCCESS AND BARRIERS TO SUCCESS AMONG AFRICAN AMERICAN AND WHITE MEN, AGES 18 TO 30

Julia Sewell  
Augsburg College

Every 26 seconds, a child drops out of high school. This devastating fact resonates even more with the African-American community, with 50% of African American men not graduating from high school on time. Using a convenience sample of 48 African American and 55 white men, this study explored their perceptions of success and barriers. Data analysis compared the two groups' views of success. The most popular definition of success among African-American men was being able to

have and to achieve one's goals. In contrast the majority of white male participants reported happiness as being their definition of success. Also when compared to the white men, African-American men experienced greater barriers to success in the following areas: a) coming from single-parent homes, b) having experience with incarceration, c) having more experience with gang activity, d) and slightly lower educational expectations.

#### EFFECT OF PHYSICIANS' EXPRESSIONS OF UNCERTAINTY AND PHYSICIAN SEX ON PATIENT PERCEPTIONS

Janna Tassop and Paul C. Price  
California State University, Fresno

"Recently, there has been a shift in medicine from a paternalistic approach to a shared decision making model. SDM allows the patient to be an active participant and admitting uncertainty is encouraged. There is evidence that uncertainty has negative effects on patient satisfaction (Gordon et al., 2000; Ogden et al., 2002). We try to replicate this effect in a carefully controlled experimental design—while also varying the sex of the physician, which has not been done before. This seems worthy of examination because the number of female physicians continues to grow. Students read a prompt asking them to imagine they have a set of symptoms before hearing a diagnosis from "Dr. Williams." The physician will be male or female and give either a certain diagnosis (where only one possibility is presented) or an uncertain diagnosis (where two possibilities are presented). They will then rate the physician on domains such as competence and over all satisfaction. We predict that the uncertain physician will be viewed less favorably and the uncertain female will be least favored.

#### EFFECTS OF PARTISAN MEDIA ON ATTITUDES TOWARDS LGBT GROUPS

Brian Werter  
Cal Poly, San Luis Obispo

Two studies examine the relationship between viewing news media either in favor of or against same-sex marriage and prejudice towards LGBTs. Study 1 shows a positive relationship between religious fundamentalism, right wing authoritarianism, prejudice towards lesbians and gays, and willingness to be an ally for LGBT groups. Participants who scored higher on religious fundamentalism and right wing authoritarianism scored higher on prejudice towards lesbians and gays and lower on self-identification as an ally for LGBTs. In addition, those who considered themselves more religious were less willing to vote for an amendment to their state's constitution legalizing same-sex marriage. Study 2 is expected to reveal the effects of media on prejudice towards LGBTs by exposing participants to pro- or anti- gay marriage media stimuli. Participants will be randomly assigned into a negative, positive or control video group. Significant differences in levels of prejudice and allying with LGBTs are expected dependent on condition.

#### LANGUAGE ABILITY AND RELIGIOUSNESS/SPIRITUALITY IN THE ELDERLY

Jordan Kinney, Kelli Anderson, Dan Schumann,  
and Allison Keuning, Ph.D.  
Northwestern College

The relationship between religiousness/spirituality (R/S) and physical health has been explored in some detail in the literature. Little attention has been paid to the relationship between R/S and cognitive ability. The present study explores the relationship between R/S and cognitive functioning in the elderly, with particular attention payed to language skills. As part of a larger research

study examining psychosocial functioning and spirituality in the elderly, participants from many diverse backgrounds are being recruited from senior living facilities in a large urban area and will be administered the Mini-Mental State Exam, the Wechsler Test of Adult Reading, Wechsler Similarities, Verbal Fluency (FAS), the Hopkins Verbal Learning Test, the Fetzer Brief Multidimensional Measure of R\ S, the Duke Religion Index, and the Brief Symptom Inventory. 30 elderly have already completed the study toward a goal of 100 completed participants by April 2010. Data will be analyzed using correlation and regression analysis. Conclusions and implications of the current study will be discussed and presented.

MINORITY ON MINORITY  
DISCRIMINATION: IMPACT OF MAJORITY  
SOCIAL NORM PERCEPTION

Christine Chen  
Carnegie Mellon University

There has been little research about minority to minority prejudice despite the fact that minorities represent the majority of America's workforce. Therefore, there is a need to address the issue of racial prejudice, not just in the context of majority to minority discrimination, but also in regards to the less obvious minority to minority relations. This experiment studied minority group member discrimination against members of other minority groups when part of a group composed of all race-majority individuals, all race-minority individuals of the participant's own race, or an equal mix of race-majority and race-minority individuals. It is expected that participants are less likely to evaluate another minority group member favorably when in the presence of a race-majority group than in any of the other conditions (mixed group and race-minority group).

SUBCONSCIOUS PRIMING AS A MEASURE  
OF SOCIAL COMPARISON IN MALE BODY  
SATISFACTION

Sarah Jurick, Shiloh Krieger, Jim Kulik  
University of California San Diego

Although study of the effects that explicit social comparisons with peers have on male body satisfaction has increased recently, the effects of implicit peer comparisons have remained unexamined. In the present study, implicit social comparison effects on male body satisfaction were tested using 75 male undergraduates at the University of California San Diego. Participants completed baseline body and self-satisfaction questionnaires and then were subliminally exposed to fit peers, unfit peers, or a control image (of a tree). All groups were given 60 trials: peer exposed conditions received 40 control tree images and 20 peer images (versus 60 control tree images) at 80 ms per frame. Participants subsequently completed self-satisfaction scales in addition to a self-activation measure. It is hypothesized that participants in the peer conditions will show greater self-activation than those in the control conditions. To the extent that this occurs, it is further hypothesized that males exposed subliminally to fit peers will experience a relative decline in body satisfaction, whereas those exposed subliminally to unfit peers will experience a relative increase in body satisfaction compared to controls. The results will increase understanding of the earliest point at which exposure to peers can activate self-concepts and influence male body satisfaction.

THE PROCESS OF DIALOGUE-BASED  
INTERGROUP CONTACT AMONG ISRAELI,  
PALESTINIAN, AND AMERICAN YOUTH:  
NATIONALITY AND SEX-BASED  
DIFFERENCES IN PARTICIPATION

Eric P. Windell, Elena P. Ricks, Phillip L.  
Hammack, & Andrew Pilecki  
University of California, Santa Cruz

The Israeli-Palestinian conflict is one of the most visible intractable conflicts in recent history. Various groups have created dialogue sessions to try and foster understanding between the two nationalities. Maoz (2001) studied dialogue sessions between Israelis and Palestinians, taking note of the power dynamics in these sessions. Frequency of participation was used as one marker for power between nationalities. Existing research has not addressed differences between sex and dialogue paradigms, despite their potential influence on participants' assertion of power. The present study examines differences in participation across sex, nationality, and dialogue paradigm, by assessing two dialogue sessions from a Chicago-based co-existence program conducted in the summer of 2007. This program implemented two different dialogue paradigms: one based on the contact hypothesis (Allport, 1954), which focused on prejudice reduction through contact as individuals; and the other based on social identity theory (Tajfel & Turner, 1979), focused on acknowledging the power dynamics between the two collective identities through contact as separate group members. We hypothesize that male participants will seek to dominate the dialogue regardless of nationality and dialogue paradigm. Frequency of participation is documented, and a Chi Square will be used to analyze between-group differences.

INACTIVATION OF THE DORSAL RAPHE  
NUCLEUS REDUCES THE ANXIOTIC  
RESPONSE OF RATS RUNNING AN ALLEY  
FOR INTRAVENOUS COCAINE

Oren A. Ofer, Carl L. Mueller, Stephanie  
Waldroup, Ami Cohen, Osnat Ben Shahar,  
& Aaron Ettenberg  
University of California, Santa Barbara

In addition to its well-known euphoric properties, cocaine has been shown to have strong negative effects whose onset occurs after the initial euphoria has subsided. These dual and opposing actions of cocaine can be observed in rats running a straight alley once a day for a reward of IV cocaine. Such animals exhibit a unique pattern of approach-avoidance conflict – they run quickly toward the goal box, but then stop and retreat back to the start box. Previous research has shown that “retreat behaviors” stem from the subjects' concurrent positive (cocaine reward) and negative (cocaine-induced anxiety) associations with the goal box. Since brain serotonergic (5-HT) systems have been implicated in the neurobiology of anxiety, the current study investigated the impact of inactivating the 5-HT system on the retreat behaviors of cocaine-seeking rats. Intracranial application of baclofen and muscimol (GABA agonists) into the cell bodies of origin of the 5-HT system (the dorsal Raphe nuclei) had no impact on the subjects' latency to leave the start box but reliably reduced retreats and thereby improved times to reach the goal box. These data demonstrate that inactivation of the 5-HT system reduces the conflict/anxiety otherwise present in cocaine-seeking animals.

TAKING LANGUAGE FOR GRANITE: ON  
THE COMPREHENSIBILITY OF  
MALAPROPISMS

Michael Ramscar, Ariel James, Melody Dye  
Stanford University

Malapropisms are common in everyday speech, yet listeners can often parse them with little difficulty. The question is: how do listeners understand a speaker's meaning when the speaker makes an error? One explanation is that comprehension is a predictive process and listeners predict upcoming discourse as they listen to a conversation unfold. If this is the case, then we suspect that listeners are typically able to cope with speech errors, in part, because much of everyday speech is made of highly familiar words and phrases, which enable them to predict the correct word or turn of phrase even when what they actually hear is in error. However, this suggests that when a malapropism is heard in an unfamiliar context, listeners should be worse at parsing it and more likely to notice it as an error. In line with this, we found that listeners are better able to detect malapropisms in low-frequency, unfamiliar sequences of words, and that comprehension of their intended "meaning" declines in these contexts. This suggests that listeners are indeed sensitive to the frequencies of distributions of words in language, and offers further evidence in support of a predictive account of speech processing.

THE EFFECTS OF CAFFEINE ON IMPLICIT  
AND EXPLICIT MEMORY PERFORMANCE IN  
YOUNGER ADULTS

Stephanie M. Sherman & Lee T. Ryan  
University of Arizona

College-aged adults do not achieve their optimal level of cognitive performance during early morning hours, presumably because they are at the point in their circadian rhythm where their physiological level of arousal is very low.

Previously, we have shown that caffeine enhances memory for adults ages 65 and older when they are experiencing low physiological arousal. The purpose of this study is to determine whether caffeine will also enhance memory in college students during their non-optimal time of day - early morning. Thirty minutes after consuming a cup of coffee that is either caffeinated or decaffeinated, participants will complete one implicit and one explicit memory task, using a word-stem completion paradigm. Implicit memory is behavior that occurs as a result of a prior experience without the participant's conscious awareness. Explicit memory is when the participant directly recalls material presented earlier. Based on previous research, we hypothesize that the administration of caffeine will improve explicit memory performance while impairing implicit memory performance. The study will reveal whether young adults benefit cognitively from caffeine at their non-optimal time of day.

THE EFFECTS ON MEMORY AFTER  
MULTIPLE PRESENTATIONS

Cameron M. Rabideau, Charles F. Chubb, Gig  
W. Phoong, & Gregory A. Sanchez  
University of California, Irvine

The more experience one has of a stimulus, the better we expect one's memory to be for it. However, preliminary results suggested this expectation might be violated in the following experiment. Phase 1: participants viewed images of objects and judged whether they were more likely to be seen indoors vs. outdoors. Some images were presented three times, others only once. Phase 2: After a brief delay, participants were given a surprise memory test in which they were presented with another series of images; Half were "old," i.e., identical to images seen in phase 1. The others were "lures," i.e., slight variations of images seen in phase 1. We hypothesized that sensitivity to lures vs. old images might be higher for images seen once vs. thrice in phase 1. On the contrary,  $d'$  for

discriminating lures from old images was 1.30 for thrice-seen images vs 0.73 for once-seen images. However, participants were much more biased to judge thrice-seen than once-seen images as old, suggesting that the decision statistic they used was sensitive not only to the difference between a lure and the original image but also to the information acquired by the number of presentations of the image to the lure.

AN ACQUIRED TASTE: HOW READING LITERATURE AFFECTS SENSITIVITY TO WORD DISTRIBUTIONS WHEN JUDGING LITERARY TEXTS

Justine Kao, Robert Ryan, Melody Dye,  
Michael Ramscar  
Stanford University

Here we look at how readers' experience reading literature shapes their sensitivity to the distribution of words in literary texts, and how this in turn may shape what they recognize to be good literary writing. To examine this question, we manipulated literary and non-literary passages so that the modified versions had lower word chunk frequencies but higher individual word frequencies. Subjects were asked to rate the quality of writing in each passage and complete a questionnaire about their reading habits. Results indicated that subjects who read more literary writing gave higher ratings to original literary passages, while non-literary readers preferred the modified versions. Literary and non-literary readers alike rated the original non-literary passages higher. This indicates that literary readers are sensitive to the frequencies of word chunks containing words that appear more frequently in the literary genre, while non-literary readers are not. Readers of both genres are sensitive to the frequencies of chunks in non-literary writing. These results suggest that, over time, exposure to different linguistic models affects people's sensitivities to word and chunk frequencies, and may have implications for how a fine-tuned understanding of the probabilistic

structure of language can be acquired through reading.

THE INFLUENCE OF GEOGRAPHICAL SOFTWARE ON EDUCATION AND SPATIAL ABILITY

Maria Ptouchkina, Cara O'Brien, and David Uttal  
Northwestern University

The present study investigated the relations between Geographical Information Systems (GIS) learning and children's spatial ability, and the role of spontaneous gesture in spatial cognition and communication. Participants completed spatial- and content-related tests, a learning phase, and a verbal interview. Ten students in the experimental condition used a GIS system, My World; the ten students in the control condition used traditional tables and figures. Students who received GIS training improved more on the post-test than those who received paper and pencil training. Correlation test revealed a positive relationship between amount of spontaneous gesturing and prior knowledge, which can be indicative of the fact that children who have a better understanding of the topic have better mental representations of the spatial concepts, and thus gesture more. Gesture might play a more direct role in the learning process by allowing to explore - perhaps with less effort - ideas that may be difficult or inappropriate to think through in a verbal format (Goldin-Meadow, 2000). Malleability of spatial cognition suggests that spatial learning can be fostered by technology and education (Uttal et al, under review). Classroom implementation of GIS learning has a great potential to completely restructure science classrooms.

## BOOK READING STYLES IN BILINGUAL HEAD START CLASSROOMS

Silvia Niño  
New York University

Early narratives shared between children and adults are crucial for children's linguistic and cognitive development. Most research on narrative development has focused on parent-child conversations and book-reading interactions. However, parent-child interactions is only one context through which children develop narrative skills. Because preschoolers spend a significant part of their day in preschool, interactions between children and their preschool-teachers also plays a formative role for children's narrative competency. Nevertheless, only a handful studies have examined the book-sharing styles used by preschool teachers, and little is known about how teachers adapt their book-sharing approach to bilingual environments. The present study examined the book-sharing styles of teachers in twelve bilingual (Spanish-English) Head Start classrooms as they shared wordless and text-based books with their class. Preliminary results suggest that there are individual differences in teachers' book-sharing styles, with some teachers focusing closely on the storyline, whereas others encourage their students to think analytically and make predictions about the plot. Interestingly, though, all teachers tend to include more meta-literacy talk and offer richer language lessons when sharing the wordless book. Results are discussed in relation to the role of teacher-class book-sharing on children's language development.

## HOW PATTERN KNOWLEDGE GENERALIZE ACROSS MODALITIES: MONOLINGUAL VERSUS BILINGUAL CHILDREN

Sharon Hou, Giselle Navarro, Mariel Kyger,  
M.A., and Cathy Sandhofer, Ph.D.  
University of California, Los Angeles

Children become familiarized to their native language through daily exposure. Each language consists of its own grammatical patterns to which children become attuned. Mintz (2003) introduced the idea of grammatical patterns called 'frequent frames' to explain how children use patterns to acquire language. We investigated whether children's proficiency in their native language affected their ability to identify color shape patterns. 2- to 3-year-old monolingual English- and Spanish-speaking children, and bilingual (English-Spanish) children were taught patterns of shapes and colors that resembled the patterns of their native language, the patterns of another language, or a non-language pattern. They were then asked to complete exemplars of each pattern. We hypothesized that children would be better at completing patterns similar to their native language. We also hypothesized that bilingual children would perform equally on English and Spanish patterns. Results of this study will inform our understanding of the links between language development and other types of learning in children.

## OWN-FACE FIXATION IN THE FORMATION OF FIRST GRADER'S FACE PROTOTYPES

Andrew R. Taylor  
Grand Valley State University

Prior studies have shown that facial prototypes in infants are a direct result of the amount and variability of contact with human faces received in their short lifespan. Such studies use preferential looking tasks to show that infants prefer to look at the face of their primary caregiver, the face of someone with the same

gender as their primary caregiver, or a person of their same race. The current study was designed to test the contact hypothesis of face prototype formation in first graders using an ambiguous facial drawing technique and an assessment of longitudinal close contact with the child. Analyses found that whereas the gender of those individuals who had close contact with the child was not a good predictor of the gender of the drawing, the gender of the child him or herself was a significant predictor. This study uses a fixation hypothesis to explain the observed results.

#### YOUNG INFANTS' PREFERENCE FOR HAPPY FACES

Ana Maria Mejia, & Ho Jin Kim  
University of California, Los Angeles

Young infants' robust listening preference for Infant-directed speech (IDS) over Adult-directed speech (ADS) has been demonstrated over the last decades. Further investigations of specific IDS characteristics have shown that happy affect expressed in IDS captures infants' attention. Moreover, IDS is often accompanied by similar modifications of facial expressions, known as Infant-directed face (IDF). Thus, whether infants' response to IDS extends to IDF was tested in three experiments. The first investigated infants' preference for IDF over Adult-directed face (ADF). Twelve voiceless dynamic clips of IDF and ADF were displayed side-by-side; infants' eye movements were recorded. Results indicated that infants from 3 months and older looked longer at IDF than ADF, suggesting infants' preference for IDF. Next, two experiments examined the effect of affect in IDF. While the same setup was used, the affect expressed in IDF and ADF were controlled. When positive affect was expressed in both faces (IDF, ADF), 6-month-old infants' did not show preference for IDF. However, infants looked longer at ADF when ADF was happier than IDF. Overall, the present study shows that infants' preference for IDS extends to

IDF in a similar fashion, giving importance to happy affect in adults' communicative behavior to infants.

#### FACILITATING CATEGORIZATION IN INFANTS: HOW MUCH INFORMATION IS TOO MUCH?

Laura Hawkins, Paola Escudero Ph.D., Scott Johnson Ph.D.  
University of California, Los Angeles

How infants learn to categorize objects and their names is an important question in developmental psychology. It has been shown that infants' object categorization is facilitated by linguistic labels, i.e. infants find it easy to classify different objects if they hear their names. Conversely, it has also been shown that object categorization can also be hindered when objects are presented together with auditory or linguistic information. In the present study, we examine whether infants' associations of objects and labels differs as a function of whether they can utilize both visual and linguistic information or only linguistic information to perform the task. We use an anticipatory eye movement paradigm and a design that examines learning across time in order to compare these two scenarios. Thus far we have found that 8-month-olds in the linguistic information only condition may be able to perform the task better than 8-month-olds who were in the visual + linguistic information condition. We have also found that this difference may be developmental since 11-month-olds in the visual + linguistic condition were better able to perform the task than the 8-month-olds in the same condition.

## CULTURAL DIFFERENCES OF GRIEF AND COMPLICATED GRIEF

Kristina Y. Cho, & Dr. Sidney Zisook  
University of California, San Diego

Complicated Grief (CG) is a grief disorder that persists for more than 6 months, after the death of a loved one. There is minimal cross-cultural research on grief and complicated grief. It is important for clinicians to learn more about cross-cultural expressions of grief, in order to understand and provide appropriate management to bereaved individuals and to not misrepresent culturally sanctioned mourning rituals as aberrant and pathological behaviors. The present study explores the relationship of grief, complicated grief, and depression in two clinical populations, one at UCSD and one in South Korea. The study aims to understand the differences in severity of grief and complicated grief based on ethnicity. Surveys were distributed to psychiatric outpatients in waiting rooms in Seoul, Korea and San Diego, and consisted of a consent form, face-sheet, and a questionnaire (TRIG, ICG, and PHQ-9). Surveys were translated in Korean for the Korean population. We hypothesize that Koreans will have more intense grief symptoms up to 6 months, but will have less complicated grief after 6 months. As the current study progresses, cross-cultural data analysis may indicate the differences of CG severity between Koreans and Caucasians.

## THE ROLE OF EXTRACURRICULAR ACTIVITY PARTICIPATION ON ADOLESCENT DEPRESSION MODERATED BY PARENT INVOLVEMENT

Joseph Michael Nelson, AJ Cabradilla, Ashley Ellen Pasewalk  
University of Oregon

This study examines the role of a child's participation in extracurricular activities and parent involvement in relation to adolescent

depression. In addition, it also looks at parent involvement as a potential moderator for the relationship between extracurricular activity participation and adolescent depression. This study reanalyzes the data parts collected on a group of adolescents (n=593) that pertained to our research question. In the original study, participants completed surveys which used previously validated measurement scales to ask questions regarding extracurricular activities, depression levels, and parent involvement (48.6% females). Results of the secondary analysis show that parent involvement and extracurricular activities were both negatively correlated with adolescent depression. However, participation in extracurricular activities was less significant ( $r = -.054$ ) in comparison to parent involvement ( $r = -.226$ ). Additionally, there appears to be a significant positive correlation between extracurricular activities and parent involvement ( $r = .19$ ).

## THE RELATIONSHIP BETWEEN BLOWS TO THE HEAD AND PROBLEMS WITH ATTENTION, HYPERACTIVITY, SELF-ESTEEM AND ANXIETY

Brittany Cunningham, Camille Gonzalez,  
Timothy Heitzman PhD.  
Fairfield University

Previous research has described a pattern of deficits following concussions. However, assessing a person's history of concussions is problematic since concussions are poorly understood and many go undiagnosed. To bypass this problem, the present study focused on reported blows to the head (BTH) rather than a reported history of concussions. It was hypothesized that total number of BTH would yield similar problems found in concussions. Undergraduate students (N=103) completed the BASC-2 College Form and the Brain Injury Screening Questionnaire. Results revealed a significant positive correlation between BTH and problems with attention and hyperactivity, and a negative correlation with self-esteem.

There was a trend indicating a positive association between BTH and anxiety. These findings reflect similar patterns of deficits found in concussions.

#### FAMILY HISTORY AS A PREDICTOR IN LONG VS. SHORT TERM OUTCOME IN ADOLESCENT SUBSTANCE USE

Rubin Khoddam  
University of California, San Diego

To test the effects of family history on adolescent alcohol and substance use in the long versus short term, teen data was analyzed by looking at groups with no family history, a first degree only, second degree only, and those with both a first and second degree relative with a history of alcohol and/or substance use. Furthermore, family history groups were divided based on whether they had substance dependence with a comorbid Axis I disorder, if they were only substance dependent or if they were part of the control sample. Dependent variables for analysis included whether relapse occurred as well as the severity of use. Included in severity is the number of dependence symptoms, withdrawal symptoms, frequency and amount of use. Preliminary results are consistent with the hypothesis that those with a family history would show a higher proportion of relapse and more severe use in the long term. Any family history was indicative of increased amounts of alcohol and substance consumption between gender and group. There was also a greater proportion of relapse among the group with a concomitant Axis I disorder.

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### Linguistics Courtyard

#### THE ROLE OF GUILT IN COOPERATION

Marvin Guemo  
University of California, Santa Barbara

This research looked at how the presence or absence of guilt influences cooperation. Expressing guilt may be a way to repair one's reputation after under-contributing in a collective action. Without negative emotions among members, continued cooperation might be possible. To test this, a modified Voluntary Contribution Mechanism was used. Participants were placed in groups of four and given an endowment. They had to decide how much of the endowment to contribute to the group project and how much to keep for themselves. Their income for each period is calculated by adding the tokens they kept for themselves and their income from the group project. Their income from the group project was calculated by multiplying the total contribution of everyone by 1.6, and dividing it equally among the others. At the end of every period, participants could give back to the group any portion of their earnings from the group project. To the extent that returning earnings could be seen as guilt, this experiment looked at the role of guilt in cooperation. The results show that the more guilt others show in the previous period, the higher one's contribution will be the following period.

#### STUDENT RESPONSES TO STIGMATIZED AND NEUTRAL MEDIA IN REGARDS TO SEXUALLY TRANSMITTED DISEASES

Rachael M. Hernandez  
Yosemite High School

This experiment is designed to investigate students' perceptions and misconceptions of stigmatized and neutral media in regards to sexually transmitted diseases. The participants (n=23) consisted of 16-18 year old males and females, predominantly of Caucasian descent, in an International Baccalaureate Psychology class from a rural, central California high school. This experiment was carried out in one class period, exposing students to both the Gardasil (stigmatized) and the Valtrex (neutral) television

commercials. After viewing each commercial, participants answered a questionnaire about their perceptions of sexually transmitted diseases. The independent variable was the type of media (stigmatized and neutral) viewed by the participants. The dependent variable was the score of misconceived notions of sexually transmitted diseases in regard to gender, race, symptoms, and longevity of disease. A t-test demonstrated that there was significance at the  $p < 0.05$  level of confidence, showing that stigmatized media promotes more misconceptions of sexually transmitted diseases than neutral media.

#### REAL-IDEAL SELF CONGRUENCE AND PERFORMANCE: TESTING THROUGH INTERACTIVE VIDEO GAMES

Christine Stalie, Megan Simmons, Elise Guelich,  
Nick Davenport, & Jill Cole  
Seattle Pacific University

This study explores the relationship between self-esteem, congruence between one's real self and ideal self, and performance at the Nintendo Wii, an interactive video game. We hypothesized that individuals would perform better overall at the Wii game as their ideal self character, and that this effect would be moderated by self-esteem. Forty-seven college students at a small, Christian liberal arts university were recruited and completed measures of global self-esteem and congruence of their real and ideal selves. Participants then played games of Wii Bowling, once with a "real" character and once with an "ideal" character that they had created. Results indicated there was no significant difference between the performance of participants playing as their real or ideal self. However, the greater the discrepancy between a participant's real and ideal characters created, the worse they performed as the ideal character. Findings indicate that level of self congruence affects performance, and that interactive video games are an effective methodological option for

examining the outcomes of real-ideal self congruence.

#### CULTURAL AND SOCIETAL FACTORS INFLUENCE THE DEVELOPMENT OF BULIMIA NERVOSA IN YOUNG WOMEN: A REVIEW OF THE LITERATURE

Sequana Tolon, Jeanette Whitmore,  
Dennis Romero  
The University of Michigan-Flint

The development of Bulimia Nervosa is multiply determined. While studies show this to be a primarily Western culture phenomenon, research is showing the impact to be world wide if even on a minor level. Many factors influence the development of Bulimia in an individual including their culture, family, peers, media, and finances. This review of the literature will consider the following as; gender, socio-cultural expectations, in the manifestation of Bulimia Nervosa in adolescent females. Other contributory factors that serve to intensify a young women's struggle to control their weight and shape include body dissatisfaction and high incidence of co-morbid substance abuse disorders, the need for control, and the anxiety provoking secrets that overwhelm the minds of many. Western culture plays an intricate role in the impulse-like gravitation to thinness, beauty, and perfection that young women often fall victim to. Americans have become obsessed with the images young woman whose body is underdeveloped and mirrors one of an adolescent boy and the converse, which are playboy centerfolds that contain pages of women with who are often perceived as desirable. The silent insidious nature of this disorder is often left untreated until the condition is out of control enough to become apparent.

RELIGIOUS/SPIRITUAL COPING WITH  
HEALTH/PSYCHOSOCIAL STRESSORS IN  
THE ELDERLY

Jon Jore\*, Dan Schumann\*, Nicola Rodwell\*, and  
Allison Keuning, Ph.D.  
Northwestern College

The relationship between religiousness/spirituality (R/S) and physical health has been explored in some detail in the literature. However, less attention has been paid to the particular relationship between R/S coping and physical health or psychosocial stressors of the elderly. The present study explores the relationship between measures of R/S and measures of health and psychosocial stressors in the elderly, with particular attention on religious coping. As part of a larger research study examining psychosocial functioning and spirituality in the elderly, participants from diverse socioeconomic backgrounds are being recruited from senior living facilities in a large metropolitan area and will be administered the Life Events Scale, SF-12v2 Health Survey, Brief Multidimensional Measure of Religiousness/Spirituality, Brief RCOPE, and the DUREL: Duke University Religion Index. Approximately 30 elderly have already completed the study toward a goal of at least 60 completed participants by the end of April 2010. Data will be analyzed using correlation and regression analysis. Conclusions of the current study will be discussed, and implications for future research will be presented.

COPING AND SELF-COMPASSION IN  
COLLEGE-AGED GIRLS' RELATIONAL  
AGGRESSION

Emily Weinstein, Dawn E. Schrader,  
& Jess Matthews  
Cornell University

Relational aggression among girls has widespread negative consequences, including affective instability, identity problems, self-harm

behavior, affective features of depression, bulimic symptoms, and decreased life satisfaction (Crick & Zahn-Waxler, 2003). This study sought a phenomenological description of experiences of college women and to ascertain how they cope with relational aggression. We developed an interview consisting of retrospective and hypothetical dilemmas (based on along with the Brief COPE scale (Carver, 1997) and a Self Compassion Scale (Neff, 2003). Using a coding system developed from the dimensions of the Brief COPE and the SCS, examined whether those general coping and self-compassion skills were evidenced in relational aggression situations. Findings indicate that the coping strategies that girls report using on the scale were not the same as those they actually used in their real dilemmas or the hypothetical dilemma. Self-compassion scores to be negatively correlated with the appearance of isolation. Use of perspective taking in interviews was correlated with references to different facets of general self-compassion and coping, including mindfulness and active coping. Judgment/Labeling, and Moral Language were also correlated with perspective taking. Implications include developing better intervention strategies for coping with relational aggression by increasing coping and self-compassion skills at all ages.

DOES JUROR AND DEFENDANT ETHNICITY  
AND SCORES ON THE PREJUDICE AGAINST  
HISPANICS SCALE MODERATE CAPITAL  
DECISIONS? AN EXAMINATION OF  
JUROR BIAS

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We examined White and Hispanic jurors' scores on the Prejudice Against Hispanics Scale (PAH) (Hunt & Espinoza, 2005) and verdict and sentencing decisions for death penalty cases. Three hundred and fifty five participants (177 White and 178 Hispanic) acted as mock jurors

and read through a trial transcript that varied defendant ethnicity (White or Hispanic). After reading through the transcript mock jurors were asked to give a verdict, recommend a sentence, and answer various culpability questions. Jurors, regardless of ethnicity, who scored high on the PAH found the Hispanic defendant guilty significantly more often, gave this defendant the death penalty significantly more often, and found this defendant significantly more culpable compared with the White defendant. In addition, White jurors scoring high on the PAH also gave significantly lower trait ratings to the Hispanic defendant compared with all other conditions. Limitations, future directions, and legal standards for capital cases are discussed.

#### EFFECT OF NICOTINE ON GABA NEURONS NACHR SUBTYPES IN THE VTA

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GABAergic and glutamergic synaptic inputs to VTA DA neurons are modulated by different nAChR subtypes with distinct desensitization properties. Nicotine can enhance glutamergic transmission while the nAChRs on GABA neurons are desensitized, thus shifting the balance of synaptic inputs to excitation. This desensitization silences endogenous cholinergic drive to the GABAergic inputs, which ultimately disinhibits the DA neurons. This coordinated disinhibition and enhanced excitation likely contributes to prolonged increases in DA release and ultimately behavioral reinforcement. We hypothesize that acute nicotinic activation of VTA GABA neurons will result in enhanced inhibition of VTA DA neurons, but that alpha-4/beta-2 nAChRs will up-regulate or change subunit composition to chronic NIC exposure. We have found that iontophoretic application of NIC enhances the firing rate of VTA GABA neurons in rats and mice. Nicotine enhancement of VTA GABA neuron activity is blocked by the

a4b2 antagonist DHBE, suggesting that NIC is exciting these neurons through their a4b2 nAChRs. Studies are in progress to determine the effects of chronic NIC on VTA GABA neuron firing rate in vivo and synaptic input to VTA GABA neurons in vitro. In addition, using single-cell RTPCR we will evaluate the quantitative expression profile of nAChR subunits in VTA GABA neurons to determine the adaptation that occur with chronic NIC.

#### NEUROANATOMICAL MEDIATORS OF ATTENTION DEFICITS IN AUTISM

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Autism is a neurodevelopmental disorder associated with socioemotional, cognitive and attentional changes that occur more often in males. Recent work indicates that deficiency of the hormone vasopressin mimics attentional phenotypes for autism and is concentrated in a sexually dimorphic brain region called the bed nucleus of the stria terminalis (BNST). We hypothesize that the BNST contributes to goal-directed allocation of attention. To explore this, a group of rats were evaluated for their performance on a demanding test of attention; some underwent lesions of the BNST, while others were unlesioned controls. We predicted that, in comparison to controls, BNST-lesioned animals would exhibit poorer response accuracy only when goal-directed attentional orienting is taxed. Preliminary results are in accord to our prediction but final results await histochemical verification of the lesions. Therefore, the BNST appears to play a role in the coordination of attentional processes, mirroring the attentional changes seen in people with autism.

#### THE STABILITY BIAS IN EDUCATIONAL ENVIRONMENTS

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The stability bias is the belief that one will neither forget over time nor benefit from learning over study sessions. In the past, this phenomenon has been assessed using judgments of learning (JOLs) and word pairs. This paradigm may be problematic because word pairs are rarely encountered in real life, and people may not have information to draw on in making their JOLs. The current study addressed the question of whether the stability bias will be present in JOLs about text materials. Because text materials are often studied in classroom settings, subjects may be able to draw upon their own experiences and elicit more accurate JOLs. Retention interval and type of study materials were manipulated and subjects' JOLs were measured. Preliminary data suggest that subjects' metacognitive judgments are not affected by retention interval or type of study materials, signifying that the stability bias prevents subjects from making accurate JOLs about familiar materials. The stability bias's presence in school settings may be preventing students from studying effectively.

#### THE MOZART EFFECT ON READING COMPREHENSION

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This is an experiment to investigate the Mozart Effect and the effects of different types of background music or silence on reading comprehension. The three experimental groups (n=27, n=25, n=26) and control group (n=26) consisted of 16-17 year old, predominantly Caucasian male and female students, from a rural high school in central California. The experiment was carried out over four class periods with the four groups listening to either classical, rock, or rap music, all without lyrics, or silence. The participants read selected material while listening to one of the three types of background music or silence and afterward

completed a reading comprehension test. The independent variable was the type of background music or silence listened to and the dependent variable was the number of details the participants remembered on the reading comprehension test. A one way ANOVA demonstrated that there was no significance at the  $p < .05$  level showing that the types of background music or silence had no effect on reading comprehension scores.

#### THE EFFECT OF EXPOSURE TO MEANING THREATS ON IMPLICIT PATTERN LEARNING

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This is an experiment designed to investigate the effect of exposure and non-exposure to meaning threats on implicit pattern learning. Meaning threats are unexpected events or ideas that stimulate cognitive dissonance. The experimental (n=30) and control groups (n=30) consisted of 16-19 year old, predominately Caucasian male and female students from a rural high school in central California. The aim of this investigation was to show that meaning threats can cause cognitive dissonance and prime the brain to find grammatical letter string patterns. The experiment was carried out during two class periods. One class period read Franz Kafka's short story "The Country Doctor", and the other class period had no reading material. The independent variable was whether or not participants were exposed to the meaning threats found in Kafka's short story. The dependent variable was the number of correctly identified grammatical, patterned letter strings. A t-test demonstrated that there was no significant difference at the  $p < .05$  level, showing that exposure to meaning threats through Kafka's work does not prime the brain to identify grammatical letter string patterns.

## THE EFFECTS OF MASKING ON JUST NOTICEABLE DIFFERENCES OF FREQUENCY

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Southern Oregon University

This experiment examined the effects of forward masking, backward masking, continuous masking and absence of masking on just noticeable differences of frequency. Just noticeable differences were calculated for 3 normal hearing participants by asking participants which tone they thought was higher pitched: a tone with a masker before, after, or during the masked tone or the reference tone. The results showed that masking had a statistically significant effect on just noticeable differences of frequency ( $p = .005$ ). Multiple comparisons indicated that both the continuously and backward masked conditions performed poorer than the silent condition. These results comply favorably with Emiroglu and Kollmeier (2008), Plack (1996), and Turner, Zeng, Relkin, and Horwitz (1992). Furthermore, a midrange frequency spike for just noticeable differences under forward masking occurred in this study, as in Zeng and Turner (1992). Future research could explore the negative correlation established in Carlyon and Turner (1993) to determine whether statistically significant differences between forward masking and backward/continuous/unmasked conditions could be calculated.

## PSYCHOLOGICAL ESSENTIALISM AND STEREOTYPE THREAT

Elizabeth Scharnetzki, Tara C. Dennehy,  
and Avi Ben-Zeev  
San Francisco State University

Recently, Prentice and Miller (2007) made a persuasive argument about the importance of exploring the intimate link between psychological essentialism (e.g., the perception that women and other “natural” kinds have an underlying causal essence) and stereotyping

phenomena. Following Prentice and Miller’s exhortation, our study was designed to examine the effects of two prominent essentialist beliefs suggested by Haslam and his colleagues (e.g., Bastian & Haslam, 2006): discreteness (category membership is clear cut) and naturalness (category membership is biological/natural) on susceptibility to stereotype threat (e.g., Steele, 1997). Stereotype threat is a social-contextual phenomenon in which people who are highly domain-identified underperform when confronted with reminders of a negative stereotype about their group. In our study, female participants were asked to complete a logical-spatial task under conditions of threat or no-threat. Threat was manipulated by the presence of a male confederate whereas no-threat was manipulated by the presence of a female confederate in the testing environment. Data indicated that while naturalness beliefs did not predict susceptibility to stereotype threat discreteness beliefs were found to moderate performance under threat, such that females who were higher in discreteness performed better under threat. We discuss potential implications of either/or thinking as a potential buffer against stereotyping.

## BILINGUALISM AND ACADEMIC ACHIEVEMENT

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The present study investigated the effect of bilingualism/multilingualism on academic achievement. 66 undergraduate students at University of California, Los Angeles were randomly selected to fill out a questionnaire that contained questions about participants’ demographics, education, and experience with language(s). The independent variable was bilingualism and was operationally defined as fluency in more than one language as well as the age at which the language was learned. The dependent variable was academic achievement and was operationally defined as current overall

grade point average, enrollment in honors program, and ambition for graduate school. It was hypothesized that undergraduate students that report bilingualism will show higher academic achievement, with those who learned the second language earlier in life showing the most significant achievement. Although the results showed no significant difference between the mean GPAs of monolingual and multilingual participants, the age at which the second language was learned had significant effect on multilingual participants' performance in school, as those who learned the second language before age three had higher GPAs than those who learned it after age three,  $t(37) = 2.06$ ,  $p < .05$ . The findings imply that teaching a second language during early childhood would positively influence children's future academic performance.

#### FATHER INVOLVEMENT IN ETHNICALLY DIVERSE POPULATIONS

Ryann McNeil,  
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Scholars of child development and childhood practitioners recognize the important influential role fathers play for children's socio-emotional and cognitive development. Despite this recognition, little research has been done to explore and understand the roles of fathers in the family. The current study describes the activities that low- income, ethnically diverse fathers engage in with their 14 month infants. Approximately, 200 mothers of African American, Dominican, and Mexican backgrounds were recruited from 3 New York City hospitals in which mothers reported the routine of their infants' prior day (24 hours) when their children were 14 months old. From these data, the activities and the time spent with fathers was derived from eight categories: care-giving, toy play, unstructured, literacy, television, child outings, general outings, and childcare. The daily activities that fathers

engage in with their young infant's offers a window onto the ways different fathers might participate in children's lives by measuring how much time they spend with their infants, and evaluating how that time is spent. The activities children share with their fathers during infancy suggest that child gender, family cultural practices, and the mother father relationship play an integral role in shaping the ways fathers interact with their children.

#### INTERACTIONS OF PHONOLOGY AND MORPHOLOGY IN CHILDHOOD READING ABILITY

Brent Cannons & Karina Muro  
Loyola Marymount University

In order to become a successful reader, a child must be able to parse spoken and written language into components parts like sounds (phonemes) and grammatical units (morphemes). In the current body of research on the interactions of phonological and morphological awareness, studies have shown that both are essential to the acquisition of reading ability in the beginning reader. Phonological awareness is generally a target of intervention only in beginning readers, as it is assumed to only be associated with early stages of reading development. In our examination of phonological and morphological awareness in 6th grade middle school students with low reading scores ( $N = 8$ ), we were interested in determining whether this assumption is warranted. Given that phonological and morphological awareness both require a common skill set (parsing of language into parts), we predicted that these two skills would be associated. Participants' scores in these areas were significantly correlated (.86), suggesting that adolescents with poor morphological skills also have deficits in phonological awareness. Furthermore, this analysis implicates the importance of phonological awareness in intervention programs for struggling adolescent readers.

CORRELATION BETWEEN WORKING  
MEMORY PERFORMANCE AND  
CLASSROOM BEHAVIOR IN  
KINDERGARTENERS

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Working memory, the aspect of short term memory related to control and attention, is closely associated with learning abilities. When working memory is impaired, children may have difficulties with classroom behavior that require high memory storage and complex processing skills. Little is known, however, about how working memory and behavior correlate in younger children before formal schooling begins. In this study, we examined teacher-reported behavior ratings on the Children's Attention and Adjustment Survey (CAAS) and working memory (WISC-IV Digits Backward task) for kindergarteners (N = 95) at the beginning of the school year. The CAAS yielded subscale scores for inattention, impulsivity, hyperactivity, conduct disorders, and ADHD. The role of preschool attendance, gender, and bilingualism was also examined. The results supported the hypothesis that working memory scores would be significantly inversely correlated with ratings on the behavior subscales for the CAAS. Our findings suggest that teacher-reported behavior problems in the first few weeks of kindergarten may serve as a marker for working memory deficiencies. Poor working memory skills may explain why some children experience learning difficulties during the early school years. As a result, children may be prevented from acquiring critical skills needed for academic achievement.

ENHANCED VISUAL SEARCH BY INFANTS  
OF SIBLINGS WITH AUTISM

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Previous studies have shown that autistic individuals are atypically skilled at visual search. In a cross-sectional study, 6-, 12-, and 18-month-old infant siblings (IS) of children with autism (who are at greater risk of autism) were compared to age-matched typically developing (TD) infants on two visual search tasks. An eye tracker measured infants' ability to find an unusual item ("+" in a field of distractors ("L") varying in number and random or circular arrangement. A univariate test showed that age and risk predicted circle accuracy ( $p < .05$ ). T tests showed that at 12 months IS ( $n=9$ ) were more accurate than controls ( $n=8$ ,  $p < .05$ ); however, 18-month-old TD ( $n=15$ ) infants were more accurate than IS ( $n=10$ ,  $p < .05$ ). Univariate tests showed that TD infants became more accurate at both visual search tasks with age ( $p < .05$ ), while IS did not ( $p > .05$ ). These preliminary data show that early in development, infant siblings of children with autism, similar to autistic individuals, may show enhanced visual search; however, their accuracy may not improve with age.

MARRIAGE AND HEAVEN: THE  
RELATIONSHIP BETWEEN  
RELIGIOUSNESS/SPIRITUALITY AND  
MARRIAGE SATISFACTION IN THE  
ELDERLY

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Religiousness and spirituality (R/S) are consistently identified as important elements of healthy marriages, though relatively little research has focused on this relationship, particularly in the elderly. The current study explores this relationship as part of a larger research study examining psychosocial functioning and R/S in the elderly. Participants from diverse socioeconomic backgrounds are being recruited from senior living facilities in a large metropolitan area and will be administered the Lubben Social Network Scale-

6, the Life Satisfaction Inventory-A, the Life Events Scale, the Fetzer Brief Multidimensional Measure of Religiousness/Spirituality, the Brief RCOPE, the Duke University Religion Index, and the Marital Satisfaction Questionnaire for Older Persons. Approximately 30 elderly have already completed the study toward a goal of at least 60 completed participants by the end of April 2010. Data will be analyzed using correlation and regression analysis. The results of the current study will be presented, as well as their implications for future research.

FRIENDSHIPS: DIFFERENCES BETWEEN  
ADOLESCENTS WITH TYPICAL  
DEVELOPMENT AND THOSE WITH  
DEVELOPMENTAL DELAYS

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Studies have shown that friendship quality is a key indicator of psychosocial adjustment, correlated with higher self-esteem and less internalized problems for adolescents (Rubin, Bukowski & Parker, 1998; Berndt, 1996; Rubin, Dwyer, Kim, & Burgess, 2004). Research suggests that children with developmental delays (DD) tend to have fewer and less intimate friendships than their typically developing peers (TD; Matheson, Olsen & Weisner, 2007). While studies have examined TD and DD children separately, few have compared the friendships of these two groups directly. The objective of this study is to determine how TD and DD children's friendships differ and discover any discrepancies between parent and child reports of friendship. Reciprocity, closeness, parental involvement, and time spent with friends will be examined. TD children and DD children (age 13) were sampled from the Collaborative Family Study. Comparable semi-structured interviews were conducted with parents and adolescents regarding the adolescent's friendships. To date

52 interviews have been conducted and 27 have been coded. The data will be looked at descriptively. Group differences will be assessed using regression tests for ordinal data and chi-square tests for categorical data. Results will speak to group differences in friendship quality.

AN EXPLORATION OF SPIRITUALITY,  
EMOTIONAL FUNCTIONING, AND LIFE  
STRESS IN THE ELDERLY

Nicola Rodwell\*, Shaina Olson\*, Jon Jore\*,  
and Allison Keuning, Ph.D.  
Northwestern College

The relationship between religiousness, spirituality, and health has received increasing attention in behavioral sciences research, revealing a generally positive impact of religion and spirituality (R/S) on health. However, the relationship between R/S, emotional functioning, and life stress has not been as extensively examined, particularly in the elderly population, which is the purpose of the current study. Elderly participants from diverse backgrounds are being recruited from senior living facilities in a large metropolitan area. Approximately 35 elderly have already completed the study toward a goal of at least 60 completed participants by the end of April 2010. The Fetzer Brief Multidimensional Measures of Religiousness/Spirituality (BMMRS), Brief RCOPE, Duke University Religion Index (DUREL), Lubben Social Network Scale (LSNS), Brief Symptom Inventory (BSI), and Life Events Scale will be administered. Data will be analyzed using correlation and regression analysis. Conclusions of the current study will be discussed, and implications for future research will be presented.

CULTURAL DIFFERENCES IN PAIN  
EXPERIENCE: A COMPARISON BETWEEN  
CHINESE, CHINESE AMERICANS AND NON-  
HISPANIC WHITES

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While there has been much interest in the contribution of ethnicity to pain experience, existing research has focused on describing differences between African Americans and European Americans, and a broader knowledge of cultural differences is lacking. The aims of this study are to determine whether Asians and non-Hispanic whites differ in their affective responses to pain, and whether psychological factors (approach/avoidance motivation and pain catastrophizing) mediate these differences. We ask groups of first generation Chinese, second or third generation Chinese Americans, and Caucasian Americans to complete a cold pressor task, in which they put their non-dominant hands into cold (0-1°C) water. Participants' time of first pain (threshold) and overall immersion time (tolerance) are recorded. We also obtain subjective ratings of pain intensity and unpleasantness. We anticipate differences between Chinese and Caucasians in the affective aspect of pain (tolerance and unpleasantness rating) but not the biological aspect of pain (threshold and intensity rating). Our preliminary results support these hypotheses by showing a trend for Asian Americans to have lower tolerance (but not threshold) than Caucasians.

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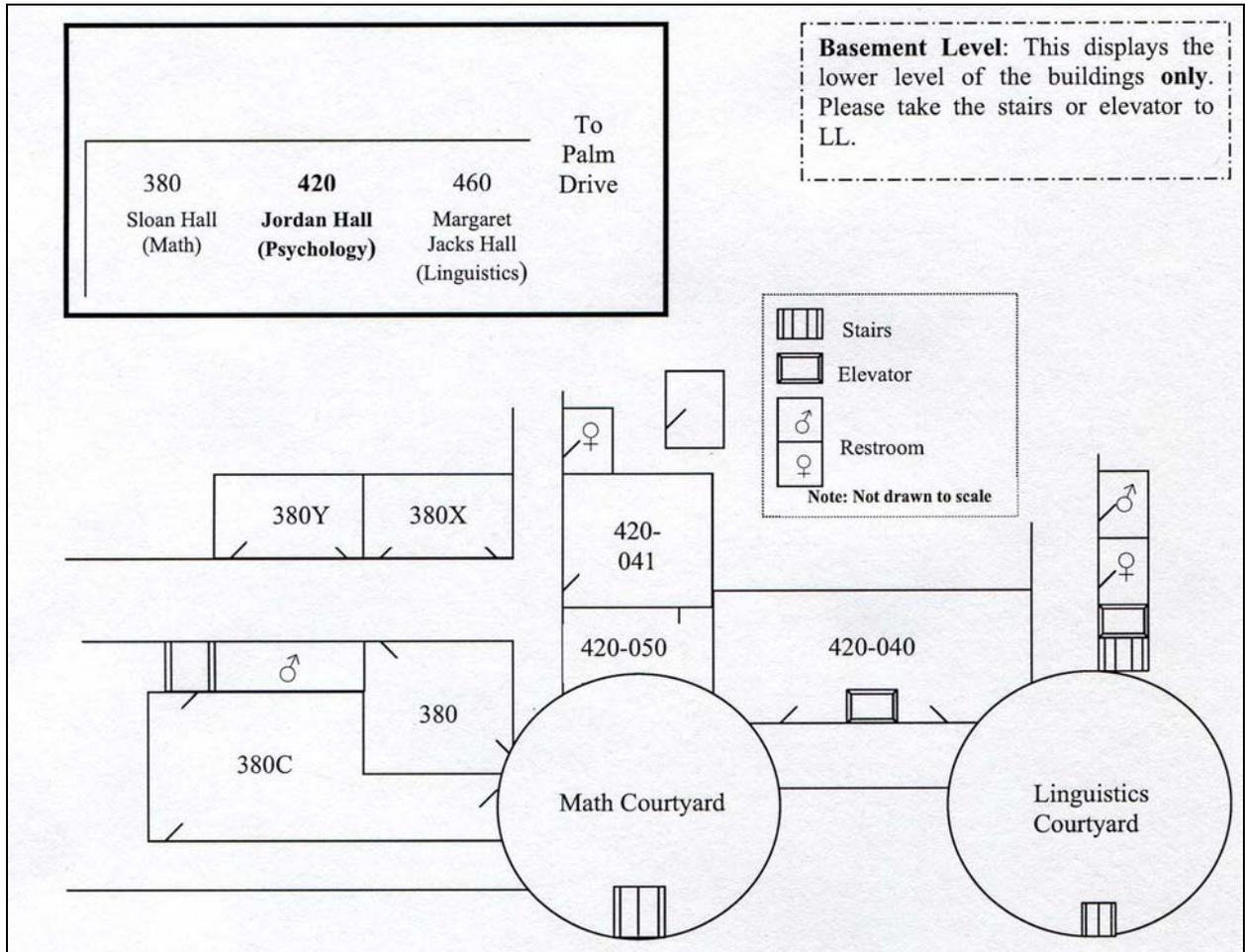
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